香港交易及結算所有限公司及香港聯合交易所有限公司對本公告的內容概不負責，對其準確性或完整性亦不發表任何聲明，並明確表示概不就因本公告全部或任何部份內容而產生或因倚賴該等內容而引致的任何損失承擔任何責任。

本公告及本公告所述上市文件僅為按照香港聯合交易所有限公司證券上市規則（「上市規則」）要求提供資料而刊發，並不構成出售任何證券的邀請或要約或招攬購買任何證券的要約。本公告及本公告所述任何內容（包括上市文件）不構成任何合約或承諾的基準。 *為免生疑問，刊發本公告及本公告所述上市文件不得被視為根據由或代表本公司（定義見下文）就公司（清盤及雜項條文）條例（香港法例第32章）刊發的招股章程作出的證券發售，亦不構成就證券及期貨條例（香港法例第571章）而言載有向公眾人士發出的訂立或要約訂立收購、出售、認購或包銷證券之協議的廣告、邀請或文件。*

*本公告並不構成在美國或在根據有關司法權區的證券法律登記或符合資格前要約、招攬或出售證券將屬非法的任何其他司法權區出售任何證券的要約或收購、購買或認購任何證券的要約招攬，亦不構成有關要約或招攬的一部分。本公告所述證券概無且不會根據一九三三年美國證券法（經修訂）（「**證券法**」）或美國任何州或其他司法權區之證券法例登記，除根據證券法之登記規定獲豁免或屬不受證券法所規限的交易外，概不可在美國境內發售或出售。本公告所述證券乃依賴證券法144A條或根據對證券法登記規定的其他豁免在美國或依賴證券法S規例向非美國人士在美國境外發售及出售。不會在美國或限制或禁止發售的任何其他司法權區公開發售證券。本公告並非供直接或間接在或向美國發佈。*

致香港投資者之通知：*本公司確認，票據旨在僅由專業投資者（定義見上市規則第三十七章）購買，並已按該基準於香港聯合交易所有限公司（「**香港聯交所**」）上市。因此，本公司確認，票據不適合由香港散戶投資者投資。投資者應仔細考慮所涉及的風險。*

刊發發售備忘錄

ENN 新奧

新奧能源控股有限公司
ENN Energy Holdings Limited

（於開曼群島註冊成立之有限公司）
（股份代號：**2688**）

550,000,000美元於二零二七年到期之**4.625%**綠色優先票據（「票據」）

（股份代號：**5235**）

聯席全球協調人、聯席賬簿管理人及聯席牽頭經辦人

滙豐　摩根士丹利　花旗　德意志銀行　瑞穗證券

聯席賬簿管理人及聯席牽頭經辦人

澳新銀行　法國巴黎銀行　三菱日聯證券　法國外貿銀行　渣打銀行

本公告乃新奧能源控股有限公司(「**本公司**」)根據上市規則第37.39A條刊發。

請參閱本公告隨附的日期為二零二二年五月十一日有關票據發行之發售備忘錄(「**發售備忘錄**」)。票據旨在僅由專業投資者(定義見上市規則第三十七章)購買,並已按該基準於香港聯交所上市。發售備忘錄僅以英文刊發。發售備忘錄並無刊發中文版。

發售備忘錄僅供參考,不構成向任何司法權區的公眾人士要約出售任何證券的章程、通知、通函、手冊或廣告,並非向公眾人士發出的要約認購或購買任何證券的邀請,亦並非旨在邀請公眾人士提出任何或購買任何證券的要約。

發售備忘錄不得被視為誘使認購或購買本公司的任何證券,且無意進行該勸誘。不應基於發售備忘錄所載資料作出投資決定。

香港,二零二二年五月十八日

於本公告日期,本公司董事會由下列董事組成:

執行董事:
王玉鎖先生(主席)
鄭洪弢先生(副主席)
吳曉菁女士(總裁)
王冬至先生

非執行董事:
王子崢先生
金永生先生
張宇迎先生

獨立非執行董事:
馬志祥先生
阮葆光先生
羅義坤先生
嚴玉瑜女士

IMPORTANT NOTICE

THIS OFFERING IS AVAILABLE ONLY TO INVESTORS WHO ARE EITHER (1) QIBS (AS DEFINED BELOW) OR (2) NON-U.S. PERSONS OUTSIDE OF THE UNITED STATES

IMPORTANT: You must read the following disclaimer before continuing. The following disclaimer applies to the attached offering memorandum (the "**Offering Memorandum**"). You are therefore advised to read this disclaimer carefully before reading, accessing or making any other use of the attached. In accessing the attached, you agree to be bound by the following terms and conditions, including any modifications to them from time to time, each time you receive any information from us as a result of such access.

Confirmation of your Representation: You have accessed the attached document on the basis that you have confirmed your representation to The Hongkong and Shanghai Banking Corporation Limited, Morgan Stanley & Co. International plc, Citigroup Global Markets Inc., Deutsche Bank AG, Singapore Branch, Mizuho Securities Asia Limited, Australia and New Zealand Banking Group Limited, BNP Paribas, MUFG Securities Asia Limited, Natixis and Standard Chartered Bank (collectively, the "**Initial Purchasers**") that (1) either (i) you and any customers you represent are non-U.S. persons outside the United States and the electronic mail address that you gave us and to which this e-mail has been delivered is not located in the United States and, to the extent you purchase the securities described in the attached Offering Memorandum you will be doing so pursuant to Regulation S under the U.S. Securities Act of 1933, as amended (the "**Securities Act**"), or (ii) you are acting on behalf of, or you are, a qualified institutional buyer ("**QIB**"), as defined in Rule 144A under the Securities Act, and (2) you consent to delivery of the attached Offering Memorandum and any amendments or supplements thereto by electronic transmission.

The attached document has been made available to you in electronic form. You are reminded that documents transmitted via this medium may be altered or changed during the process of transmission and consequently none of the Initial Purchasers nor any of their respective employees, representatives or affiliates accepts any liability or responsibility whatsoever in respect of any discrepancies between the document distributed to you in electronic format and the hard copy version. We will provide a hard copy version to you upon request.

Restrictions: The attached Offering Memorandum is being furnished in connection with an offering exempt from registration under the Securities Act solely for the purpose of enabling a prospective investor to consider the purchase of the securities described in the Offering Memorandum. You are reminded that the information in the attached document is not complete and may be changed.

THE SECURITIES HAVE NOT BEEN, AND WILL NOT BE, REGISTERED UNDER THE SECURITIES ACT, OR THE SECURITIES LAWS OF ANY STATE OF THE UNITED STATES OR OTHER JURISDICTION AND THE SECURITIES MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS (AS DEFINED IN REGULATION S UNDER THE SECURITIES ACT), EXCEPT PURSUANT TO AN EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND APPLICABLE STATE OR LOCAL SECURITIES LAWS.

Except with respect to eligible investors in jurisdictions where such offer is permitted by law, nothing in this electronic transmission constitutes an offer or an invitation by or on behalf of either the issuer of the securities or any Initial Purchaser to subscribe for or purchase any of the securities described therein, and access has been limited so that it shall not constitute a general advertisement or general solicitation (as those terms are used in Regulation D under the Securities Act) or directed selling efforts (within the meaning of Regulation S under the Securities Act) in the United States or elsewhere.

Prohibition of sales to EEA retail investors – The securities described in the attached Offering Memorandum are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area (the "**EEA**"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, "**MiFID II**"); or (ii) a customer within the meaning of Directive (EU) 2016/97 (the "**Insurance Distribution Directive**"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II. Consequently no key information document required by Regulation (EU) No 1286/2014 (as amended, the "**PRIIPs Regulation**") for offering or selling the securities described in the attached Offering Memorandum or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the securities described in the attached Offering Memorandum or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

Prohibition of sales to UK retail investors – The securities described in the attached Offering Memorandum are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the United Kingdom ("UK"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018, as amended by the European Union (Withdrawal Agreement) Act 2020 ("**EUWA**"); or (ii) a customer within the meaning of the provisions of the Financial Services and Markets Act 2000 of the United Kingdom, as amended (the "**FSMA**") and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA. Consequently no key information document required by Regulation (EU) No 1286/2014 as it forms part of domestic law by virtue of the EUWA (the "**UK PRIIPs Regulation**") for offering or selling the Notes or otherwise making them available to retail investors in the UK has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the UK may be unlawful under the UK PRIIPs Regulation.

Notification under Section 309B(1)(c) of the Securities and Futures Act, Chapter 289 of Singapore (the "**SFA**") – the Company has determined, and hereby notifies all relevant persons (as defined in Section 309A(1) of the SFA), that the Notes are prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018 of Singapore) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

You are reminded that you have accessed the attached Offering Memorandum on the basis that you are a person into whose possession this Offering Memorandum may be lawfully delivered in accordance with the laws of the jurisdiction in which you are located and you may not nor are you authorized to deliver or forward this document, electronically or otherwise, to any other person. If you have gained access to this transmission contrary to the foregoing restrictions, you will be unable to purchase any of the securities described therein.

Actions that You May Not Take: You should not reply by e-mail to this document, and you may not purchase any securities by doing so. Any reply e-mail communications, including those you generate by using the "Reply" function on your e-mail software, will be ignored or rejected.

THE ATTACHED OFFERING MEMORANDUM MAY NOT BE FORWARDED OR DISTRIBUTED TO ANY OTHER PERSON AND MAY NOT BE REPRODUCED IN ANY MANNER WHATSOEVER. ANY FORWARDING, DISTRIBUTION OR REPRODUCTION OF THIS DOCUMENT IN WHOLE OR IN PART IS UNAUTHORIZED. FAILURE TO COMPLY WITH THIS DIRECTIVE MAY RESULT IN A VIOLATION OF THE SECURITIES ACT OR THE APPLICABLE LAWS OF OTHER JURISDICTIONS.

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STRICTLY CONFIDENTIAL

新奥能源控股有限公司
ENN Energy Holdings Limited

(incorporated with limited liability under the laws of the Cayman Islands)

(Stock Code: 2688)

US$550,000,000 4.625% GREEN SENIOR NOTES DUE 2027

The US$550,000,000 4.625% Green Senior Notes due 2027 (the "**Notes**") will be the unsubordinated and unsecured senior obligations of ENN Energy Holdings Limited (the "**Company**" or "**we**"). The Notes will bear interest at a rate of 4.625% per year. Interest on the Notes will accrue from May 17, 2022. Interest will be paid on the Notes semi-annually in arrears on May 17 and November 17 of each year, beginning on November 17, 2022. Unless previously repurchased, cancelled or redeemed, the Notes will mature on May 17, 2027. The Notes are being issued as "**Green Notes**" under our Green Finance Framework. See "*Green Finance Framework.*"

Pursuant to the Circular on Promoting the Reform of the Administrative System on the Issuance by Enterprises of Foreign Debt Filings and Registrations (國家發展改革委關於推進企業發行外債備案登記制管理改革的通知(發改外資[2015]2044號)) (the "**NDRC Circular**") issued by the National Development and Reform Commission of the PRC or its local counterparts (the "**NDRC**") on September 14, 2015 which came into effect on the same day, the Company has registered the issuance of the Notes with the NDRC and obtained a certificate from NDRC on April 6, 2022 evidencing such registration and intends to provide the requisite information on the issuance of the Notes to the NDRC within 10 Registration Business Days (as defined in the Description of the Notes) after the issue date of the Notes.

The Company may redeem the Notes at any time upon the occurrence of certain tax events. In addition, the Company may, at any time and from time to time redeem the Notes on any date, on not less than 30 nor more than 60 days' prior notice, in whole or in part, on not less than 30 nor more than 60 days' prior notice, at a price equal to (a) in the case of the optional redemption date prior to April 17, 2027 (the date that is one month prior to the maturity date for the Notes), the greater of (1) 100% of the principal amount of the applicable Notes to be redeemed and (2) the sum of the present values of the remaining scheduled payments of principal and interest on the applicable Notes to be redeemed (not including interest accrued and unpaid to the date of redemption), discounted to the date of redemption on a semi-annual basis (assuming a 360-day year consisting of 12 months of 30 days each and, in the case of an incomplete month, the actual number of days elapsed) at the Adjusted Treasury Rate (as defined in the Description of the Notes) plus 30 basis points, plus, in either case, accrued and unpaid interest on the applicable Notes to be redeemed, if any, to (but not including) the optional redemption date; or (b) in the case of an optional redemption date on or after April 17, 2027 (the date that is one month prior to the maturity date for the Notes), 100% of the principal amount of the Notes to be redeemed, plus accrued and unpaid interest, if any, to, but not including, the optional redemption date. Upon the occurrence of a Change of Control (as defined in the Description of the Notes), we must make an offer to repurchase all or some Notes outstanding at a purchase price equal to 101% of their principal amount, plus accrued and unpaid interest, if any, to but excluding the date of repurchase.

The Notes will rank *pari passu* with all of the Company's other existing and future unsubordinated obligations and will be effectively subordinated to its secured obligations.

Investing in the Notes involves risks. See "*Risk Factors*" beginning on page 11.

The Notes are expected to be assigned a rating of "Baa1" by Moody's Investors Service Hong Kong Limited ("**Moody's**"), "BBB" by S&P Global Ratings, a division of the S&P Global, Inc. ("**S&P**") and "BBB+" by Fitch (Hong Kong) Limited ("**Fitch**"). The Company is rated "Baa1" by Moody's with stable outlook, "BBB" by S&P with positive outlook and "BBB+" by Fitch with stable outlook. A rating is not a recommendation to buy, sell or hold the Notes and may be subject to suspension, reduction or withdrawal at any time. A suspension, reduction or withdrawal of the rating assigned to the Notes may adversely affect the market price of the Notes.

Application will be made to The Stock Exchange of Hong Kong Limited (the "**SEHK**" or "**Hong Kong Stock Exchange**") for the listing of the Notes by way of debt issues to professional investors (as defined in Chapter 37 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited) ("**Professional Investors**") only. This Offering Memorandum is for distribution to Professional Investors only.

Notice to Hong Kong investors: The Company confirms that the Notes are intended for purchase by Professional Investors only and will be listed on the SEHK on that basis. Accordingly, the Company confirms that the Notes are not appropriate as an investment for retail investors in Hong Kong. Investors should carefully consider the risks involved.

The SEHK has not reviewed the contents of this Offering Memorandum, other than to ensure that the prescribed form disclaimer and responsibility statements and a statement limiting distribution of this Offering Memorandum to Professional Investors only have been reproduced in this Offering Memorandum. Listing of the Notes on the SEHK is not to be taken as an indication of the commercial merits or credit quality of the Notes or the Company or the Group or quality of disclosure in this Offering Memorandum. Hong Kong Exchanges and Clearing Limited and the SEHK take no responsibility for the contents of this Offering Memorandum, make no representation as to its accuracy or completeness and expressly disclaim any liability whatsoever for any loss howsoever arising from or in reliance upon the whole or any part of the contents of this Offering Memorandum.

The listing of, and permission to deal in, the Notes by way of debt issues to Professional Investors only is expected to become effective on or about May 18, 2022.

Offering Price for the Notes: 99.568%

The Notes have not been and will not be registered under the U.S. Securities Act of 1933, as amended (the "**Securities Act**"), or the securities laws of any other place. Accordingly, the Notes may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons (as such terms are defined under the Securities Act) except pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act. The Notes may be offered and sold only to (1) persons who are qualified institutional buyers ("**Qualified Institutional Buyers**") (as defined in Rule 144A under the Securities Act) purchasing for their own account or the account of a Qualified Institutional Buyer as to which the purchaser exercises sole investment discretion, in reliance on the exemption from the registration requirements of the Securities Act provided by Rule 144A; or (2) non-U.S. persons in offshore transactions in reliance on Regulation S under the Securities Act, and in each case in accordance with any other applicable law. Prospective purchasers are hereby notified that the seller of the Notes may be relying on the exemption from the provisions of Section 5 of the Securities Act provided by Rule 144A. For a description of certain restrictions on resales and transfers, see "*Transfer Restrictions.*"

It is expected that delivery of the Notes will be made to investors in book-entry form through the facilities of the Depository Trust Company on or about May 17, 2022.

Joint Global Coordinators, Joint Bookrunners and Joint Lead Managers

HSBC **Morgan Stanley** **Citigroup** **Deutsche Bank** **Mizuho Securities**

Joint Bookrunners and Joint Lead Managers

ANZ **BNP PARIBAS** **MUFG** **Natixis** **Standard Chartered Bank**

Offering Memorandum dated May 11, 2022.

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IMPORTANT NOTICE

THIS OFFERING MEMORANDUM DOES NOT CONSTITUTE AN OFFER TO SELL, OR A SOLICITATION OF AN OFFER TO BUY, ANY SECURITIES IN ANY JURISDICTION TO ANY PERSON TO WHOM IT IS UNLAWFUL TO MAKE THE OFFER OR SOLICITATION IN SUCH JURISDICTION. NEITHER THE DELIVERY OF THIS OFFERING MEMORANDUM NOR ANY SALE MADE HEREUNDER SHALL UNDER ANY CIRCUMSTANCES IMPLY THAT THERE HAS BEEN NO CHANGE IN THE AFFAIRS OF THE COMPANY OR ANY OF ITS SUBSIDIARIES OR THAT THE INFORMATION SET FORTH IN THIS OFFERING MEMORANDUM IS CORRECT AS AT ANY DATE SUBSEQUENT TO THE DATE HEREOF.

This Offering Memorandum includes particulars given in compliance with the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "**Listing Rules**") for the purpose of giving information with regard to the Company and the Group. We accept full responsibility for the accuracy of the information contained in this Offering Memorandum and confirm, having made all reasonable enquiries, that to the best of our knowledge and belief there are no other facts the omission of which would make any statement herein misleading.

We, having made all reasonable inquiries, confirm that: (i) this Offering Memorandum contains all information with respect to us, our subsidiaries and affiliates referred to in this Offering Memorandum and the Notes that is material in the context of the issue and offering of the Notes (including the information which is required by applicable laws and according to the particular nature of us and the Notes and is necessary to enable investors and their investment advisers to make an informed assessment of our assets and liabilities, financial position, profits and losses, and prospects and of the rights attaching to the Notes); (ii) the statements contained in this Offering Memorandum relating to us and our subsidiaries and our affiliates are in every material respect true and accurate and not misleading; (iii) the opinions and intentions expressed in this Offering Memorandum with regard to us and our subsidiaries and affiliates are honestly held, have been reached after considering all relevant circumstances and are based on reasonable assumptions; (iv) there are no other facts in relation to us, our subsidiaries and affiliates, or the Notes, the omission of which would, in the context of the issue and offering of the Notes, make any statement in this Offering Memorandum misleading in any material respect; (v) we have made all reasonable enquiries to ascertain such facts and to verify the accuracy of all such information and statements in this Offering Memorandum; and (vi) the statistical, industry and market related data and forward looking statements included in this Offering Memorandum (if any) are based on or derived or extracted from sources which we believe to be accurate and reliable in all material respects. We accept responsibility accordingly.

This Offering Memorandum is highly confidential. We are providing it solely for the purpose of enabling you to consider a purchase of the Notes. You should read this Offering Memorandum before making a decision whether to purchase the Notes. You must not use this Offering Memorandum for any other purpose, or disclose any information in this Offering Memorandum to any other person. The distribution of this Offering Memorandum and the offering of the Notes in certain jurisdictions may be restricted by law. Persons into whose possession this Offering Memorandum comes are required by us, The Hongkong and Shanghai Banking Corporation Limited, Morgan Stanley & Co. International plc, Citigroup Global Markets Inc., Deutsche Bank AG, Singapore Branch and Mizuho Securities Asia Limited (collectively, the "**Joint Global Coordinators**", and each a "**Joint Global Coordinator**") and Australia and New Zealand Banking Group Limited, BNP Paribas, MUFG Securities Asia Limited, Natixis and Standard Chartered Bank (together with the Joint Global Coordinators, the "**Joint Bookrunners and Joint Lead Managers**", and, collectively, the "**Initial Purchasers**"), the Trustee and the Paying Agent, the Registrar or the Transfer Agent (collectively, the "**Agents**") to inform themselves about and to observe any such restrictions. No action is being taken to permit a public offering of the Notes or the distribution of this Offering Memorandum or any offering or publicity material relating to the Notes in any jurisdiction where action would be required for such purposes. There are restrictions on the offer, sale and resale of the Notes, and the circulation of documents relating thereto, in certain jurisdictions including, without limitation, the United States, the United Kingdom, Hong Kong, PRC, Singapore and Japan, and to persons connected therewith. For a description of certain further restrictions on offers, sales and resales of the Notes and distribution of this Offering Memorandum, see "*Plan of Distribution.*" This Offering Memorandum does not constitute an offer of, or an invitation to purchase, any of the Notes in any jurisdiction in which such offer or invitation would be unlawful. By purchasing the Notes, investors represent and agree to all of those provisions contained in that section of this Offering Memorandum.

No person has been or is authorized to give any information or to make any representation concerning us, our subsidiaries and affiliates and the Notes other than as contained in this Offering Memorandum and, if given or made, such other information or representation must not be relied upon as having been authorized by or on behalf of any of us, our subsidiaries and affiliates, the Initial Purchasers, the Trustee or the Agents (or any of their respective affiliates, directors, officers, employees, representatives, agents or advisers or any person who controls any of them or their respective advisers). Neither the delivery of this Offering Memorandum nor any offering, sale or delivery made in connection with the issue of the Notes shall, under any circumstances, constitute a representation that there has been no change, or development reasonably likely to involve a change, in the affairs of us, our subsidiaries and affiliates since the date hereof or create any implication that the information contained herein is correct as at any date subsequent to the date hereof.

This Offering Memorandum does not constitute an offer of, or an invitation by or on behalf of us, the Initial Purchasers, the Trustee or the Agents (or any of their respective affiliates, directors, officers, employees, representatives, agents or advisers or any person who controls any of them or their respective advisers) to subscribe for or purchase any Notes and this document may not be used for the purpose of an offer to, or a solicitation by, anyone in any jurisdiction or in any circumstances in which such offer or solicitation is not authorized or is unlawful.

This Offering Memorandum is being furnished by us in connection with the offering of the Notes exempt from registration under the Securities Act solely for the purpose of enabling a prospective investor to consider purchasing the Notes. Investors must not use this Offering Memorandum for any other purpose, make copies of any part of this Offering Memorandum or give a copy of it to any other person, or disclose any information in this Offering Memorandum to any other person. The information contained in this Offering Memorandum has been provided by us and other sources identified in this Offering Memorandum. Any reproduction or distribution of this Offering Memorandum, in whole or in part, and any disclosure of its contents or use of any information herein for any purpose other than considering an investment in the Notes offered by this Offering Memorandum is prohibited. Each offeree of the Notes, by accepting delivery of this Offering Memorandum, agrees to the foregoing.

Prohibition of sales to EEA retail investors – The securities described in the attached Offering Memorandum are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the European Economic Area (the "**EEA**"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, "**MiFID II**"); or (ii) a customer within the meaning of Directive (EU) 2016/97 (the "**Insurance Distribution Directive**"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II. Consequently no key information document required by Regulation (EU) No 1286/2014 (as amended, the "**PRIIPs Regulation**") for offering or selling the securities described in the attached Offering Memorandum or otherwise making them available to retail investors in the EEA has been prepared and therefore offering or selling the securities described in the attached Offering Memorandum or otherwise making them available to any retail investor in the EEA may be unlawful under the PRIIPs Regulation.

Prohibition of sales to UK retail investors – The securities described in the attached Offering Memorandum are not intended to be offered, sold or otherwise made available to and should not be offered, sold or otherwise made available to any retail investor in the United Kingdom ("**UK**"). For these purposes, a retail investor means a person who is one (or more) of: (i) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018, as amended by the European Union (Withdrawal Agreement) Act 2020 ("**EUWA**"); or (ii) a customer within the meaning of the provisions of the Financial Services and Markets Act 2000 of the United Kingdom, as amended (the "**FSMA**") and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97, where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA. Consequently no key information document required by Regulation (EU) No 1286/2014 as it forms part of domestic law by virtue of the EUWA (the "**UK PRIIPs Regulation**") for offering or selling the Notes or otherwise making them available to retail investors in the UK has been prepared and therefore offering or selling the Notes or otherwise making them available to any retail investor in the UK may be unlawful under the UK PRIIPs Regulation.

Singapore Securities and Futures Act Product Classification – Solely for the purposes of its obligations pursuant to sections 309B(1)(a) and 309B(1)(c) of the Securities and Futures Act, Chapter 289 of Singapore (the "**SFA**"), we have determined, and hereby notify all relevant persons (as defined in Section 309A(1) of the SFA) that the Notes are "prescribed capital markets products (as defined in the Securities and Futures (Capital Markets Products) Regulations 2018) and Excluded Investment Products (as defined in MAS Notice SFA 04-N12: Notice on the Sale of Investment Products and MAS Notice FAA-N16: Notice on Recommendations on Investment Products).

You are responsible for making your own examination of us and your own assessment of the merits and risks of investing in the Notes. By purchasing the Notes, you will be deemed to have acknowledged that you have made certain acknowledgements, representations and agreements as set forth under the section entitled "*Plan of Distribution*" below.

No representation or warranty, express or implied, is made by the Initial Purchasers, the Trustee or the Agents (or any of their respective affiliates, directors, officers, employees, representatives, agents or advisers) as to the accuracy, completeness or sufficiency of the information contained in this Offering Memorandum, and nothing contained in this Offering Memorandum is, or shall be relied upon as, a promise, representation or warranty by the Initial Purchasers, the Trustee or the Agents.

None of the Initial Purchasers, the Trustee or the Agents (or any of their respective affiliates, directors, officers, employees, representatives, agents or advisers) or any person who controls any of them or their respective advisers has independently verified the information contained in this Offering Memorandum and can give no assurance that this information is accurate, truthful or complete. Accordingly, no representation, warranty or undertaking, express or implied, is made or given and no responsibility or liability is accepted, by the Initial Purchasers, the Trustee or the Agents (or any of their respective affiliates, directors, officers, employees, agents, representatives or advisers) or any person who controls any of them or their respective advisers, as to the accuracy, completeness or sufficiency of the information contained in this Offering Memorandum or any other information supplied in connection with the Notes. Nothing contained in this Offering Memorandum is, or shall be relied upon as, a promise, representation or warranty by us, the Initial Purchasers, the Trustee or the Agents (or any of their respective affiliates, directors, officers, employees, agents, representatives or advisers) or any person who controls any of them or their respective advisers.

This Offering Memorandum is not intended to provide the basis of any credit or other evaluation nor should it be considered as a recommendation by the Company, the Initial Purchasers, the Trustee or the Agents that any recipient of this Offering Memorandum should purchase the Notes. Each potential purchaser of the Notes should determine for itself the relevance of the information contained in this Offering Memorandum and its purchase of the Notes should be based upon such investigations with its own tax, legal and business advisers as it deems necessary.

To the fullest extent permitted by law, none of the Initial Purchasers, the Trustee or the Agents accepts any responsibility for the contents of this Offering Memorandum or for any other statement made or purported to be made by the Initial Purchasers, the Trustee or the Agents or on any of their behalf in connection with the Company, its subsidiaries (together with the Company, the "Group"), or the Notes. Each of the Initial Purchasers, the Trustee and the Agents accordingly disclaims all and any liability whether arising in tort or contract or otherwise (save as referred to above) which it might otherwise have in respect of this Offering Memorandum or any such statement.

Listing of the Notes on the Hong Kong Stock Exchange is not to be taken as an indication of the merits of the Company or the Notes. In making an investment decision, investors must rely on their own examination of the Company and the Group and the terms of the offering, including the merits and risks involved. See "*Risk Factors*" for a discussion of certain factors to be considered in connection with an investment in the Notes.

Each person receiving this Offering Memorandum acknowledges that: no person has been authorized to give any information or to make any representation concerning the Company or the Notes (other than as contained herein) and, if given or made, any such other information or representation should not be relied upon as having been authorized by the Company, the Initial Purchasers, the Trustee or the Agents. Neither the delivery of this Offering Memorandum nor any offering, sale or delivery made in connection with the issue of the Notes shall, under any circumstances, constitutes a representation that there has been no material change or development reasonably likely to involve a change in the affairs of the Company since the date hereof or create any implication that the information contained herein is correct as of any date subsequent to the date hereof.

We are not, and the Initial Purchasers are not, making an offer to sell the Notes in any jurisdiction except where an offer or sale is permitted. The distribution of this Offering Memorandum and the offering of the Notes may be restricted by law in certain jurisdictions. Persons who are in possession of this Offering Memorandum are required by us and the Initial Purchasers to inform themselves about and to observe any such restrictions. For a description of the restrictions on offers, sales and resales of the Notes and distribution of this Offering Memorandum, see "*Plan of Distribution*" below.

IN CONNECTION WITH THE ISSUE OF THE NOTES, ANY OF THE INITIAL PURCHASERS APPOINTED AND ACTING IN SUCH CAPACITY (THE "STABILIZATION MANAGER") OR ANY PERSON ACTING ON BEHALF OF THE STABILIZATION MANAGER MAY, TO THE EXTENT PERMITTED BY APPLICABLE LAWS AND DIRECTIVES, OVER-ALLOT THE NOTES OR EFFECT TRANSACTIONS WITH A VIEW TO SUPPORTING THE PRICE OF THE NOTES AT A LEVEL HIGHER THAN THAT WHICH MIGHT OTHERWISE PREVAIL, BUT IN SO DOING, THE STABILIZATION MANAGER OR ANY PERSON ACTING ON BEHALF OF THE STABILIZATION MANAGER SHALL ACT AS PRINCIPAL AND NOT AS AGENT OF THE COMPANY. HOWEVER, THERE IS NO ASSURANCE THAT THE STABILIZATION MANAGER OR ANY PERSON ACTING ON BEHALF OF THE STABILIZATION MANAGER WILL UNDERTAKE STABILIZATION ACTION. ANY STABILIZATION ACTION MAY BEGIN ON OR AFTER THE DATE ON WHICH ADEQUATE PUBLIC DISCLOSURE OF THE TERMS OF THE NOTES IS MADE AND, IF BEGUN, MAY BE ENDED AT ANY TIME, BUT IT MUST END NO LATER THAN THE EARLIER OF 30 DAYS AFTER THE ISSUE DATE OF THE NOTES AND 60 DAYS AFTER THE DATE OF THE ALLOTMENT OF THE NOTES. ANY LOSS OR PROFIT SUSTAINED AS A CONSEQUENCE OF ANY SUCH OVERALLOTMENT OR STABILIZATION SHALL BE FOR THE ACCOUNT OF THE INITIAL PURCHASERS.

This Offering Memorandum summarizes certain material documents and other information, and we refer you to them for a more complete understanding of what we discuss in this Offering Memorandum. In making an investment decision, you must rely on your own examination of us and the terms of the offering, including the merits and risks involved. We are not making any representation to you regarding the legality of an investment in the Notes by you under any legal, investment or similar laws or regulations. You should not consider any information in this Offering Memorandum to be legal, business or tax advice. You should consult your own professional advisors for legal, business, tax and other advice regarding an investment in the Notes.

We reserve the right to withdraw the offering of Notes at any time, and the each of the Initial Purchasers reserves the right to reject any commitment to subscribe for the Notes in whole or in part and to allot to any prospective purchaser less than the full amount of the Notes sought by such purchaser. The Initial Purchasers and certain related entities may acquire for their own account a portion of the Notes.

CERTAIN DEFINITIONS, CONVENTIONS AND CURRENCY PRESENTATION

We have prepared this Offering Memorandum using a number of conventions, which you should consider when reading the information contained herein. When we use the terms "we," "us," "our," the "Company," the "Group" and words of similar import, we are referring to ENN Energy Holdings Limited itself, or to ENN Energy Holdings Limited and its consolidated subsidiaries, as the context requires.

All references in this Offering Memorandum to "U.S. dollars", "USD" and "US$" are to United States dollars, the official currency of the United States of America (the "**United States**" or "**U.S.**").; all references to "HK dollars" and "HK$" are to Hong Kong dollars, the official currency of the Hong Kong Special Administrative Region of the PRC ("**Hong Kong**").; and all references to "RMB" or "Renminbi" are to Renminbi, the official currency of the PRC.

We record and publish our financial statements in Renminbi. Unless otherwise stated in this Offering Memorandum, all translations from Renminbi amounts to U.S. dollars were made at the rate of RMB6.3726 to US$1.00, the noon buying rate in New York City for cable transfers payable in Renminbi as certified for customs purposes by the Federal Reserve Bank of New York on December 30, 2021, and all translations from HK dollars into U.S. dollars were made at the rate of HK$7.7996 to US$1.00, the noon buying rate in New York City for cable transfers payable in HK dollars as certified for customs purposes by the Federal Reserve Bank of New York on December 30, 2021. All such translations in this Offering Memorandum are provided solely for your convenience and no representation is made that the Renminbi amounts referred to herein have been, could have been or could be converted into U.S. dollars or HK dollars, or vice versa, at any particular rate or at all.

In this Offering Memorandum, unless the context otherwise requires, the following terms shall have the meanings set out below.

"2017 Bonds" means the US$600 million principal amount of 3.25% bonds due 2022 issued by our Company constituted by a trust deed dated July 24, 2017.

"2020 Green Notes" means the US$750 million principal amount of 2.625% green senior notes due 2030 issued by our Company under an indenture dated September 17, 2020.

"CAGR" means compound annual growth rate.

"C&I customer(s)" means commercial and industrial customer(s).

"CNG" means compressed natural gas.

"CNOOC" means China National Offshore Oil Corporation.

"CNPC" means China National Petroleum Corporation.

"EGII" means ENN Group International Investment Limited.

"EIH" means ENN Investment Holdings Company Limited.

"EIT Law" means the Enterprise Income Tax Law of the PRC (《中華人民共和國企業所得稅法》), as amended.

"ENN-NG" means ENN Natural Gas Co., Ltd. (新奧天然氣股份有限公司) (formerly known as ENN Ecological Holdings Co., Ltd. (新奧生態控股股份有限公司)), a controlling shareholder of our Company.

"14th Five-Year Plan" means the Outline of the People's Republic of China 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035 (《中華人民共和國國民經濟和社會發展第十四個五年規劃和2035年遠景目標綱要》).

"GDP" mean gross domestic product.

"IIT Law" means the PRC Individual Income Tax Law of the PRC, as amended.

"kWh" means kilowatt-hour.

"LCNG" means Langfang City Natural Gas Company Limited (廊坊市天然氣有限公司).

"LNG" means liquefied natural gas.

"LPG" means liquefied petroleum gas.

"m^3" means cubic meter(s).

"NDRC" means the National Development and Reform Commission of the PRC.

"PBOC" means People's Bank of China.

"%" means a percentage of a specified amount.

"PipeChina" means China Oil & Gas Pipeline Network Corporation.

"SAFE" means the State Administration of Foreign Exchange of the PRC.

"13th Five-Year Plan" means the Thirteenth Five-Year Plan Guidelines for National Economic and Social Development of the PRC (《中華人民共和國國民經濟和社會發展第十三個五年規劃綱要》).

"Xinao (China)" means Xinao (China) Gas Investment Company Limited (新奧(中國)燃氣投資有限公司), one of our wholly owned subsidiary.

"Xinneng HK" means Xinneng (Hong Kong) Energy Investment Limited (新能(香港)能源投資有限公司).

References to the "PRC" and "China" are to the People's Republic of China and, for the purposes of this Offering Memorandum, do not include the Hong Kong Special Administrative Region, the Macau Special Administrative Region or Taiwan. "PRC government" means the central government of the PRC, including all political subdivisions (including provincial, municipal and other regional or local governmental entities) and instrumentalities thereof.

References in this Offering Memorandum to accounting periods are based on our Company's fiscal year, which ends on December 31.

In this Offering Memorandum, because certain amounts have been rounded, totals of columns or rows of numbers in tables may not be equal to the apparent total of the individual items, and actual numbers may differ from those contained herein due to rounding.

Facts and statistics in this Offering Memorandum relating to global economy and the relevant industry are derived from publicly available sources. While the Company has taken reasonable care to ensure that the facts and statistics presented are accurately reproduced from such sources, they have not been independently verified by any of the Company, the Initial Purchasers, the Trustee, the Agents or their respective advisors and, therefore, neither the Company nor such parties make any representation as to the accuracy of such facts and statistics. Due to possibly flawed or ineffective calculation and collection methods and other problems, the facts and statistics herein may be inaccurate or may not be comparable to facts and statistics produced for other economies and should not be unduly relied upon. Further, the Company cannot assure investors that they are stated or compiled on the same basis or with the same degree of accuracy as may be the case elsewhere.

The English names of the PRC nationals, entities, departments, facilities, laws, regulations, certificates, titles and the like are translations of their Chinese names and are included for identification purposes only.

Unless otherwise indicated, all references in this Offering Memorandum to "Description of the Notes" are to the terms and conditions governing the Notes set out in "*Description of the Notes*" (the "Description of the Notes").

FORWARD-LOOKING STATEMENTS

This Offering Memorandum includes "forward-looking statements." All statements other than statements of historical fact contained in this Offering Memorandum, including, without limitation, those regarding our future financial position and results of operations, strategy, plans, objectives, goals and targets, future developments in the markets where we participate or are seeking to participate, and any statements preceded by, followed by or that include the words "believe," "expect," "aim," "intend," "will," "may," "anticipate," "seek," "should," "estimate," "target" or similar expressions or the negative thereof, are forward-looking statements. These forward-looking statements involve known and unknown risks, uncertainties and other factors, some of which are beyond our control, which may cause our actual results, performance or achievements, or industry results to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. These forward- looking statements are based on numerous assumptions regarding our present and future business strategies and the environment in which we will operate in the future. Important factors that could cause our actual results, performance or achievements to differ materially from those in the forward-looking statements include, among others, the following:

- general economic conditions, including those related to the natural gas industry, the PRC, and the jurisdictions in which we operate our business;
- government regulations, restrictions and approval processes in the jurisdictions in which we operate our business, including the PRC and local government's measures to curb air pollution and their promotion of the natural gas industry;
- competitive conditions and our ability to compete under those conditions;
- demand for natural gas over alternative fuels;
- our ability to implement our business and operating strategies;
- our ability to expand and manage our growth, both within China and abroad;
- our marketing and sales efforts and new business initiatives;
- fluctuations in currency exchange rates;
- supplier issues, including, but not limited to, variations and fluctuations in price, available quantity or delivery;
- possible disruptions to commercial activities due to natural and human-induced disasters, including, but not limited to, floods, earthquakes, epidemics, terrorist attacks and geopolitical tensions, conflicts and wars;
- development and continued effect of COVID-19; and
- those other risks identified in the "Risk Factors" section of this Offering Memorandum.

Any forward-looking statement speaks only as of the date on which it is made, and we undertake no obligation to update any forward-looking statement or statements to reflect events or circumstances after the date on which such statement is made or to reflect the occurrence of unanticipated events. New factors emerge from time to time and it is not possible for us to predict which will arise. In addition, we cannot access the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

NON-GAAP FINANCIAL MEASURES

We use adjusted EBITDA to provide additional information about our operating performance. We calculate adjusted EBITDA by adding/(subtracting) finance costs, depreciation and amortization expenses and other (gains)/losses to profit before tax. Adjusted EBITDA is not a standard measure under Hong Kong Financial Reporting Standards ("**HKFRS**"). Adjusted EBITDA is a widely used financial indicator of a company's ability to incur and service debt. Adjusted EBITDA should not be considered in isolation or construed as an alternative to cash flows, profit attributable to owners of the Company or any other measure of performance or as an indicator of our operating performance, liquidity, profitability or cash flows generated by operating, investing or financing activities. Adjusted EBITDA does not account for taxes, finance costs or depreciation and amortization expenses. In evaluating adjusted EBITDA, we believe that investors should consider, among other things, the components of adjusted EBITDA such as revenue and operating expenses and the amount by which adjusted EBITDA exceeds capital expenditures and other charges. We have included adjusted EBITDA herein because we believe it is a useful supplement to cash flow data as a measure of our performance and our ability to generate cash from operations to cover debt service and taxes. Adjusted EBITDA presented herein may not be comparable to similarly titled measures presented by other companies. Investors should not compare our adjusted EBITDA to adjusted EBITDA presented by other companies because not all companies use the same definition. The following table provides a reconciliation of profit before tax, the most relevant HKFRS term, to adjusted EBITDA:

	Year ended December 31,			
	2019	**2020**	**2021**	
	RMB million	*RMB million*	*RMB million*	*US$ million*
Profit before tax	8,841	9,558	11,393	1,788
Add finance costs	727	609	576	90
Add depreciation and amortization	1,784	2,081	2,263	355
Less other gains	(644)	(282)	(984)	(154)
Adjusted EBITDA	10,708	11,966	13,248	2,079

PRESENTATION OF FINANCIAL INFORMATION

Our consolidated financial statements were prepared in accordance with HKFRS, which differ in certain respects from generally accepted accounting principles in certain other jurisdictions. Unless the context otherwise requires, financial information in this Offering Memorandum is presented on a consolidated basis.

CAYMAN ISLANDS DATA PROTECTION

The Company has certain duties under the Data Protection Act (As Revised) of the Cayman Islands (the "**DPA**") based on internationally accepted principles of data privacy.

Prospective investors should note that, by virtue of making investments in the Notes and the associated interactions with the Company and its affiliates and/or delegates, or by virtue of providing the Company with personal information on individuals connected with the investor (for example directors, trustees, employees, representatives, shareholders, investors, clients, beneficial owners or agents) such individuals will be providing the Company and its affiliates and/or delegates with certain personal information which constitutes personal data within the meaning of the DPA. The Company shall act as a data controller in respect of this personal data and its affiliates and/or delegates may act as data processors (or data controllers in their own right in some circumstances).

By investing in the Notes, the Noteholders shall be deemed to acknowledge that they have read in detail and understood the Privacy Notice set out below and that such Privacy Notice provides an outline of their data protection rights and obligations as they relate to the investment in the Notes.

Oversight of the DPA is the responsibility of the Ombudsman's office of the Cayman Islands. Breach of the DPA by the Company could lead to enforcement action by the Ombudsman, including the imposition of remediation orders, monetary penalties or referral for criminal prosecution.

Privacy Notice

Introduction

The purpose of this notice is to provide Noteholders with information on the Company's use of their personal data in accordance with the DPA.

In the following discussion, "Company" refers to the Company and its affiliates and/or delegates, except where the context requires otherwise.

Investor Data

By virtue of making an investment in the Company and a Noteholder's associated interactions with the Company (including any subscription (whether past, present of future), including the recording of electronic communications or phone calls where applicable) or by virtue of a Noteholder otherwise providing the Company with personal information on individuals connected with the Noteholder as an investor (for example directors, trustees, employees, representatives, shareholders, investors, clients, beneficial owners or agents), the Noteholder will provide the Company with certain personal information which constitutes personal data within the meaning of the DPA ("**Investor Data**"). The Company may also obtain Investor Data from other public sources. Investor Data includes, without limitation, the following information relating to a Noteholder and/or any individuals connected with a Noteholder as an investor: name, residential address, email address, contact details, corporate contact information, signature, nationality, place of birth, date of birth, tax identification, credit history, correspondence records, passport number, bank account details, source of funds details and details relating to the Noteholder's investment activity.

In the Company's use of Investor Data, the Company will be characterized as a "data controller" for the purposes of the DPA. The Company's affiliates and delegates may act as "data processors" for the purposes of the DPA.

Whom this Affects

If a Noteholder is a natural person, this will affect such Noteholder directly. If a Noteholder is a corporate investor (including, for these purposes, legal arrangements such as trusts or exempted limited partnerships) that provides the Company with Investor Data on individuals connected to such Noteholder for any reason in relation to such Noteholder's investment with the Company, this will be relevant for those individuals and such Noteholder should transmit the content of this Privacy Notice to such individuals or otherwise advise them of its content.

How the Company May Use a Noteholder's Personal Data

The Company, as the data controller, may collect, store and use Investor Data for lawful purposes, including, in particular:

(i) where this is necessary for the performance of the Company's rights and obligations under any subscription agreements or purchase agreements;

(ii) where this is necessary for compliance with a legal and regulatory obligation to which the Company is subject (such as compliance with anti-money laundering and FATCA/CRS requirements); and/or

(iii) where this is necessary for the purposes of the Company's legitimate interests and such interests are not overridden by the Noteholder's interests, fundamental rights or freedoms.

Additionally, the authorized affiliates and/or delegates of the Company may use Investor Data, for example to provide their services to the Company or to discharge the legal or regulatory requirements that apply directly to them or in respect of which the Company relies upon them, but such use of Investor Data by the affiliates and/or delegates will always be compatible with at least one of the aforementioned purposes for which we process Investor Data.

Should the Company wish to use Investor Data for other specific purposes (including, if applicable, any purpose that requires a Noteholder's consent), the Company will contact the applicable Noteholders.

Why the Company May Transfer a Noteholder's Personal Data

In certain circumstances the Company and/or its authorized affiliates or delegates may be legally obliged to share Investor Data and other information with respect to a Noteholder's interest in the Company with the relevant regulatory authorities such as the Cayman Islands Monetary Authority or the Tax Information Authority. They, in turn, may exchange this information with foreign authorities, including tax authorities.

The Company anticipates disclosing Investor Data to the administrator and others who provide services to the Company and their respective affiliates (which may include certain entities located outside the Cayman Islands or the European Economic Area), who will process a Noteholder's personal data on the Company's behalf.

The Data Protection Measures the Company Takes

Any transfer of Investor Data by the Company or its duly authorized affiliates and/or delegates outside of the Cayman Islands shall be in accordance with the requirements of the DPA.

The Company and its duly authorized affiliates and/or delegates shall apply appropriate technical and organizational information security measures designed to protect against unauthorized or unlawful processing of Investor Data, and against accidental loss or destruction of, or damage to, Investor Data.

The Company shall notify a Noteholder of any Investor Data breach that is reasonably likely to result in a risk to the interests, fundamental rights or freedoms of either such Noteholder or those data subjects to whom the relevant Investor Data relates.

SUMMARY

The summary below is only intended to provide a limited overview of information described in more detail elsewhere in this Offering Memorandum. As it is a summary, it does not contain all of the information that may be important to investors and terms defined elsewhere in this Offering Memorandum shall have the same meanings when used in this Summary. Prospective investors should therefore read this Offering Memorandum in its entirety.

OVERVIEW

We are one of the largest privately-owned clean energy distributor and integrated energy solutions provider in China. Our principal business is the sale and distribution of piped gas, LNG and other multi-energy products, and the investment in, and the constructions, operation and management of, gas pipeline infrastructure, vehicle/ship refueling stations and integrated energy projects. We also conduct value added business, including the sales of gas-related appliances, energy-saving products, home safety and security products, and the provision of value added services that assist our customers in transitioning towards a low-carbon lifestyle and improving their quality of life.

We commenced operations in 1993 and have since developed into one of the leading privately-owned gas operators in the PRC. As of December 31, 2021, we had a total of 252 operational locations with a total connectable urban population of 124.3 million in China. We operate our piped gas distribution infrastructure on an exclusive basis, typically for periods ranging from 15 to 30 years, in cities and urban areas located in 20 provinces, municipalities and autonomous regions in China. We typically apply for and obtain exclusive rights from the local governments in China to distribute piped gas. We may also acquire exclusive rights by entering into joint ventures with existing local piped gas distributors. In addition, we construct and maintain city piped gas networks in locations where we have acquired exclusive rights through the above-mentioned means to supply piped gas. We charge construction and installation fees from property developers, residential customers and C&I customers according to local government's regulations. We receive recurring gas usage charges from connected customers based on the tariffs negotiated and determined within the price cap set by the local governments.

We intend to grow organically by increasing the penetration rates and the number of connected customers for our existing operational locations while continuing to develop new projects and expanding our concessions in China (including, without limitation, to add more operational locations and to acquire certain industrial park projects close to the existing operational locations), with a particular focus on the commercial and industrial zones of emerging cities. In 2019, 2020 and 2021, the number of city-gas projects under our management increased by 30, 18 and 17, respectively, in China.

Apart from our focus on city-gas projects, we adhere to the principle of integrated energy development, explore and utilize the most competitive low-carbon energy sources based on different local conditions, and develop integrated energy projects serving customers including industrial parks, factories, buildings and transportation. As of December 31, 2021, we had 150 integrated energy projects in operation and 42 projects under construction. The sales of integrated energy including cooling, heating, electricity and steam is expected to reach 36 billion kWh upon full operation over the next few years. With the direction to develop integrated energy business, we will be able to further diversify our business risks and explore more business opportunities including value added business.

For the years ended December 31, 2019, 2020 and 2021, our revenue was RMB70,183 million, RMB71,617 million and RMB93,113 million, respectively, and our net profit was RMB6,861 million, RMB7,331 million and RMB8,995 million, respectively. As of December 31, 2019, 2020 and 2021, our total net assets were RMB31,020 million, RMB36,172 million and RMB42,150 million, respectively.

Our shares were listed on the Growth Enterprise Market on May 10, 2001 and were transferred to the Main Board of the Hong Kong Stock Exchange (stock code: 2688) on June 3, 2002.

COMPETITIVE STRENGTHS

- Leading integrated energy supplier satisfying strong growth in customers' demand for energy and value added services
- Well-positioned in the fast-growing natural gas and integrated energy markets in China driven by favorable environmental policies
- Diversified business portfolio that enables us to secure a stable and sustainable profitability
- Continue to experience low-risk and strong organic growth
- Proven track record and experienced management team with strong execution capability

STRATEGIES

- Develop integrated energy business to expand business scale and improve service quality
- Expand and strengthen gas distribution business
- Improve the safety and distribution capacity of pipeline network, increase efficiency and reduce costs by leveraging digital intelligence technologies
- Upgrade the business model of our value added business

RECENT DEVELOPMENTS

Impact of COVID-19

The global outbreak of COVID-19, which was declared a pandemic by the World Health Organization in March 2020, has spread to almost every country in the world. The global impact of the outbreak continues to rapidly evolve, and many countries, including the PRC, have instituted quarantines, restrictions on travel, closed financial markets and/or restricted trading, and closed or limited hours of operations of non-essential businesses. Such actions are creating severe economic contraction and adversely impacting many industries. While most cities in the PRC gradually lifted the public health restrictions, recurring COVID-19 outbreaks have led to the re-introduction of such restrictions in several regions from time to time. Moreover, even where restrictions have been lifted, self-imposed social distancing and isolation measures may continue for a more prolonged period.

In response to the COVID-19 pandemic, the headquarter of the Group and all its member companies have formed an epidemic prevention and control team to coordinate epidemic prevention and control in accordance with national and local government requirements. We have implemented various policies to keep our employees safe and healthy, including regular disinfection at office areas, canteens, apartments and official vehicles; daily monitoring of the physical health of its employees; utilizing iCome platform for daily epidemic report mechanism to analyze the health statuses of employees, tracking health statuses of employees on quarantine and preparing contingency plans in advance to ensure the orderly implementation of epidemic prevention. As a leading enterprise in the public utilities sector, we are determined to ensure the safety of people's livelihood and gas usage during the outbreak, raise awareness of epidemic prevention both internally and externally, and ensure all departments are working closely together to protect frontline employees, providing masks, protective suits, goggles and other supplies to ensure that employees can provide services to customers safely. During the pandemic, most services provided by us have been diverted to mobile application and online platform, which lays a good foundation for us to develop value added business and explore more business opportunities. In 2021, as the outbreak of COVID-19 became relatively stabilized in China, while there were local outbreaks in various regions of China, our business development and operations were not materially and adversely affected. We cooperated with local governments to implement pandemic control measures and to ensure a stable gas supply. We also actively provided support to our customers to resume their operations and production with the stabilization of the pandemic. See also "*Risk Factors – Risks relating to Our Business – Our business, financial condition and results of operations may be materially and adversely affected by market fluctuations and economic slowdowns in the PRC and the global economy, particularly as a result of the COVID-19 pandemic.*"

Repayment of Two Tranches of the 2019 Corporate Bonds

One of our wholly owned subsidiaries, Xinao (China) issued three tranches of corporate bonds in 2019 (together, the "**2019 Corporate Bonds**"). The first tranche was issued on January 22, 2019 with a face value of RMB500,000,000, which is unsecured, carries an interest rate of 4.19 per cent. per annum and is payable on January 22, 2022. The second tranche was issued on March 8, 2019 with a face value of RMB1,000,000,000, which is unsecured, carries an interest rate of 4.20 per cent. per annum and is payable on March 8, 2022. The third tranche was issued on November 11, 2019 with a face value of RMB600,000,000, which is unsecured, carries an interest rate of 3.98 per cent. per annum and is payable on November 12, 2022. We have fully repaid the first and second tranches of the 2019 Corporate Bonds as of January 22, 2022 and March 8, 2022, respectively.

Signing of LNG Sale and Purchase Agreement with Energy Transfer LNG Export

On March 28, 2022, we, as purchaser, entered into a LNG Sale and Purchase Agreement with Energy Transfer LNG Export, LLC ("**ET LNG**"), a subsidiary of Energy Transfer LP which is listed on the New York Stock Exchange (stock code: ET), as seller. Pursuant to the agreement, we are expected to procure 0.9 million tonnes of LNG from ET LNG, per annum on a free-on-board basis. The purchase price is indexed to the Henry Hub benchmark plus a fixed liquefaction charge. The agreement has a term of 20 years and the first deliveries are expected to commence as early as 2026. The agreement will become fully effective upon the satisfaction of certain conditions precedent by ET LNG, including reaching a final investment decision, or FID.

Announcement of Unaudited Operational Data for the Three Months Ended March 31, 2022

On April 28, 2022, we announced certain unaudited operational data of our Group and our joint ventures and associates for the three months ended March 31, 2022 in our announcement published on the website of the SEHK.

As of 31 March 2022, we had 156 integrated energy projects in operation and our sales volume of integrated energy increased by 46.4% to 5,525 million kWh for the three months ended March 31, 2022 as compared to 3,774 million kWh for the corresponding period in 2021. Our retail gas sales volume increased by 6.8% to 6,840 million m^3 for the three months ended March 31, 2022 from 6,407 million m^3 for the corresponding period in 2021. Our wholesale gas volume also slightly increased to 2,105 million m^3 for the three months ended March 31, 2022 as compared to 2,082 million m^3 for the corresponding period in 2021. We completed constructions and installation for 450 thousand of newly-developed residential customers during the three months ended March 31, 2022, representing an increase of 13.9% as compared to the number of newly-developed residential customers during the corresponding period in 2021. The installed designed daily capacity for newly-developed C&I customers increased by 33.5% to 5.02 million m^3 for the three months ended March 31, 2022, as compared to 3.76 million m^3 for the corresponding period in 2021. For more information, please refer to our announcement dated April 28, 2022 published on the website of the SEHK.

THE OFFERING

The following is a brief summary of the terms of this offering and is qualified in its entirety by the remainder of this offering memorandum. For a more complete description of the terms of the Notes, see "Description of the Notes" in this offering memorandum. Terms used in this summary and not otherwise defined shall have the meanings given to them in "Description of the Notes."

Company	ENN Energy Holdings Limited, a company incorporated with limited liability on July 20, 2000 in the Cayman Islands under the Companies Act (As Revised) of the Cayman Islands (Company No. 102544)
Notes Offered	US$550,000,000 in aggregate principal amount of 4.625% senior notes due 2027
Issue Price	99.568% of principal amount
Maturity Date	May 17, 2027
Interest Payment Dates. . .	May 17 and November 17, commencing November 17, 2022
Interest	The Notes will bear interest from May 17, 2022 at the rate of 4.625% per annum, payable semi-annually in arrears from November 17, 2022. Interest will be calculated on the basis of a 360-day year, consisting of twelve 30-day months, in the case of an incomplete month, the actual number of days elapsed.
Further Issues	The Notes will be issued in an initial aggregate principal amount of US$550,000,000. The Company may, however, from time to time, without the consent of the holders of the Notes, issue pursuant to the Indenture, additional notes, having the same terms and conditions under the Indenture as the previously outstanding Notes in all respects, except for issue date, issue price, amount of the first payment of interest on them (or the date thereof, as the case may be), the timing for the NDRC Post-issue Filing (as defined in the Description of the Notes), and to the extent necessary, certain temporary securities law transfer restrictions. Additional notes issued may be consolidated with and form a single series with the previously outstanding Notes; provided, however, that such additional notes may have the same CUSIP, ISIN, Common Code or other identifying number as the outstanding Notes only if such additional notes are fungible with such Notes for U.S. federal income tax purposes.
Ranking	The Notes will be the direct, unconditional, unsubordinated and unsecured obligations of the Company, and rank *pari passu* with all other unsecured and unsubordinated obligations of the Company (other than obligations preferred by applicable law) and senior in priority of payment and in all other respects to all other indebtedness of the Company that is designated as subordinate or junior in right of payment to the Notes.
Additional Amounts.	In the event that withholding taxes are imposed by a Relevant Taxing Jurisdiction in respect of payments pursuant to the Notes, the Company will, subject to certain exceptions, pay such Additional Amounts as will result, after deduction or withholding of such taxes, in receipt by each holder of such amounts as would have been received by such holder in respect of the Notes, as applicable, had no deduction or withholding been required. See "Description of the Notes – Additional Amounts."

Green Notes	The Notes are being issued as "Green Notes" under the Green Finance Framework. See "Green Finance Framework."
Final Redemption	Unless previously redeemed, the Notes will be redeemed at their principal amount on May 17, 2027.
Redemption for Taxation Reasons	The Notes may be redeemed, at the option of the Company, in whole, but not in part, on giving not less than 30 nor more than 60 calendar days' notice prior to the date fixed for redemption at their principal amount, together with accrued and unpaid interest to the date fixed for redemption and Additional Amounts (as defined in the Description of the Notes), if any, upon certain changes in the tax laws of any relevant tax jurisdiction becoming effective that would impose withholding taxes or other deductions on the payments on the Notes, as further described in "Description of the Notes – Redemption – Optional Tax Redemption."
Redemption upon Occurrence of a Change of Control	Upon a Change of Control, the Holder of any Note will have the right, at such Holder's option, to require the Company to redeem all, or some only (subject to the applicable provision), of such Holder's Notes at price in cash equal to 101% of their principal amount, together with accrued and unpaid interest, as further described in "Description of the Notes – Redemption – Redemption upon a Change of Control."
Redemption at the Option of the Company	The Company may, at any time and from time to time redeem the Notes on any date, in whole or in part at a price equal to, (a) in the case of the optional redemption date prior to April 17, 2027 (the date that is one month prior to the maturity date for the Notes), the greater of (1) 100% of the principal amount of the applicable Notes to be redeemed and (2) the sum of the present values of the remaining scheduled payments of principal and interest on the applicable Notes to be redeemed (not including interest accrued and unpaid to the date of redemption), discounted to the date of redemption on a semi-annual basis (assuming a 360-day year consisting of 12 months of 30 days each and, in the case of an incomplete month, the actual number of days elapsed) at the Adjusted Treasury Rate (as defined in the Description of the Notes) plus 30 basis points, plus, in either case, accrued and unpaid interest on the applicable Notes to be redeemed, if any, to (but not including) the optional redemption date; or (b) in the case of an optional redemption date on or after April 17, 2027 (the date that is one month prior to the maturity date for the Notes), 100% of the principal amount of the Notes to be redeemed, plus accrued and unpaid interest, if any, to, but not including, the optional redemption date, as further described in "Description of the Notes – Redemption – Optional Redemption."
Transfer Restrictions	The Notes have not been registered under the Securities Act, any state securities laws in the United States or the securities laws of any other jurisdiction. Unless they are registered, the Notes may not be offered or sold except pursuant to an exemption from or in a transaction not subject to the registration requirements of the Securities Act, applicable state securities laws or the applicable securities laws of any other jurisdiction. See "Transfer Restrictions."
Use of Proceeds	See "Use of Proceeds."

Governing Law	The Notes and the Indenture will be governed by, and construed in accordance with, the laws of the State of New York.
Denomination, Form and Registration	The Notes will be issued in minimum denominations of US$200,000 and integral multiples of US$1,000 in excess thereof. The Notes offered in the United States to Qualified Institutional Buyers in reliance on Rule 144A will be represented by one or more permanent global notes in fully registered form without interest coupons deposited with the custodian for, and registered in the name of, Cede & Co., as nominee of The Depository Trust Company ("DTC"). The Notes offered to non-U.S. persons outside the United States in reliance on Regulation S will be represented by one or more global notes in fully registered form without interest coupons deposited with the custodian for, and registered in the name of, Cede & Co., as nominee of DTC for the respective accounts of Euroclear Bank SA/NV, as operator of the Euroclear System ("Euroclear"), and Clearstream Banking, S.A. ("Clearstream"). DTC will credit the account of each of its participants, including Euroclear and Clearstream, with the principal amount of the Notes being purchased by or through such participant. Beneficial interests in the global notes will be shown on, and transfers thereof will be effected only through, records maintained by DTC and its direct and indirect participants, including Euroclear and Clearstream.
Ratings	The Notes are expected to be assigned a rating of "Baa1" by Moody's, a rating of "BBB" by S&P and a rating of "BBB+" by Fitch. The Company is rated "Baa1" by Moody's with stable outlook, "BBB" by S&P with positive outlook, and "BBB+" by Fitch with stable outlook. These ratings do not constitute a recommendation to buy, sell or hold the Notes and may be subject to suspension, reduction or withdrawal at any time by Moody's, S&P or Fitch. Each of Moody's, S&P and Fitch is a licensed corporation under the SFO to conduct type 10 (providing credit rating services) regulated activities as defined under the SFO.
Risk Factors	See "Risk Factors" and the other information in this offering memorandum for a discussion of factors that should be carefully considered before deciding to invest in the Notes.
Listing	Application will be made to the SEHK for the listing of, and permission to deal in, the Notes by way of debt issues to Professional Investors only.
Trustee	HSBC Bank USA, National Association.
Principal Paying Agent, Registrar and Transfer Agent	HSBC Bank USA, National Association.
LEI code	The Company's Legal Entity Identifier is 549300V7BXPWT6WIPR03.

SUMMARY CONSOLIDATED FINANCIAL INFORMATION AND OTHER DATA

*The following table presents our summary consolidated financial information and other data. The summary consolidated financial information as of and for the years ended December 31, 2019, 2020 and 2021 has been derived from our audited consolidated financial statements as of and for the years ended December 31, 2019, 2020 and 2021 (the "**Company's Audited Financial Statements**"). The Company's Audited Financial Statements were prepared and presented in accordance with HKFRS and have been audited by Deloitte Touche Tohmatsu, the independent accountants of the Company. The Company's Audited Financial Statements are publicly available and can be accessed from the Company's website.*

Our financial statements have been prepared and presented in accordance with HKFRS, which differ in certain respects from generally accepted accounting principles in other jurisdictions.

The summary financial data below should be read in conjunction with, and is qualified in its entirety be reference to, the Company's Audited Financial Statements and the notes thereto included elsewhere in this Offering Memorandum.

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME DATA

	Year ended December 31,			
	2019	2020	2021	
	RMB million (audited)	*RMB million (audited)*	*RMB million (audited)*	*US$ million*
Revenue	70,183	71,617	93,113	14,611
Cost of sales	(58,918)	(59,285)	(79,057)	(12,406)
Gross profit	11,265	12,332	14,056	2,205
Other income	861	952	1,077	169
Other gains and losses	644	282	984	154
Distribution and selling expenses	(976)	(951)	(1,122)	(176)
Administrative expenses	(3,099)	(3,230)	(3,725)	(584)
Share of results of associates	326	306	261	41
Share of results of joint ventures	547	476	438	69
Finance costs	(727)	(609)	(576)	(90)
Profit before tax	8,841	9,558	11,393	1,788
Income tax expense	(1,980)	(2,227)	(2,398)	(376)
Profit for the year	6,861	7,331	8,995	1,412
Other comprehensive income (expense)				
Items that will not be reclassified subsequently to profit or loss:				
Fair value change of equity instruments at fair value through other comprehensive income ("FVTOCI")	(1)	65	15	2
Fair value change of properties transferred from property, plant and equipment to investment properties	3	–	16	3
Income tax relating to items that will not be reclassified	–	(16)	(7)	(1)
	2	49	24	4
Items that have been reclassified or may be reclassified to profit or loss:				
Exchange differences arising on translating foreign operations	–	1	5	1
Release of exchange reserve to profit or loss upon deregistration of a subsidiary	3	–	–	–
Fair value change of derivative financial instruments under hedge accounting	–	(122)	164	26
Income tax relating to items that may be reclassified	–	14	(37)	(6)
	3	(107)	132	21
Other comprehensive income (expense) for the year	5	(58)	156	25
Total comprehensive income for the year	6,866	7,273	9,151	1,437

	Year ended December 31,			
	2019	2020	2021	
	RMB million (audited)	*RMB million (audited)*	*RMB million (audited)*	*US$ million*
Profit for the year attributable to:				
Owners of the Company	5,670	6,278	7,755	1,217
Non-controlling interests	1,191	1,053	1,240	195
Profit for the year	6,861	7,331	8,995	1,412
Total comprehensive income for the year attributable to:				
Owners of the Company	5,674	6,220	7,905	1,241
Non-controlling interests	1,192	1,053	1,246	196
Total comprehensive income for the year	6,866	7,273	9,151	1,437
Earnings per share	*RMB*	*RMB*	*RMB*	*US$*
Basic	5.05	5.59	6.88	1.08
Diluted	5.04	5.57	6.86	1.08
Other financial data				
Adjusted EBITDA(1)	10,708	11,966	13,248	2,079
Adjusted EBITDA margin(2)	15.3%	16.7%	14.2%	14.2%
Core Profit (3)	5,278	6,242	7,154	1,123
Total Debt(4)	19,145	19,684	19,890	3,121
Total Debt(4)/Adjusted EBITDA	1.8x	1.6x	1.5x	1.5x
Net Debt(5)	11,772	11,054	11,206	1,758
Net Debt(5)/Total Capital (6)	23.5%	19.8%	18.1%	18.1%
Adjusted EBITDA/Finance costs	14.7x	19.6x	23.0x	23.0x
Capital expenditures	8,922	6,741	7,657	1,202

Notes:

(1) We calculate adjusted EBITDA by adding/(subtracting) finance costs, depreciation and amortization expenses and other gains and losses to profit before tax. Adjusted EBITDA is not a standard measure under HKFRS. Adjusted EBITDA is a widely used financial indicator of a company's ability to incur and service debt. Adjusted EBITDA should not be considered in isolation or construed as an alternative to cash flows, profit attributable to owners of the Company or any other measure of performance or as an indicator of our operating performance, liquidity, profitability or cash flows generated by operating, investing or financing activities. Adjusted EBITDA does not account for taxes, finance costs or depreciation and amortization expenses. In evaluating adjusted EBITDA, we believe that investors should consider, among other things, the components of adjusted EBITDA such as revenue and operating expenses and the amount by which adjusted EBITDA exceeds capital expenditures and other charges. We have included adjusted EBITDA herein because we believe it is a useful supplement to cash flow data as a measure of our performance and our ability to generate cash from operations to cover debt service and taxes. Adjusted EBITDA presented herein may not be comparable to similarly titled measures presented by other companies. Investors should not compare 'our adjusted EBITDA to adjusted EBITDA presented by other companies because not all companies use the same definition. The following table provides a reconciliation of profit before tax, the most relevant HKFRS term, to adjusted EBITDA:

(2) Adjusted EBITDA margin is calculated by dividing adjusted EBITDA by revenue.

(3) We calculate core profit by subtracting the sum of (i) other gains and losses (excluding net settlement amount realized from commodity derivative contracts) and (ii) deferred tax arose from unrealized gain of commodity derivative contracts and share-based payment expenses, from our profit attributable to shareholders.

(4) Total debt includes all long-term and short-term bank loans, corporate bonds, senior notes and unsecured bonds.

(5) Net debt is calculated by subtracting cash and cash equivalents (excluding restricted bank deposits) from total debt.

(6) Total capital includes total debt and total equity.

	Year ended December 31,			
	2019	2020	2021	
	RMB million (audited)	*RMB million (audited)*	*RMB million (audited)*	*US$ million*
Profit before tax	8,841	9,558	11,393	1,788
Add finance costs	727	609	576	90
Add depreciation and amortization	1,784	2,081	2,263	355
Less other gains	(644)	(282)	(984)	(154)
Adjusted EBITDA	10,708	11,966	13,248	2,079

SUMMARY CONSOLIDATED STATEMENT OF FINANCIAL POSITION DATA

	Year ended December 31,			
	2019	2020	2021	
	RMB million (audited)	*RMB million (audited)*	*RMB million (audited)*	*US$ million*
Non-current Assets				
Property, plant and equipment	37,955	41,861	46,793	7,343
Right-of-use assets	2,185	2,129	2,119	333
Investment properties	268	261	288	45
Goodwill	2,379	2,511	2,520	395
Intangible assets	4,175	4,446	4,311	676
Interests in associates	3,308	3,619	3,655	574
Interests in joint ventures	3,841	4,141	5,063	794
Other receivables	48	73	18	3
Derivative financial instruments	328	292	946	148
Financial assets at fair value through profit or loss (“FVTPL”)	4,841	4,760	4,406	691
Equity instruments at FVTOCI	123	211	266	42
Amounts due from associates	345	6	21	3
Amounts due from joint ventures	12	10	4	1
Deferred tax assets	1,292	1,370	1,212	190
Deposits paid for investments	15	1	60	9
Prepayment and deposits paid for acquisition of property, plant and equipment, land use rights and operation rights	169	134	126	20
Restricted bank deposits	446	650	622	98
Total non-current assets	61,730	66,475	72,430	11,364
Current assets				
Inventories	1,169	1,285	1,508	237
Trade and other receivables	7,492	9,053	10,568	1,659
Contract assets	757	732	775	122
Derivative financial instruments	345	336	1,585	249
Financial assets at FVTPL	16	70	152	24
Amounts due from associates	575	892	1,165	183
Amounts due from joint ventures	1,058	2,106	2,440	383
Amounts due from related companies	164	348	318	50
Restricted bank deposits	566	116	363	57
Cash and cash equivalents	7,373	8,630	8,684	1,363
Total current assets	19,515	23,568	27,558	4,327

	Year ended December 31,			
	2019	2020	2021	
	RMB million (audited)	*RMB million (audited)*	*RMB million (audited)*	*US$ million*
Current liabilities				
Trade and other payables	7,635	8,302	10,172	1,596
Contract liabilities	12,613	14,242	14,908	2,339
Deferred income	33	38	48	8
Amounts due to associates	189	319	424	67
Amounts due to joint ventures	785	976	1,249	196
Amounts due to related companies	1,060	925	964	151
Taxation payables	962	971	909	143
Lease liabilities	100	89	75	12
Derivative financial instruments	416	401	956	150
Bank and other loans – due within one year	7,495	4,590	6,150	965
Corporate bonds	–	–	2,099	329
Unsecured bonds	–	–	3,601	565
Senior notes	–	2,380	–	–
Share-based payment liabilities	–	–	24	4
Total current liabilities	31,288	33,233	41,579	6,525
Net current liabilities	(11,773)	(9,665)	(14,021)	(2,198)
Total assets less current liabilities	49,957	56,810	58,409	9,166
Capital and reserves				
Share capital	116	117	117	18
Reserves	25,752	30,444	35,660	5,596
Equity attributable to owners of the Company	25,868	30,561	35,777	5,614
Non-controlling interests	5,152	5,611	6,373	1,000
Total equity	31,020	36,172	42,150	6,614
Non-current liabilities				
Contract liabilities	3,302	3,212	2,993	470
Deferred income	650	729	789	124
Amounts due to associates	–	–	215	34
Amounts due to joint ventures	735	585	325	51
Lease liabilities	450	310	280	44
Derivative financial instruments	330	526	806	126
Bank and other loans – due after one year	2,848	2,078	3,318	521
Corporate bonds	2,094	2,097	–	–
Senior notes	2,539	4,827	4,722	741
Unsecured bonds	4,169	3,712	–	–
Deferred tax liabilities	1,820	2,562	2,785	437
Financial guarantee liabilities	–	–	21	3
Share-based payment liabilities	–	–	5	1
Total non-current liabilities	18,937	20,638	16,259	2,552
Total equity and non-current liabilities	49,957	56,810	58,409	9,166

RISK FACTORS

You should carefully consider the risks and uncertainties described below and other information contained in this Offering Memorandum before investing in the Notes. The risks and uncertainties described below may not be the only ones that we face. Additional risks and uncertainties that we are not aware of or that we currently believe are immaterial may also adversely affect our business, financial condition or results of operations. If any of the possible events described below occur, our business, financial condition or results of operations could be materially and adversely affected. In such case, we may not be able to satisfy our obligations under the Notes, and you could lose part or all of your investment.

RISKS RELATING TO OUR BUSINESS

Our business, financial condition and results of operations may be materially and adversely affected by market fluctuations and economic slowdowns in the PRC and the global economy, particularly as a result of the COVID-19 pandemic.

Our business is subject to global market fluctuations and general economic conditions in the PRC and the global economy. Any prolonged downturn, recession or other condition that adversely affects our business and economic environment, including the ongoing COVID-19 pandemic, could materially and adversely impact our business, financial condition and results of operations.

The economic recovery since the 2008 global financial crisis has been slow, with economic growth rates in major economies such as Europe, the United States, Japan and the PRC generally remaining persistently lower than pre-crisis levels. The global economic conditions have been, and are likely to continue to be, affected by concerns over increased geopolitical tensions, including the escalation of Russia-Ukraine tensions, the continued uncertainty regarding the further trade policy changes resulting from the trade war between the United States and China and the prolonged period of uncertainty around the Brexit. Such events have and may continue to create negative economic impact and increase volatility in the global market.

Recent global market and economic conditions have been unprecedented and challenging with tight credit conditions and recession or stagnation in most major economies. The equity and financial markets have been very turbulent since the second half of 2015. Concerns over possible inflation or deflation, uncertainty relating to currency exchange rates and interest rates, the availability and cost of credit, the sovereign debt crisis in Europe, volatility in commodity and oil prices, geopolitical issues, policy changes affecting international trade and the imposition of tariffs, and unstable financial markets and the global housing and mortgage markets have contributed to increased market volatility, weakened business and consumer confidence and diminished expectations for economic growth around the world. For example, recent Russian military actions across Ukraine since February 2022 have led to a significant increase in international crude oil and natural gas prices. Such military actions, and sanctions in response thereof as well as escalation of conflict, could significantly affect prices and demand in global energy market and cause turmoil in the capital markets and generally in the global financial system.

Trade tensions between the United States and China escalated, where both countries have increased tariff on certain products in their bilateral trade. Such tensions have continued to put pressure on manufacturers and supply chains in light of tariffs and potential tariffs imposed both by the United States and China. While the lasting impact the trade war may have on China's economy and the energy sector remains uncertain, the trade war may negatively affect our operations if there are restrictions on certain activities of third parties whom we partner with in our businesses.

The global outbreak of COVID-19, which was declared a pandemic by the World Health Organization in March 2020, has spread to almost every country in the world. Further, in the first half of 2021, a new Delta variant of COVID-19 began to spread globally and caused an increase in COVID-19 cases in many places in the PRC, and in November 2021, a new Omicron variant, which appears to be the most transmissible variant to date, was detected, which Omicron variant has since caused an increase in COVID-19 cases in multiple countries, including the PRC, and of which the potential severity is currently being evaluated. The global impact of the outbreak continues to rapidly evolve, and many countries, including the PRC, have instituted quarantines, restrictions on travel, closed financial markets and/or restricted trading, and closed or limited hours of operations of non-essential businesses. Such actions are creating severe economic contraction and adversely impacting many industries. While most cities in the PRC gradually lifted the public health restrictions, recurring COVID-19 outbreaks caused by the new COVID variants have led to the re-introduction of such restrictions in several regions from time to time. Moreover, even where restrictions have been lifted, self-imposed social distancing and isolation measures may continue for a more prolonged period. The resultant disruptions to the supply chain and reduced levels of consumption, commercial activities and industrial production in the affected countries has precipitated an economic slowdown in those economies which, if prolonged, could cause a global recession. For example, our revenue from construction and installation fees in the first half of 2020 decreased due to the delays in the construction and installation progress for new customers, as well as a decrease in revenue from our value added business as a result of the reduced frequency of face-to-face communications with our existing and potential customers caused by stringent COVID-19 control measures in most cities in the PRC. In 2021, while there were local outbreaks in various regions of China, our business development and operations were not materially and adversely affected.

Our customers may face financial difficulties, which may lead to difficulties for us to collect our accounts receivables due to the effects of the COVID-19 pandemic on our customers and increased risks of incurring bad debt. While we expect the demand for our products and services are likely to remain robust, if our counterparties do not fulfill their contractual obligations or settle liabilities to us due to disruptions to their businesses or liquidity issues as a result of the continued effect of the COVID-19 pandemic, we may suffer losses and our financial condition may be adversely affected. In addition, there can be no assurance that we can recover money owed to us without a time-consuming, costly and protracted process.

Additionally, if any of our employees or our contractors' employees, for example, construction workers and gas appliance installers, are identified as a possible source of spreading COVID-19, we may be required to quarantine employees that are suspected of being infected, or our contractors may be required to quarantine employees that are suspected of being infected, as well as others that have come into contact with those employees. We may also be required to disinfect our affected premises, which could cause a temporary suspension of our projects and services, thus adversely affecting our business operations.

The COVID-19 pandemic is ongoing and evolving rapidly. The impact of the outbreak and government responses thereto may vary from jurisdiction to jurisdiction. The duration and ultimate impact of the outbreak cannot be reasonably estimated at this time. The outbreak and restrictions imposed to contain it may be further broadened or continue for extended periods of time. Such measures may not be successful in stabilizing markets or containing the economic or other impacts of the outbreak. As a result, the global economy is facing significant uncertainties and global financial markets are experiencing significant volatilities which may adversely affect the Chinese economy, our business and financial condition, results of operations, prospects, liquidity, capital position, credit ratings and the value of the Notes. Investors must exercise caution before making any investment decisions.

Our performance depends in part on property development, and our construction and installation fee income may be adversely affected by fiscal and credit tightening measures as well as industry policy introduced by the PRC government.

A portion of our gross profits in the years ended December 31, 2019, 2020 and 2021 were derived from gas pipeline construction and installation fees, which are fees charged by us to end-users for connecting to our gas pipeline networks. Gas pipeline construction and installation fees for the years ended December 31, 2019, 2020 and 2021 represented 9.9%, 9.0% and 8.7%, respectively, of our total revenue for the relevant period. In addition, revenue generated from gas pipeline construction and installation will generally achieve a higher gross margin than revenue generated from gas sales. For the years ended December 31, 2019, 2020 and 2021, the gross profits from gas pipeline construction and installation were RMB3,719 million, RMB3,264 million and RMB4,446 million, representing 33.0%, 26.5% and 31.6% of our total gross profits, respectively. We normally act as the project manager for the laying of gas pipelines in property development projects and we receive construction and installation fees in stages based on our percentage-of-completion of pipeline construction work. As a large portion of our construction and installation fee income is generated from new residential property development projects, the results of our pipeline connection operation may be affected by the performance of the PRC real estate markets. The timing and cost of the gas pipeline connections will depend on a number of factors, including, but not limited to, the cost and availability of financing to property developers, conditions in the PRC real estate markets and the general economic conditions in China. In recent years, the PRC government and PRC fiscal regulatory bodies have imposed various policies designed to limit or restrict the rate of growth of real estate development in the PRC. While we believe that our geographic coverage, with 252 city gas projects across 20 provinces, municipalities and autonomous regions in China, and the low penetration rate in China, suggest a potential significant future growth of residential gas consumption and helps mitigate the risks of adverse property market conditions in individual cities, we cannot assure you that we will not be adversely affected if further fiscal and credit-tightening measures are introduced. In addition, any industry policy seeking to regulate connection fee imposed at a national or local level could have an adverse impact on our construction and installation fee income. For example, on June 27, 2019, NDRC published its Policy Paper No. 1131 regarding "Guiding Opinions on Regulating City Connection Fee" which stipulated that, among others, the connection fee in certain regions where the connection fee is not liberalized will be capped in principle at 10% return on cost plus basis set by NDRC of the central government, with costs to be assessed by local pricing bureaus. We cannot assure you that there will be no future decline in our revenue from gas pipeline construction and installation as well as a drop in our gross margin. There is no guarantee that we will not be adversely affected if further industry policies are introduced. See also "*– Risks Relating to the PRC – PRC economic, political and social conditions, as well as government policies, could affect our business and prospects.*"

In addition, property development projects may be materially and adversely affected by a number of factors, including shortage of equipment or materials, price fluctuations, bad weather, natural disasters, accidents, downturns in the property market, operational conditions and other unforeseeable situations or matters. Should any of these events occur, the completion of the whole or part of the property development project may be postponed and, consequently, the receipt of construction and installation fees may be delayed. We will not be compensated for construction and installation fees not received as a result of any such delays.

Our ability to maintain our current level of profitability depends on our continued success in securing new customers and other factors which are outside of our control.

For the years ended December 31, 2019, 2020 and 2021, we achieved a gross profit margin of 16.1%, 17.2% and 15.1%, respectively, and a net profit margin of 9.8%, 10.2% and 9.7%, respectively. Although we believe that we are well-positioned to secure new projects in other high-growth cities, our ability to maintain and continue to generate growth is not assured. For example, our ability to maintain revenue generated from sales of piped gas depends on our continued success in maintaining ongoing and securing new connections to piped gas customers. Any decline in our pipeline connection operations and failure to maintain the number of end-users connected to our gas pipeline networks will have an adverse impact on our piped gas sales. Accordingly, there is no assurance that we will be able to sustain our current level of profitability and growth rates. Factors that could adversely affect our business and growth include, but are not limited to, competition from other gas distribution companies in areas that we seek to expand into, particularly those with more capital resources than us, and lack of success in securing and developing new operational locations, as well as increasing penetration rates in existing operational locations; reduction of the fees we can charge end-users for gas pipeline connections, whether due to market supply and demand, government regulation or otherwise; changes in the PRC government policy to promote the use of gas; significant increase in average gas purchasing costs and our potential failure to pass on the increased costs to end-customers completely and quickly; the increasing penetration rate of electric vehicles that do not consume natural gas; slowdown in real estate development; and discontinuation of any government subsidies that we currently enjoy.

We are subject to gas price controls in certain markets and may not be able to pass through increased costs to end-customers.

Retail gas sales for the years ended December 31, 2019, 2020 and 2021 represented 57.1%, 56.6% and 52.9%, respectively, of our total revenue for the relevant period. Gas procurement cost of our city-gas projects is agreed between us and the suppliers with reference to the benchmark city-gate price regulated by the NDRC. In recent years, the PRC government has been progressively moving natural gas pricing towards a market-based mechanism so as to encourage more upstream gas supply from domestic and overseas imported sources.

The NDRC sets city-gate prices as a benchmark price instead of a ceiling price and permits it to be adjusted upward or downward from November 20, 2016. On June 20, 2017, in order to strengthen the regulation of gas distribution tariff and maintain the healthy development of downstream distribution industry, the NDRC published the Guidelines to Strengthen the Gas Distribution Tariff Regulation (the "**Guidelines**"). The Guidelines stipulated the principle of "permitted costs plus reasonable returns" governing the return on assets of gas distribution with a 7% cap for natural gas distributors which is calculated based on the average gas procurement cost of each city-gas project. Furthermore, the NDRC's local branches and pricing bureaus shall formulate detailed implementation rules pursuant to the Guidelines, including the detailed calculation method of the gas distribution-related assets, costs and returns, by June 2018. Local branches of NDRC have issued their corresponding implementation rules in accordance with the Guidelines. For example, Development and Reform Commission of Hunan Province has promulgated the Measures of Hunan Province for the Administration of Pipeline Gas Distribution Tariff (Trial) on March 7, 2018 and the Measures of Hunan Province for the Administration of Pipeline Gas Distribution Tariff on December 9, 2019. If in certain regions the distribution tariff charged by us would result in return ratio above the 7% cap, we would be required to lower our tariff. As of March 31, 2022, we have not received any notice of gas tariff reduction following the first round of review of our return on assets by local governments as part of the implementation of the Guidelines. However, we cannot assure you that the future implementation of the Guidelines and related rules would not result in future price drops of the gas tariff we charge, which may cause our profit margin and other business and financial conditions to suffer, and in which case our business prospects, financial conditions, and results of operations may be materially and adversely affected.

Local pricing bureaus determined indicative end-user tariffs. Any tariffs adjustment affecting residential end-users may be approved after a public hearing or local government's approval, while for non-residential end-users we established an automatic pass-through mechanism where if the price adjustment is within the government's indicative price, their approval is not needed. In relation to residential end-users, even if the adjustments sought by us are approved, such approval process and hearing can cause substantial delay and we may not be able to completely and quickly pass through future increases in natural gas costs to end-users and may face margin pressure if the NDRC makes unfavorable adjustments in gas prices. In addition, as the end-user tariffs increase, we may encounter a slow-down in the growth of our sales of natural gas to certain most price-sensitive C&I customers as they may cease or reduce their natural gas consumption by utilizing other alternative fuels with lower costs.

In addition, the NDRC published the Circular on Strengthening the Regulation of Natural Gas Transmission and Distribution Prices on July 4, 2020, which further strengthened the supervision of the calculation of the gas distribution-related costs and the costs not related to gas transmission and distribution shall be deducted from such calculation. We cannot assure you that we will continue to charge pipeline construction and installation fees and gas tariffs in our existing markets at the levels currently enjoyed by us, or that the relevant local pricing bureaus will allow us to charge similar construction and installation fees in new markets. We cannot assure you that we will be able to obtain the required approval from the relevant local pricing bureaus for an increase in pipeline construction and installation fees or gas tariffs if our costs increase significantly. Any reduction in construction and installation fees and end-user tariffs, failure of or delay in passing through the increased costs, and any potential slow-down of consumption growth will have an adverse impact on our results of operations and financial condition. If we are unable to obtain approval for passing through any increased input costs in pipeline construction and installation fees or gas tariffs, our profits may be materially and adversely affected.

We are dependent on a limited number of suppliers of natural gas, which may affect our ability to supply natural gas to our customers.

Natural gas, the primary raw material purchased by us, accounted for 85.5%, 82.9% and 82.6%, of our total cost of sales for each of the years ended December 31, 2019, 2020 and 2021, respectively. We currently purchase a substantial portion of our natural gas from oil and gas exploration and production companies, primarily, PetroChina, Sinopec, and CNOOC, or their distributors, pursuant to gas purchase agreements with terms that typically range from 15 to 25 years. While we have entered into take-or-pay or other long-term gas purchase contracts to secure long-term natural gas supply for certain of our projects, many of our other projects do not have similar arrangements. Therefore, we cannot assure you that we will be able to continue to purchase natural gas from suppliers on similar terms or on terms otherwise acceptable to us, in which case our business and profitability may be materially and adversely affected. In addition, we cannot assure you that unforeseen events will not prevent the timely delivery of, or affect the quality of, natural gas supplied by our suppliers. We obtain natural gas directly from suppliers via pipelines. In the event of an unforeseen disruption to natural gas pipeline supplies, whether due to accidents, commercial reasons, technical difficulties, natural disasters, war or terrorism, we may be unable to obtain an immediately available supply of natural gas for our piped gas customers. If the required natural gas cannot be purchased as scheduled or on terms acceptable to us, our business, financial condition and results of operations may be adversely affected. Our gas supply became more abundant and diversified following the execution of the three long-term LNG import contracts signed with Chevron U.S.A INC., Origin Energy LNG Portfolio Pty Ltd. and Total Gas & Power Asia Private Limited in 2016. See also "*Business – Purchases – Gas.*" Our natural gas import amounts to around 10% of the total gas supplied to us, while the remaining 90% is supplied domestically. The natural gas imports are expected to continue to grow as the PRC government plans to improve the importation channels for natural gas from Central Asia under the 14th Five-Year Plan for the natural gas sector. Due to the fluctuations in international crude oil prices, we cannot assure you that imported natural gas can be procured on terms and prices similar to domestically sourced natural gas. Should the prices of imported natural gas become higher than domestically sourced natural gas, increasing imports of natural gas by us will increase our average costs of natural gas and our cost of sales. If we are unable to completely and quickly pass on the higher cost of sales to our customers due to the price controls we are subject to, our margin and profitability would be adversely affected.

We may be subject to risks of potential shortfall on committed take-or-pay volume if we fail to increase the number of connected residential households and C&I customers in the operational locations which are subject to take-or-pay obligations.

We have entered into take-or-pay contracts with, among others, PetroChina, Sinopec and CNOOC, or their distributors, for gas supplied through the West-East Pipelines, the Zhong-Wu Pipelines, the Sichuan East Pipelines and other pipelines. In order to fully utilize our committed volume, we will need to increase the number of connected residential households and C&I customers in our operational locations that are subject to take-or-pay obligations and their usage volume in the next few years. Since 2016, we have commitments to acquire LNG from certain international natural gas suppliers. The delivery of LNG under such arrangements commenced in 2018 and last for 5 to 10 years. We are obliged to make "take-or-pay" payment to suppliers for the quantity contracted but not delivered. We may be subject to risks of potential shortfall on committed take-or-pay volume and may suffer losses if we fail to generate sufficient demand. See also "*Business – Purchases – Gas.*"

If we are unable to fund our substantial capital expenditure requirements and current liabilities on terms we deem acceptable, it may adversely affect our prospects and future operations.

Our city-gas project development generally comprises of the construction of gas pipeline networks and gas storage facilities. The construction of natural gas pipelines mainly involves laying underground gas pipelines and ancillary gas pipelines that provide the connections to residential households and C&I customers. In particular, for some major city-gas projects, construction also involves the construction of processing stations and high-pressure transmission gas pipelines. The construction of natural gas storage facilities also involves laying underground gas pipelines, constructing storage tanks and ancillary facilities. The construction of various gas pipeline infrastructures requires substantial initial investment which must be financed by internal resources, bank or other borrowings and/or equity fund raising. We cannot assure you that we will be able to secure adequate financing from the abovementioned sources to fund the capital expenditure required for developing new gas pipeline networks and new natural gas storage facilities in the future. In the event that we are unable to obtain adequate financing, our ability to expand our gas distribution network may be hindered and the prospects of our future operations may be adversely affected. In addition, given the nature of gas pipeline construction and ancillary facility development, it would typically take years before the newly constructed pipelines and facilities could be put into use and contribute towards our revenue. This translates into a long payback period for our substantial capital expenditure before our capital investment for each project could generate return. Any unexpected adverse changes or delays in the process or any financing difficulty could further lengthen the payback period of our investment and may have an adverse impact on our liquidity and financial condition.

As of December 31, 2019, 2020 and 2021, our net cash generated from operating activities was RMB11,690 million, RMB9,696 million and RMB10,466 million, which enables us to fund our capital expenditure. In spite of this, we may have substantial net current liabilities in the future, and our business operations and our ability to raise funding may be materially and adversely affected by any such net current liabilities. Moreover, our cash flow position depends not only on market conditions and customer demands, but also on a number of political, economic, legal and other factors, including any impact from the ongoing COVID-19 pandemic, which are beyond our control. If we cannot maintain sufficient revenue or are not able to raise necessary funding to pay off our current liabilities and meet our capital commitments, our business, financial condition and results of operations may be materially and adversely affected.

The economic benefits arising from the expansion of our gas pipeline networks depend on the economic development of the areas in which the projects are located.

As our income is mainly derived from (i) the sale of natural gas to residential, C&I and vehicle customers from whom we collect fees based on the volume of gas consumed, and (ii) gas pipeline construction and installation fees collected from customers connecting to our gas pipeline network for their gas supply, the success of our projects depends on the economic development of the areas in which the projects are based. Although we typically undertake feasibility studies to assess the future economic benefit of a project, we cannot assure you that an operational location will develop or prosper economically. Given the substantial capital investment at the early stages of each project, any unexpected adverse changes in the economic growth of an operational location or any substantial deviation from our expectations in terms of both the number of new customers and the volume of their future gas consumption, could lengthen the payback period of our investment and may adversely affect our liquidity and financial condition.

Failure to attract and retain qualified personnel and experienced senior management could disrupt our operations and adversely affect our business and competitiveness.

To a significant extent, our success is built upon the technical expertise and in-depth knowledge of the piped gas supply and integrated energy industry possessed by the Executive Directors and certain other key technical and management personnel. Our future growth and success will depend to a large extent on our ability to retain or recruit qualified individuals to strengthen our management, operational and research teams. Due to the intense market competition for highly skilled workers and experienced senior management, we may face difficulties locating experienced and skilled personnel in certain areas, such as engineering, marketing, product development, sales, finance and accounting. Accordingly, if any of our Executive Directors or key technical and management personnel ceases to be involved in our operations, or if any of them fails to observe and perform their obligations under their respective service agreements, the implementation of our business strategies may be affected, which could lead to a material adverse impact on our operations.

Our expansion into new business areas and new distribution channels may subject us to additional risks and uncertainties.

From time to time, we may undertake investments, acquire certain businesses, assets and technologies, as well as develop new business lines, products and distribution channels, any of which may not be successful. We accelerate the expansion of our integrated energy business. As of December 31, 2021, we operated a total of 150 integrated energy projects in China. These investments, acquisitions and business initiatives could require our management to develop expertise in new areas, manage new business relationships, attract new types of customers, and divert their attention and resources. These investments, acquisitions and business initiatives may also expose us to potential risks, including risks associated with the integration of new business lines, operations and personnel, the diversion of resources from our existing businesses and technologies, the potential loss of, or harm to, relationships with employees and customers, as well as other unforeseen or hidden liabilities. The expansion of our businesses may also put pressure on our efforts to centralize our management effectively and develop our information technology systems. There is no assurance that we will succeed in any of these initiatives within the expected timeframes or at all.

The performance and results of our integrated energy business depend upon our ability to remain competitive in a highly competitive market and upon successful execution of our projects.

Our results of operations in the integrated energy business could be materially and adversely affected by keen competition resulting from relatively low barriers to entry into the integrated energy market. Unlike piped gas, the pricing of energy sales and services provided under the integrated energy business is unregulated. Therefore, the profitability of integrated energy business will depend largely on the operating efficiency and energy consumption level of the company, as well as whether the company is able to benefit from the synergies across its integrated energy projects. There is no guarantee that we will be able to maintain our competitiveness in this highly competitive market and continue to grow our customer base. An increase in the market entrants with better know-how and resources may potentially have a material adverse effect on our business, financial condition and results of operations.

The execution of integrated energy projects requires expertise and technological know-how so as to be able to devise customized energy solution for customers' needs. The design of energy solution will depend on the availability of energy sources, consumption level, customers' nature of business, capability to coordinate and dispatch energy among customers. Although we have accumulated expertise and have been improving our technological know-how to stay competitive in the market, there is no guarantee that we will be able to excel as a market leader in terms of technology and innovation or that our expertise will be directly relevant to the smooth execution of integrated energy projects. The risks associated with project development and execution can impact the viability and economic feasibility of our projects and may accordingly negatively affect our results of operations, financial condition and reputation.

Our value added business may be subject to product liability claims which may adversely affect our business, financial condition and results of operations.

Our value added business may be subject to product liability claims if consumers are injured or otherwise harmed by the products or services provided by us. Concerns regarding the safety of gas appliances and household products that are sourced from a variety of suppliers could cause shoppers to avoid purchasing certain products from us, even if the basis for the concern may be outside of our control.

Claims, recalls or actions could be based on allegations that, among other things, the products sold are misbranded, provide inadequate instructions regarding their use or misuse, include inadequate warnings or in the case of any electrical devices that we sell, are not fit for purpose or pose a safety hazard. While we maintain product liability insurance coverage in amounts and with deductibles that we believe are prudent, there can be no assurance that the coverage will be applicable and adequate to cover all possible adverse outcomes of claims and legal proceedings against us. Any material shortfall in coverage may have an adverse impact on the results of our operations. In addition, any lost confidence on the part of our customers would be difficult and costly to re-establish. As such, any material issue regarding the safety of any gas appliances and/or household products we sell, regardless of the cause, could materially and adversely affect our business, financial condition and results of operations. See also "*Risk Factors – Risks Relating to the PRC Natural Gas Industry – Natural gas operations entail inherent safety and environmental risks that may result in substantial liability to us.*"

The expansion of our business into new locations may not be as successful or profitable as in the provinces in which we currently operate.

We plan to expand our business into additional locations. In 2019, 2020 and 2021, the number of city-gas projects under our management increased by 30, 18 and 17, respectively. Our experience in the locations in which we currently have operations, however, may not be applicable in other parts of China or abroad. We cannot assure you that we will be able to leverage such experience to expand into new markets. When we enter new markets, we may face intense competition from natural gas operators with established experience or presence in the geographical areas in which we plan to expand and from other natural gas operators with similar expansion targets. In addition, expansion or acquisition may require a significant amount of capital investment, which could divert the resources and time of our management and, if we fail to integrate the new locations effectively, it will affect our operating efficiency. Demand for natural gas, environmental standards and government regulation and support may also be different in other cities. Failure to manage any of our planned expansions, strategic alliances or acquisitions may have a material adverse effect on our business, financial condition and results of operations and we may not have the same degree of success in other cities that we have had so far, or at all. In addition, although we intend to expand our operations, we cannot assure you that we will be successful in soliciting new projects in the future through either auction or private negotiation.

We may encounter problems with our joint projects and disputes with our joint venture and other business partners may adversely affect our business, financial condition and results of operations.

In the course of our business, we have in the past formed, and will in the future continue to form, joint ventures, consortiums or other cooperative relationships with other parties, including in some cases foreign governmental entities or foreign companies, to jointly engage in certain business activities, which include, among others, jointly operating the oilfields. We may be unable to control the actions of such third-party operators.

We may bear joint and several liabilities to the project owners or other parties with third-party operators, other consortium members or joint venture or business partners under the relevant consortium, joint venture or other agreements, and, as a result, we may incur damages and other liabilities for any defective work or other breaches by third-party operators, other consortium members or joint venture or business partners.

In addition, if there are disagreements between us and our joint venture partners regarding the business and operations of the joint projects, there can be no assurance that they will be able to resolve them in a manner that will be in our best interests. Certain major decisions, such as selling or refinancing these projects, may require the consent of all other partners. These limitations could adversely affect our ability to sell, refinance or otherwise operate and profit from these projects.

Any of these and other factors may have an adverse effect on the performance of our oil and gas joint projects and expose such projects to a number of risks, including the risk that these projects may not be able to fulfill their obligations under contracts with customers, resulting in disputes not only between us and our partners, but also between the joint ventures and their customers, or create unexpected complications. Such a material adverse effect on the performance of the joint projects may in turn adversely affect our business, financial condition and results of operations.

Our operations may be adversely affected by cyber-attacks or similar disruptions.

We devote significant resources to protecting our digital infrastructure and data against cyber-attacks. If our systems against cyber-security risk prove to be ineffective, we could be adversely affected by, among other things, disruptions to our business operations, and loss of proprietary information, including intellectual property, financial information and employer and customer data, injury to people, property, environment and reputation. As cyber-security attacks continue to evolve, we may be required to expend additional resources to enhance our protective measures against cyber-security breaches.

We are in the process of applying land use right certificates and/or building ownership certificates for certain of our properties in China.

We currently do not hold land use right certificates and/or building ownership certificates in respect of several of our plants or land in China. We are in the process of applying for such building ownership certificates and land use right certificates. As of December 31, 2021, we are in the process of applying for ownership certificates for our buildings in the PRC and for the land use right certificates for the land in the PRC, together amounting to RMB622 million. Our rights as owner of such properties may be adversely affected as a result of the absence of formal title certificate, as we will not be able to transfer our interest in the land or the building for such land and/or buildings until we have obtained any land use right certificates and/or building ownership certificates. Some of the entities from which we leased land may not possess valid title to their properties. In addition, we have leased land from individual villagers or village committees and applicable PRC law may be interpreted as prohibiting such land to be used for non-agricultural purposes. If there are disputes over the legal title to any of these leased properties or if the relevant authorities determine that our use of such properties violates PRC law and our leases are deemed to be invalid, we may be required to vacate such sites, which could disrupt our business operations in those locations and our business, financial condition and results of operations may be adversely affected.

The interests of our controlling shareholders may differ from those of our Company.

As of the date hereof, ENN-NG owned approximately 32.67% of the issued share capital of our Company (as recorded in the register required to be kept under section 352 of the Securities and Futures Ordinance). Accordingly, ENN-NG has, and will continue to have, the ability to exercise significant influence over our business and may cause us to take actions that are not in, or may conflict with, our interests and/or the interests of some or all of our creditors or minority shareholders. We cannot assure you that such actions will not have an adverse effect on us or the holders of the Notes.

In particular, our ability to access LNG receiving terminals in Zhoushan is dependent on our controlling shareholder continuing with the access arrangement under the long-term agreements. If our controlling shareholder no longer allows us access to Zhoushan's LNG receiving terminals, we may in turn lose access to a variety of gas suppliers in the market and face difficulties in diversifying our gas sources and lowering our overall natural gas procurement costs. Our business, financial condition and results of operations may accordingly be adversely affected.

We conduct our business through PRC operating subsidiaries and joint venture partners, some of which we do not control, and these business partners' interests may not align with ours.

We currently conduct our business operations primarily through operating subsidiaries established in China. Although we have control over the management of these operating subsidiaries, a substantial portion of them are not wholly owned. We also conduct our business through certain joint ventures with PRC partners which we do not control. For those non-wholly owned operating subsidiaries and joint ventures, certain important corporate actions for many subsidiaries typically require supermajority or unanimous board or shareholder approval. We cannot assure you that our subsidiaries or joint ventures will not engage in certain of these corporate actions in the future or that, if they do, that they will be able to cause our PRC partners to consent to such actions. In addition, there is a possibility that the PRC partners of these operating subsidiaries may have economic or business interests or goals which are inconsistent with our own, and are unable or unwilling to fulfil their obligations under the relevant joint venture or shareholders' agreements, or have financial difficulties.

With respect to our Sino-foreign equity joint ventures, we also rely on shareholding entrustment agreements which may not be as effective in providing operational control as direct or indirect ownership. As these shareholding entrustment agreements have not been submitted or approved by authorities in China, there is also a risk that the relevant PRC authorities may consider these shareholding entrustment agreements to be invalid or unenforceable. We cannot assure you that our partners will not have economic or business interests or goals which are inconsistent with our own, or will be able or willing to fulfil their obligations under the relevant joint venture or shareholders' agreements, or have financial difficulties.

Any such events, particularly if they cannot be remedied due to our inability to cause the termination of the joint venture or other significant corporate actions, may have an adverse effect on our business, financial condition or results of operations.

We may not be able to detect and prevent fraud or other misconduct committed by our representatives.

While we have internal controls and procedures designed to prevent fraud and misconduct by our representatives, we may not always be able to detect or prevent such misconduct in a timely manner, especially if it is related to the personal behaviors of our representatives, and we cannot assure you that we will be able to detect or prevent such misconduct or improper activities in a timely manner or at all, many of which are beyond our control. If such misconduct led to negative publicity, our image may be harmed, and our business, financial condition and results of operations could be adversely affected.

We may in the future receive, through our supplier, natural gas directly or indirectly from Russia that is currently the subject of sanctions of the U.S. and other countries.

Since 2014, the United States, the E.U. and other countries began to impose economic sanctions on certain individuals and entities in Russia. Certain of these sanctions apply to the energy sector of the Russian Federation economy.

CNPC, the parent company of one of our key suppliers, PetroChina, has entered into a purchase and sales contract with Gazprom, the largest extractor of natural gas in Russia and a sanctioned entity, for the supply of natural gas. The first deliveries of natural gas were made in December 2019. Because PetroChina is our key supplier and in certain occasions or locations, our only supplier, we may receive, indirectly through PetroChina, natural gas from Gazprom in the future.

Under the current sanctions regime, we do not believe that the purchase and delivery of natural gas from Gazprom to CNPC, PetroChina, and ultimately to us, would be targeted by the sanctions. Although we will closely monitor future sanctions targeting Russia, we cannot predict whether the current sanctions targeting Russian individuals and entities will be enhanced in the future, or the impact that any such enhancements may have on us. It is possible that we may encounter serious delay in or disruption of our procurement of natural gas in the future, and we may not be able to secure the amount of natural gas supply we desire from other suppliers on acceptable terms or at all, which may materially affect our business, financial condition, result of operations and prospects.

The adoption of hedge accounting with effect from January 1, 2020 renders our consolidated financial information as of and for the year ended December 31, 2019 not directly comparable with our consolidated financial information after January 1, 2020.

With effect from January 1, 2020, we adopted hedge accounting in accordance with HKFRS 9 where we designate certain derivatives as hedging instruments for cash flow hedges. Please refer to Note 4 of the audited consolidated financial statements as of and for the year ended December 31, 2020 and Note 4 of the audited consolidated financial statements as of and for the year ended December 31, 2021 for a discussion of the adoption of hedge accounting. As the adoption of hedge accounting was prospective and we did not restate the corresponding figures for the prior periods before January 1, 2020, our condensed financial statements as of and for the year ended December 31, 2019 may not be directly comparable to our condensed consolidated financial information after January 1, 2020, including our audited consolidated financial statements as of and for the year ended December 31, 2020 and 2021. Investors must therefore exercise caution when making comparisons to any financial figures after January 1, 2020, including our audited consolidated financial statements as of and for the year ended December 31, 2020 and 2021 against our consolidated financial information prior to January 1, 2020 and when evaluating the Group's financial condition, results of operations and results.

RISKS RELATING TO THE PRC NATURAL GAS INDUSTRY

Our gas distribution business is dependent on our ability to maintain our gas operation licenses, other certificates, approvals and permits.

We conduct our piped city-gas businesses in the PRC pursuant to gas operation licenses, other certificates, approvals and permits from the PRC government which authorizes us, in some instances, to provide exclusive gas distribution services in various PRC locations. Our PRC projects and joint ventures may be in the process of obtaining valid gas operation license from time to time. For the validly obtained gas operation licenses, the PRC government may revoke the gas operation licenses in certain circumstances based on the recommendation of the governmental bodies charged with the regulation of the transportation, distribution, marketing and storage of gas.

In addition, some of our PRC project companies have not obtained or are still in the process of obtaining necessary environmental or construction related approvals from PRC authorities, if any of our gas operation licenses, other certificates, approvals or permits are revoked, not renewed or not obtained, we would be required to cease providing gas supply and transportation services in the relevant PRC locations. Our business, financial condition and results of operations may be materially and adversely affected in case of loss of some or all of our gas operation licenses, other certificates, approvals or permits.

Our piped gas distribution projects rely on concessions rights granted by local governments, which will expire, or may be terminated early or not be renewed upon expiration, and may contain restrictions on our transfer of interests in the project.

We operate our piped gas distribution projects typically on an exclusive basis for periods ranging from 15 to 30 years pursuant to the relevant concession rights we have obtained or are in the process of obtaining from local governments as we continue to expand our operations. We could face competition from other companies, including large state-owned enterprises, in applying for concession rights in new projects and we cannot guarantee that we could obtain concession rights necessary for our future operations. Some concession rights agreements of our projects contain restrictions on our ability to transfer our interests to third parties without prior consent from the relevant local government. Furthermore, concession rights are subject to regulatory controls and routine review.

Cancellation or early termination of any such concessions or imposition of restrictive regulatory controls or failure to renew any concession upon its expiration or failure to obtain any concession right, if at all, may interrupt the operations of such projects which may have a material adverse effect on the financial condition and results of operations of such projects.

We are exposed to the credit risk of our C&I customers, and any increase in the level of non-payment by our customers may adversely affect our business and financial condition.

C&I customers generally consume high volumes of piped gas and their non-payment could materially and adversely affect our business. We charge our C&I customers gas usage charges either in advance or in arrears. For those charged in advance, we require the customers to deposit gas charges into magnetic cards which connected to the gas meters. Gas meters that record actual gas consumption are installed at the customers' premises and where smart meters are used, meter readings are automatically transferred to our system in real-time, corresponding value of deposit will be charged in line with the volume of gas consumed at pre-determined unit. For those charged in arrears, monthly bills based on prior month's actual usage are then sent to the customer. In the event a customer defaults on the payment of gas usage charges, the customer's gas supply will be suspended at our discretion. Due to the COVID-19 pandemic, we have allowed for additional grace period for a small number of clients on a case-by-case basis. In addition, we collect construction and installation fees from our C&I customers in advance in instalments based on the percentage-of-completion of the pipeline construction work. In general, a C&I customer is required to pay a deposit of the construction and installation fee upon signing of supply contract. In the event a customer defaults on the payment of construction and installation fees, we do not start the supply of gas to the customer until the construction and installation fees are fully paid. Although we have the ability to terminate or suspend service to customers who do not pay, any material increase in non-payment by our customers would increase our accounts receivables considerably without the corresponding financing to fund our working capital, which may materially and adversely affect our financial condition and results of operation.

Natural gas operations entail inherent safety and environmental risks that may result in substantial liability to us.

Natural gas operations entail inherent risks, including equipment defects, malfunctions and failures, human error, accidents, and natural disasters, which could result in uncontrollable flows of natural gas, fires, explosions, property damage, damage to the environment, injury or death. Natural gas pipelines, if damaged or improperly maintained, may rupture or cause leakage and any explosion or combustion resulting from the leakage may cause death or serious injuries. According to the National Gas Accident Analysis Report (3rd Quarter of 2021) released by the Safety Management Committee of China City Gas Association, there were 322 natural gas accidents (representing 80 user accidents, 241 pipeline accidents and 1 station accident), 41 deaths and 225 injuries relating to natural gas operations and usage in the first three quarters of 2021.

The location of pipelines near populated areas, including residential areas, commercial business centers, industrial sites and other public gathering places, could increase the level of damage resulting from these risks, including the loss of human life, significant damage to property, environmental damage, impairment of our operations and substantial loss to us. We may incur substantial liability and cost if damages are not covered by insurance or are in excess of policy limits.

We have limited insurance coverage and may incur losses due to business interruptions resulting from natural or man-made disasters, and our insurance may not be adequate to cover liabilities resulting from accidents or injuries that may occur.

Due to the nature of our business, we often handle highly flammable and explosive materials. There is a significant risk that industry-related accidents will occur in the course of our business. While we have implemented safety precautions and maintenance procedures throughout our businesses, we cannot assure you that accidents will not occur during future operations. Any significant accident, whether or not we are found to be at fault, may adversely affect our business, financial condition and results of operations. We have obtained insurance for certain fixed assets (including the pipelines we own) that we consider to be subject to significant operating risks. We have also taken out third-party liability insurance policies covering (i) the loss of life or property of third parties arising out of any accident that may occur at our natural gas processing stations, and (ii) the injury or loss of life of staff arising out of our business operations. We have not, however, taken out an insurance policy for any interruption of our business. Should any natural catastrophes such as earthquakes, floods, or any acts of terrorism occur, we may suffer significant property damage and loss of revenue due to interruptions in our business operations. We cannot assure you that our insurance policies will adequately compensate for losses or damages under any and all potential adverse circumstances. A material and successful claim made against us that is not covered by any of our insurance policies or is in excess of our insurance coverage could have an adverse effect on our business and financial position.

Our growth depends in part on environmental regulations and programs promoting the use of cleaner-burning fuels, and modification or delay in implementation of these regulations may adversely impact our business.

Our business is subject to certain PRC laws and regulations relating to the production, storage, transportation and sale of natural gas and other energy sources, as well as environmental and safety matters. The discharge of natural gas or other pollutants into the environment may give rise to liabilities or may require us to incur significant costs to remedy such discharge. In addition, we cannot assure you any environmental laws adopted in the future will not materially increase our cost of conducting business.

In addition, our business depends in part on environmental regulations and programs in China that promote the use of cleaner-burning fuels, including natural gas, for vehicles. Moreover, according to the PRC Government Energy Production and Consumption Revolution Strategy (《能源生產及消費革命戰略》(2016-2030)), the PRC government intends to enhance the supply of natural gas, the development of gas pipeline network and energy saving and emission reduction. According to BP Statistical Review of World Energy 2021, the proportion of natural gas in China's total primary energy consumption was 8.2% in 2020, the PRC government targets to increase the proportion of natural gas in China's total primary energy consumption to 15% by 2030 according to the Energy Production and Consumption Revolution Strategy (2016-2030). The PRC government will implement additional regulations and programs encouraging the use of natural gas. Any delay in implementation of these regulations or programs could have a detrimental effect on the continued development of the PRC natural gas industry, which, in turn, could adversely affect our business.

The natural gas and crude oil price fluctuates widely, which will affect the prices of natural gas we source from some of our suppliers and have a material adverse impact on our business and profitability.

The prices of natural gas in our supply arrangements with certain suppliers are linked to prevailing prices for natural gas and/or crude oil. Natural gas and crude oil prices historically have been volatile and likely will continue to fluctuate in the future due to a variety of factors that are beyond our control. These factors include:

- overall economic conditions;
- the level of consumer demand for natural gas and crude oil, the price, availability and acceptance of alternative fuels and technology advances affecting energy consumption;
- political conditions in natural gas and crude oil producing regions;
- the ability of the members of the Organization of Petroleum Exporting Countries to agree to and maintain crude oil price and production controls;

- actions, regulations and taxation of relevant governmental authorities, including environmental and climate change regulations;
- speculation by investors in natural gas and crude oil; and
- variations between product prices at sales points and applicable index prices.

These factors and the volatile nature of the energy markets make it impossible to predict with any certainty the future prices of natural gas and crude oil. While we use financial derivatives, including but not limited to swaps and options, to hedge applicable risks of the volatility in natural gas and crude oil price, the use of such financial derivatives may not successfully hedge all risks. The fair value of derivatives fluctuates mainly due to the volatility of crude oil price, which in turn impacts our results of operations. If natural gas and crude oil prices increase significantly, and/or such increases last for a sustained period of time, we may be unable to secure natural gas supply at an acceptable price. In the event of significant increases in average gas purchasing costs, we may be unable to pass on to end-customers completely and quickly, which in turn may materially and adversely affect our business and profitability.

Adverse developments in the PRC economy or an economic slowdown in the PRC may reduce the demand for our products and services and have a material adverse effect on our results of operations, financial condition and prospects.

We rely on demand for natural gas, other forms of energy as well as related services in China for our revenue growth, which is substantially affected by the growth of the industrial base, increases or decreases in residential and commercial and industrial consumption of natural gas and the overall economic growth of China. In recent years, China has been one of the world's fastest growing economies in terms of GDP growth. However, the global financial crisis that unfolded in 2008 and continued in the past few years has led to a marked slowdown in the economic growth of China. For example, China's real GDP growth rate has shown an overall downward trend in recent years, declining from 6.6% in 2018, to 6.1% in 2019 to 2.3% in 2020, despite that it rose to 8.1% in 2021. More recently, rising government deficits and debt levels across the globe together with a wave of downgrading of sovereign debt in major western economies have caused turmoil in the global financial markets. The global economy may continue to exacerbate in the future and continue to have an adverse impact on the PRC economy. Any significant slowdown in the PRC economy may have a material adverse effect on our business, prospects, financial condition and results of operations.

RISKS RELATING TO THE PRC

PRC government regulations may limit our activities and adversely affect our business operations.

Our operations, like those of other PRC oil and gas companies, are subject to extensive regulation by the PRC government. In China, gas companies operating piped gas distribution businesses in urban areas are under the supervision of a number of government ministries and departments, including, but not limited to, the Ministry of Construction and the Ministry of Public Security. We must comply with the relevant requirements of certain regulations, including the Regulations on the Administration of Fuel Gas in Urban Areas and the Administration Measures for Concession Operation of Municipal Public Utilities. Central governmental authorities, such as the NDRC, the Ministry of Finance, the Ministry of Natural Resources, the Ministry of Commerce and the State Bureau of Taxation and the local pricing bureaus, exercise extensive control over various aspects of the PRC's oil and gas industry. This control affects a number of aspects of our operations such as the pricing of our main products and services, industry-specific taxes and fees, business qualifications, capital investments, and environmental and safety standards. As a result, we may face significant constraints on our ability to implement our business strategies, to develop or expand our business operations or to maximize our profitability. Our business may also be adversely affected by future changes in policies of the PRC government ministries and departments in respect of the oil and gas industry as well as changes in policies of local governments in relation to our various areas of business.

PRC economic, political and social conditions, as well as government policies, could affect our business and prospects.

The PRC economy differs from the economies of most of the developed countries in many respects, including the extent of government involvement, level of development, growth rate, uniformity in the implementation and enforcement of laws in relation to control of foreign exchange and control over capital investment and allocation of resources.

The PRC economy is in the process of transitioning from a centrally planned economy to a more market-oriented economy. For approximately three decades, the PRC government has implemented economic reform measures to utilize market forces in the development of the PRC economy. In addition, the PRC government continues to play a significant role in regulating industries and the economy through policy measures. We cannot predict whether changes in PRC economic, political or social conditions and in PRC laws, regulations and policies will have an adverse effect on our current or future business, financial condition or results of operations.

In addition, many of the economic reforms carried out by the PRC government are unprecedented or experimental and are expected to be refined and improved over time. Other political, economic and social factors may also lead to further adjustments of the reform measures. This refining and adjustment process may not necessarily have a positive effect on our operations and business development.

Our business, financial condition and results of operations may be adversely affected by:

- changes in PRC political, economic and social conditions;
- changes in policies of the PRC government, including changes in policies affecting the natural gas industry;
- changes in laws and regulations or the interpretation of laws and regulations;
- measures that may be introduced to control inflation or deflation;
- changes in the rate or method of taxation;
- imposition of additional restrictions on currency conversion and remittances abroad; and
- reduction in tariff protection and other import restrictions.

Furthermore, the growth of demand in China for natural gas depends heavily on economic growth. We cannot assure you that such growth will be sustained in the future. Since early 2004 and from time to time, the PRC government has implemented certain measures in order to prevent the PRC economy from experiencing excessive inflation. Such governmental measures may cause a decrease in the level of economic activity, including demand for natural gas, and have an adverse impact on economic growth in China. If China's economic growth slows down or if the Chinese economy experiences a recession, the growth of demand for natural gas may also slow down or stop. Such events could have a material adverse effect on our business, results of operations and financial condition.

Changes in government control of currency conversion and in PRC foreign exchange regulations may adversely affect our business operations.

The PRC government imposes controls on the convertibility between Renminbi and foreign currencies and the remittance of foreign exchange out of China. Under existing PRC foreign exchange regulations, payments of current-account items may be made in foreign currencies without prior approval from the SAFE, by complying with certain procedural requirements.

Approval from appropriate governmental authorities, however, is required when Renminbi is converted into foreign currencies and remitted out of China for capital-account transactions, such as the repatriation of equity investment in China and the repayment of the principal of loans or debt denominated in foreign currencies. Such restrictions on foreign exchange transactions under capital accounts also affect our ability to finance our PRC subsidiaries. Subsequent to this offering, we have the choice, as permitted by the PRC foreign investment regulations and foreign exchange regulations, to invest our funds in the form of registered capital or a shareholder loan into our PRC subsidiaries to finance our operations in China. Our choice of investment is affected by the relevant PRC regulations with respect to capital-account and current-account foreign exchange transactions in China. In addition, our transfer of funds to our subsidiaries in China is subject to approval by PRC governmental authorities in the case of an increase in registered capital, and subject to prior record-filing and registration with PRC governmental authorities in case of shareholder loans to the extent that the regulations on external debt and cross-border financing as promulgated by the NDRC and PBOC are complied with, and the existing foreign investment approvals received by our PRC subsidiaries permit any such shareholder loans at all. These limitations on the flow of funds between us and our PRC subsidiaries could restrict our ability to act in response to changing market conditions.

Fluctuations in the value of Renminbi may adversely affect our business and the value of distributions by our PRC subsidiaries.

The Notes are denominated in U.S. dollars, while substantially all of our revenue is generated by our PRC operating subsidiaries and is denominated in Renminbi. The value of Renminbi against the U.S. dollar and other foreign currencies is subject to changes in the PRC's policies, as well as international economic and political developments.

Pursuant to reforms of the exchange rate system announced by the PBOC on July 21, 2005, Renminbi-to-foreign currency exchange rates are allowed to fluctuate within a narrow and managed band against a basket of foreign currencies, rather than being effectively linked to the U.S. dollar. Further, from May 18, 2007, the PBOC enlarged the floating band for the trading prices in the interbank foreign exchange market of the Renminbi against the U.S. dollar from 0.3% to 0.5% around the central parity rate, effective on May 21, 2007. This allows the Renminbi to fluctuate against the U.S. dollar by up to 0.5% above or below the central parity rate published by the PBOC. The floating band was further widened to 1.0% on April 16, 2012. These changes in currency policy resulted in the Renminbi appreciating against the U.S. dollar by approximately 33.0% from July 21, 2005 to December 31, 2014. On March 17, 2014, the PBOC further widened the floating band against the U.S. dollar to 2.0%. On August 11, 2015, the PBOC adjusted the mechanism for market makers to form the central parity rate by requiring them to consider the closing exchange rate of the last trading date, the supply and demand of foreign exchange and the rate change at primary international currencies. On December 11, 2015, the China Foreign Exchange Trade System (the "**CFETS**"), a sub-institutional organization of the PBOC, published the CFETS Renminbi exchange rate index for the first time which weighs the Renminbi based on 13 currencies, to guide the market in order to measure the Renminbi exchange rate from a new perspective. The PRC government may adopt further reforms of its exchange rate system, including making the Renminbi freely convertible in the future. If such reforms were implemented and resulted in depreciation of the Renminbi against the U.S. dollar, our financial condition and results of operations could be materially and adversely affected because of our relatively substantial U.S. dollar-denominated indebtedness and other obligations after the issuance of the Notes. Such depreciation could also materially and adversely affect the value, translated or converted into U.S. dollars or otherwise, of our earnings and our ability to satisfy our obligations under the Notes. There are significant uncertainties regarding the long-term value of the Renminbi, and there is no assurance that the Renminbi will not experience significant depreciation or (as the case may be) appreciation against U.S. dollars or against any other currency in the future.

There are limited hedging instruments available in China to reduce our exposure to exchange rate fluctuations between the Renminbi and other currencies. To mitigate the potential loss associated with our foreign exchange exposure, we entered into various foreign currency derivative contracts ("**Foreign**

Currency Derivatives") with certain financial institutions. As at December 31, 2021, the Foreign Currency Derivatives have a total notional amount of US$550 million, which enabled us to buy US$ at the predetermined RMB/US$ or HK$/US$ exchange rates on the maturity date. The net unrealized loss of such Foreign Currency Derivatives was RMB14 million in 2021, which was recorded as part of our other gains and losses, and the net unrealized gain of such Foreign Currency Derivatives was RMB6 million in 2020. There is no assurance that the hedging instruments we adopted, or plan to adopt, could achieve the expected benefits, or at all.

Under the EIT Law we may be classified as a "resident enterprise" of the PRC, which could result in unfavorable tax consequences to us.

Under the EIT Law, an enterprise established outside of China with "de facto management body" located within China will be considered a PRC "resident enterprise" for PRC tax purposes and consequently will be treated in a manner similar to a Chinese enterprise for enterprise income tax purposes. The implementing rules of the EIT Law define "de facto management body" as a management body that exercises "substantial and overall management and control over the production and operations, personnel, accounting, and properties" of the enterprise. In April 2009, the State Administration of Taxation specified certain criteria for the determination of the "de facto management bodies" for foreign enterprises that are controlled by PRC enterprises. However, no definition of "de facto management body" has been provided for enterprises established offshore by individuals or foreign enterprises such as our Company. Although it is unclear under the PRC tax law whether we will be deemed as having a PRC "de facto management body" located in China for PRC tax purposes, to date we have not received any notice from any PRC tax authority treating us as a PRC "resident enterprise" for PRC tax purposes. If the PRC tax authorities determine that we are a "resident enterprise" for PRC enterprise income tax purposes, a number of unfavorable PRC tax consequences could follow and we may be subject to enterprise income tax at a rate of 25% on our worldwide taxable income as well as PRC enterprise income tax reporting obligations. In our case, this would mean that income from sources outside the PRC, such as income from any investment outside the PRC of any portion of the offering proceeds, would be subject to PRC enterprise income tax at a rate of 25%, whereas no direct tax is imposed on enterprises under the laws of the Cayman Islands.

Interest paid by us to our non-PRC resident investors and gain on the sale of our Notes may be subject to taxation under PRC tax laws.

Under the EIT Law and its implementation regulations, if we are deemed as a PRC "resident enterprise" for PRC tax purposes, PRC withholding tax at the rate of 10% may be applicable to interest paid by us to investors that are "non-resident enterprises" if such "non-resident enterprise" investors do not have an establishment or place of business in China or if, despite the existence of such establishment or place of business in China, the relevant income is not effectively connected with such establishment or place of business in China, if the interest is treated as income from sources within the PRC. In the case of non-resident individual investors, under the IIT Law and its implementation regulations, the tax may be withheld at a rate of 20%. Any gain realized on the transfer of the Notes by "non-resident enterprise" investors would be subject to a 10% PRC tax (or 20% in the case of non-resident individuals) if we were treated as a PRC "resident enterprise" and such gain is regarded as income derived from sources within China. The PRC tax may be reduced under applicable income tax treaties or agreements entered into between China and other countries or areas. However, it is unclear whether, if we were considered a PRC "resident enterprise," holders of our Notes could in practice obtain the benefit of these treaties or agreements.

On March 23, 2016, the Ministry of Finance and the State Administration of Taxation of the PRC issued the "Notice on Comprehensively Carrying out the Pilot Project of the Value added Tax-for-Business Tax Reform" ("**Circular 36**"), which introduced a new Value added tax ("**VAT**") from May 1, 2016. Under Circular 36, VAT is applicable where entities or individuals provide or receive certain services within China. The services potentially subject to VAT include the provision of financial services such as the provision of loans. Circular 36 further clarifies that "loans" refers to the activity of lending capital for another's use and receiving the interest income thereon. Based on the definition of "loans" under Circular 36, holders of the Notes may be treated as providing financial services in the form of loans to the Company for VAT purposes. Although "resident enterprise" is a specific concept in China's EIT law, in the event the Company is deemed to be a PRC resident enterprise by the PRC tax authorities, the holders of the Notes may be regarded as providing financial services within China and consequently, the Company may be obligated to withhold VAT at a rate of six per cent., plus related local levies, for payments of interest and certain other amounts paid by the Company to Noteholder that are non-resident enterprises or individuals. VAT is unlikely to be applicable to any transfer of Notes between entities or individuals located outside China and therefore unlikely to be applicable to gains realized upon such transfers of Notes, but there is uncertainty as to the applicability of VAT if either the seller or buyer of Notes is located inside China. Circular 36 and other laws and regulations pertaining to VAT are relatively new and the interpretation and enforcement of such laws and regulations involve uncertainties.

If we were a PRC "resident enterprise" and were required under the EIT Law, IIT Law or Circular 36 and the implementation regulations in connection therewith to withhold PRC income tax or VAT on interest paid to non-resident holders of the Notes, we would be required, subject to certain exceptions, to pay such additional amounts as would result in receipt by a holder of the Notes of such amounts as would have been received by the holder had no such withholding been required. The requirement to pay additional amounts will increase the cost of servicing interest payments on the Notes, and could have a material adverse effect on our ability to pay interest on, and repay the principal amount of, the Notes, as well as our profitability and cash flow. In addition, if a holder of the Notes is required to pay PRC income tax or VAT on the transfer of our Notes, the value of such holder's investment in our Notes may be materially and adversely affected.

We may be able to redeem the Notes in whole at a redemption price equal to 100% of the principal amount plus accrued and unpaid interest in the event that we are required to pay additional amounts because we are treated as a PRC "resident enterprise."

In the event that we are treated as a PRC tax "resident enterprise", we may be required to withhold PRC tax on interest paid to certain of our non-resident investors. In such case, we will, subject to certain exceptions, be required to pay such additional amounts as will result in receipt by a holder of the Notes of such amounts as would have been received by the holder had no such withholding been required. As described under "Description of the Notes–Redemption–Optional Tax Redemption," in the event that we are required to pay additional amounts as a result of certain changes in tax law, including any change in the existing position or the stating of an official position regarding the application or interpretation of such law, that results in our Company being required to withhold tax on interest payments as a result of our being treated as a PRC "resident enterprise," we may redeem the Notes in whole at a redemption price equal to 100% of the principal amount plus accrued and unpaid interest.

Our results of operations were, and may continue to be adversely affected by the replacement of business tax with VAT.

Our construction and installation fees used to be subject to a 3% business tax, whereas on March 23, 2016, the Ministry of Finance and the State Administration of Taxation of the PRC issued Circular 36, pursuant to which business tax has been completely replaced by VAT effective May 1, 2016. Currently, the construction and installation fees was subject to an 9% VAT pursuant to the Announcement No.39 issued by the General Administration of Taxation and the General Administration of Customs of the PRC on March 20, 2019. Nonetheless, some of our group entities were also subject to a 3% simplified rate pursuant to the tax regulation. We cannot assure you that we are able to pass the increased costs onto end users, and the levy of VAT on our construction and installation fees could affect our results of operation because of the material contribution of construction and installation fees to our revenue and profits.

PRC regulations relating to the establishment of offshore special purpose companies by PRC residents may adversely affect our business operations.

The SAFE promulgated the Circular on Relevant Issues Concerning Foreign Exchange Administration for PRC Residents to Engage in Offshore Investment and Financing and Round Trip Investment via Special Purpose Vehicles (the "**Circular 37**") and its implementation guidelines in July 2014, which abolishes and supersedes the SAFE's Circular on Relevant Issues Concerning Foreign Exchange Administration for PRC Residents to Engage in Offshore Financing and Round Trip Investment via Overseas Special Purpose Vehicles (the "**Circular 75**") and its related implementation rules and guidelines. Pursuant to the Circular 37 and its implementation guidelines, PRC residents (including PRC institutions and individuals) must register with local branches of SAFE in connection with their direct or indirect offshore investment in an overseas special purpose vehicle ("**SPV**") directly established or indirectly controlled by PRC residents for the purpose of offshore investment and financing with their legally owned asset or interests in domestic enterprises, or their legally owned offshore assets or interests. Such PRC residents are also required to amend their registration with SAFE when there is a significant change to the registered SPV, such as changes of its PRC resident individual shareholder, name, operation period or other basic information, the increase or decrease in the capital contribution by such PRC individuals in the SPV, any share transfer or exchange, merger or division of the SPV. Failure to comply with the registration procedures set forth in the Circular 37 may result in restrictions on the foreign exchange activities of our PRC subsidiaries, including the payment of dividends and other distributions to its offshore parent or affiliate, the capital inflow from the offshore entities and its settlement of foreign exchange capital, and may also subject the relevant onshore company or PRC residents to penalties under PRC foreign exchange administration regulations.

The beneficial owners of our Company, Mr. Wang Yusuo and Ms. Zhao Baoju, who are PRC residents, have made their individual overseas investment registrations required under Circular 75 with Hebei Branch of the SAFE on June 4, 2012. However, if Mr. Wang Yusuo or Ms. Zhao Baoju fail to update such individual overseas investment registration as required by Circular 37, or any other shareholder as PRC resident or controlled by a PRC resident is unable or fail to comply with Circular 37, such shareholder may be subject to fines and legal sanctions, the consequence of which may affect our business operations, particularly with respect to the ability of our PRC subsidiaries to remit foreign currency payments out of China, which could affect our ability to service our offshore indebtedness.

Interpretation of PRC laws and regulations involves uncertainty and the current legal environment in China could limit the legal protections available to you.

Our core business is conducted in China and is governed by PRC laws and regulations. Our principal operating subsidiaries are located in China and are subject to the PRC laws and regulations. The PRC legal system is a civil law system based on written statutes and prior court decisions have limited precedential value and can only be used as a reference. Additionally, PRC written laws are often principle-oriented and require detailed interpretations by the enforcement bodies to further apply and enforce such laws. Since 1979, the PRC legislature has promulgated laws and regulations in relation to economic matters such as foreign investment, corporate organization and governance, commercial transactions, taxation and trade, with a view to developing a comprehensive system of commercial law, including laws relating to the natural gas industry. Because these laws and regulations have not been fully developed and because of the limited volume of published cases and the non-binding nature of prior court decisions, interpretation of PRC laws and regulations involves a degree of uncertainty and the legal protection available to you may be limited. Depending on the governmental agency or the presentation of an application or case to such agency, we may receive less favorable interpretations of laws and regulations than our competitors. In addition, any litigation in China may be protracted and result in substantial costs and diversion of resources and management attention. These uncertainties may impede our ability to enforce the contracts we have entered into. Furthermore, such uncertainties, including the potential inability to enforce our contracts, together with any development or interpretation of PRC laws that is adverse to us, may materially and adversely affect our business, financial condition and results of operations.

We cannot guarantee the accuracy of facts, forecasts and other statistics with respect to China, the PRC economy, the PRC natural gas industry and the selected PRC regional data contained in this Offering Memorandum.

Facts, forecasts and other statistics in this Offering Memorandum relating to China, the PRC economy, the PRC natural gas industry and the selected PRC regional data have been derived from various official or other publications available in China and may not be consistent with other information compiled within or outside of China. We cannot guarantee, however, the quality or reliability of such source materials. The materials have not been prepared or independently verified by us, the Initial Purchasers or any of our or their affiliates or advisors (including legal advisors), or other participants in this offering and, therefore, we make no representation as to the accuracy of such facts, forecasts and statistics. Due to possibly flawed or ineffective collection methods or discrepancies between published information and market practice, the facts, forecasts and statistics in this Offering Memorandum may be inaccurate or may not be comparable to facts, forecasts and statistics produced with respect to other economies. Further, we cannot assure you that they are stated or compiled on the same basis or with the same degree of accuracy as in other jurisdictions. Therefore, you should not unduly rely upon the facts, forecasts and statistics with respect to China, the PRC economy, the PRC natural gas industry and the selected PRC regional data contained in this Offering Memorandum.

RISKS RELATING TO THE NOTES

The Notes may not be a suitable investment for all investors.

Each potential investor in any Notes must determine the suitability of that investment in light of its own circumstances. In particular, each potential investor should:

- have sufficient knowledge and experience to make a meaningful evaluation of the relevant Notes, the merits and risks of investing in the relevant Notes and the information contained or incorporated by reference in this Offering Memorandum or any applicable supplement to the Offering Memorandum;

- have access to, and knowledge of, appropriate analytical tools to evaluate, in the context of its particular financial situation, an investment in the relevant Notes and the impact such investment will have on its overall investment portfolio;

- have sufficient financial resources and liquidity to bear all of the risks of an investment in the relevant Notes, including where principal or interest is payable in one or more currencies, or where the currency for principal or interest payments is different from the potential investor's currency;

- understand thoroughly the terms of the relevant Notes and be familiar with the behavior of any relevant indices and financial markets; and

- be able to evaluate (either alone or with the help of a financial adviser) possible scenarios for economic, interest rate and other factors that may affect its investment and its ability to bear the applicable risks.

Some Notes may be complex financial instruments and such instruments may be purchased as a way to reduce risk or enhance yield with an understood, measured, appropriate addition of risk to the purchaser's overall portfolios. A potential investor should not invest in Notes which are complex financial instruments unless it has the expertise (either alone or with the help of a financial adviser) to evaluate how the Notes will perform under changing conditions, the resulting effects on the value of such Notes and the impact this investment will have on the potential investor's overall investment portfolio. Additionally, the investment activities of certain investors are subject to legal investment laws and regulations, or review or regulation by certain authorities.

The Notes are unsecured obligations.

The Notes are unsecured obligations of the Company. The payment obligations under the Notes may be adversely affected if:

- the Company enters into bankruptcy, liquidation, reorganization or other winding-up proceedings;
- there is a default in payment under the Company's future secured indebtedness or other unsecured indebtedness; or
- there is an acceleration of any of the Company's indebtedness.

If any of these events were to occur, the Company's assets may not be sufficient to pay amounts due on the Notes.

Our subsidiaries are subject to restrictions on the payment of dividends and the repayment of intercompany loans or advances to us and our subsidiaries.

We are a holding company. Substantially all of our business operations are conducted through our wholly or partly owned subsidiaries, associates and joint ventures. Payments on the Notes are structurally subordinated to all existing and future liabilities and obligations of each of our subsidiaries, associates and joint ventures. Claims of creditors of such companies will have priority as to the assets of such companies over us and our creditors, including holders of the Notes. As a result, all of the existing and future liabilities of our subsidiaries, including any claims of trade creditors and preferred stockholders, will be effectively senior to the Notes. Our obligation to make payments on the Notes is solely our obligation and will not be guaranteed by any of our subsidiaries or associates and joint ventures.

As a holding company, we depend on the receipt of dividends and the interest and principal payments on intercompany loans or advances from our subsidiaries, including our PRC subsidiaries, to pay dividends to our shareholders and to satisfy our obligations, including our obligations under the Notes. The ability of our subsidiaries to pay dividends and make payments on intercompany loans or advances to their shareholders is subject to, among other things, distributable earnings, cash flow conditions, restrictions contained in the articles of association of our subsidiaries, restrictions contained in the shareholder agreements or joint venture agreements with our subsidiaries, and applicable laws and restrictions contained in the debt instruments or agreements of such subsidiaries. In addition, if any of our subsidiaries raises capital by issuing equity securities to third parties, dividends declared and paid with respect to such equity securities would not be available to us to make payments on the Notes. These restrictions could reduce the amounts that we receive from our subsidiaries, which would restrict our ability to meet our payment obligations under the Notes.

PRC laws and regulations permit payment of dividends only out of accumulated profits as determined in accordance with PRC accounting standards and regulations and such profits differ from profits determined in accordance with HKFRS in certain significant respects, including the use of different bases of recognition of revenue and expenses. Our PRC subsidiaries are also required to set aside a portion of their after-tax profits according to PRC accounting standards and regulations to fund certain reserves that are not distributable as cash dividends. In practice, our PRC project companies may pay dividends only after they have completed not only the project development, at least the development of a phase or a stand-alone tower or building, and the revenue recognition but also the required government tax clearance and foreign exchange procedures. In addition, dividends paid by our PRC subsidiaries to their non-PRC parent companies will be subject to a 10% withholding tax, unless there is a tax treaty between the PRC and the jurisdiction in which the overseas parent company is incorporated, which specifically exempts or reduces such withholding tax. Pursuant to an avoidance of double taxation arrangement between Hong Kong and the PRC, if the non-PRC parent company is a Hong Kong resident and directly holds a 25% or more interest in the PRC enterprise, such withholding tax rate may be lowered to 5% subject to approval by relevant PRC tax authorities, although there is uncertainty under a circular regarding whether intermediate Hong Kong holding companies will be eligible for benefits under this arrangement. As a result of such restrictions, there could be timing limitations on payments from our PRC subsidiaries to meet payments required by the Notes.

According to the Announcement of the PRC State Administration of Taxation on Promulgating the Administrative Measures for Non-resident Taxpayers' Enjoyment of Treaty Benefits (the "**Administrative Measures**"), effective as of January 1, 2020, any non-resident taxpayer satisfies the conditions for the preferential treatment under the tax treaties may be entitled to enjoy the preferential treatment by itself/himself when filing a tax return or making a withholding declaration through a withholding agent, collect and retain relevant materials for review in accordance with the Administrative Measures, subject to the subsequent administration by the tax authorities. Where a competent tax authority, in the course of subsequent administration, deems that a non-resident taxpayer was not eligible for treaty benefits but nonetheless was subject to a lower treaty rate or otherwise underpaid tax in the PRC, unless it is the withholding agent that failed to file a withholding return in accordance with the Administrative Measures, it shall recover the taxes according to law and hold the non-resident taxpayer liable for its deferred tax payment.

Furthermore, we may use offshore shareholder loans, rather than equity contribution, to our PRC subsidiaries to finance their operations. In such events, the market interest rates that our PRC subsidiaries can pay with respect to offshore loans generally may not exceed comparable interest rates in the international finance markets. Our PRC subsidiaries are also required to pay a 10% (or 7% if the interest is paid to a Hong Kong resident) withholding tax on our behalf on the interest paid under any shareholder loan. Prior to payment of interest and principal on any such shareholder loan, the PRC subsidiaries (as foreign-invested enterprises in China) must present evidence of payment of the withholding tax on the interest paid on any such shareholder loan and evidence of registration with the SAFE, as well as any other documents that the SAFE or its local branch may require.

As a result of the foregoing, we cannot assure you that we will have sufficient cash flow from dividends or payments on intercompany loans or advances from our subsidiaries to satisfy our obligations under the Notes.

The return on the Notes may decrease due to inflation.

The Noteholders may suffer erosion on the return of their investments due to inflation. The Noteholders would have an anticipated rate of return based on expected inflation rates on the purchase of the Notes. An unexpected increase in inflation could reduce the actual returns.

There can be no assurance that use of proceeds of the Notes to finance Eligible Green Projects will be suitable for the investment criteria of an investor.

In connection with the issue of the Notes, the Company has engaged Vigeo Eiris and the Hong Kong Quality Assurance Agency to each provide a second party opinion on the Green Finance Framework (the "Second-Party Opinions").

The Second-Party Opinions may not reflect the potential impact of all risks related to the structure, market, additional risk factors discussed above and other factors that may affect the value of the Notes. The Second-Party Opinions are not a recommendation to buy, sell or hold the Notes and are only current as of the date that the Second-Party Opinions were initially issued, and may be updated, suspended or withdrawn at any time. Currently, the providers of Second-Party Opinions and certifications are not subject to any regulatory regime or oversight. In addition, although we have agreed to certain reporting and use of proceeds obligations in connection with certain criteria, any failure to comply with such obligations does not constitute a breach or an Event of Default under the Indenture. A withdrawal of any of the Second-Party Opinions or any failure to use the proceeds of the Notes in projects within the definition of the Eligible Green Projects, or to meet or continue to meet the investment requirements of certain environmentally-focused investors with respect to such Notes, may have an adverse effect on the value of the Notes and/or may have adverse consequences for certain investors with portfolio mandates to invest in green assets. Moreover, no assurance can be provided with respect to the suitability or reliability of the Second-Party Opinions. The Initial Purchasers have not undertaken, nor are responsible for, any assessment of the eligibility of the assets within the definition of Eligible Green Projects or the monitoring of the use of proceeds from the offering of the Notes. Neither Second-Party Opinion is incorporated into, or forms part of, this Offering Memorandum.

It is the Company's intention to apply an amount equal to the proceeds from the offer of the Notes specifically for Eligible Green Projects (as defined under "Use of Proceeds" below). Prospective investors should have regard to the information set out in this Offering Memorandum regarding such use of proceeds and must determine for themselves the relevance of such information for the purpose of any investment in the Notes together with any other investigation such investor deems necessary. In particular no assurance is given by the Company or any Initial Purchaser that the use of such proceeds for any Eligible Green Projects will satisfy, whether in whole or in part, any present or future investor expectations or requirements as regards any investment criteria or guidelines with which such investor or its investments are required to comply, whether by any present or future applicable law or regulations or by its own by-laws or other governing rules or investment portfolio mandates, in particular with regard to any direct or indirect environmental, sustainability or social impact of any projects or uses, the subject of or related to, any Eligible Green Projects.

Furthermore, it should be noted that there is currently no clearly defined definition (legal, regulatory or otherwise) of, nor market consensus as to what constitutes, a "green", "social", "sustainable" or an equivalently labelled project or as to what precise attributes are required for a particular project to be defined as "green", "social", "sustainable" or such other equivalent label nor can any assurance be given that such a clear definition or consensus will develop over time. Accordingly, no assurance is or can be given to investors that any projects or uses the subject of, or related to, any Eligible Green Projects will meet any or all investor expectations regarding such "green", "social", "sustainable" or other equivalently-labelled performance objectives or that any adverse environmental, social and/or other impacts will not occur during the implementation of any projects or uses the subject of, or related to, any Eligible Green Projects.

In the event that the Notes are listed or admitted to trading on any dedicated "green", "environmental", "social", "sustainable" or other equivalently-labelled segment of any stock exchange or securities market or index (whether or not regulated), no representation or assurance is given by the Company or any Initial Purchaser or any other person that such listing or admission, or inclusion in such index, satisfies, whether in whole or in part, any present or future investor expectations or requirements as regards any investment criteria or guidelines with which such investor or its investments are required to comply, whether by any present or future applicable law or regulations or by its own by-laws or other governing rules or investment portfolio mandates, in particular with regard to any direct or indirect environmental, social or sustainability impact of any projects or uses, the subject of or related to, any Eligible Green Projects. Furthermore, it should be noted that the criteria for any such listings or admission to trading may vary from one stock exchange, securities market or index to another. Nor is any representation or assurance given or made by the Company or any Initial Purchaser or any other person that any such listing or admission to trading will be obtained in respect of any such Notes or, if obtained, that any such listing or admission to trading will be maintained during the life of the Notes.

While it is the intention of the Company to apply the proceeds of the Notes for Eligible Green Projects in, or substantially in, the manner described under "Use of Proceeds", there can be no assurance that the relevant project(s) or use(s) the subject of, or related to, any Eligible Green Projects will be capable of being implemented in or substantially in such manner and/or accordance with any timing schedule and that accordingly such proceeds will be totally or partially disbursed for such Eligible Green Projects. Nor can there be any assurance that such Eligible Green Projects will be completed within any specified period or at all or with the results or outcome (whether or not related to the environment) as originally expected or anticipated by the Company. Any such event or failure by the Company will not constitute an Event of Default (as defined herein) under the Notes. Each potential investor should regard the factors described under the section entitled "Green Finance Framework" and determine for itself the relevance of the information contained in this Offering Memorandum regarding the use of proceeds and its purchase of the Notes based upon such investigation as it deems necessary. Neither the Company nor the Initial Purchasers make any representation as to whether the Notes fulfil the relevant environmental criteria.

The insolvency laws of the Cayman Islands and other local insolvency laws may differ from those of any other jurisdiction with which holders of the Notes are familiar.

Because we are incorporated under the laws of the Cayman Islands, an insolvency proceeding relating to us, even if brought in other jurisdictions, would likely involve Cayman Islands insolvency laws, the procedural and substantive provisions of which may differ from comparable provisions of bankruptcy law in other jurisdictions. We conduct substantially all of our business operations through PRC-incorporated subsidiaries in China. The PRC laws and regulations relating to bankruptcy and insolvency and the legal proceedings in that regard may significantly differ from those of other jurisdictions with which the holders of the Notes are familiar. You should analyze the risks and uncertainties carefully before you invest in the Notes.

If we are unable to comply with the restrictions and covenants in our debt agreements or the Indenture, there could be a default under the terms of these agreements or the Indenture, which could cause repayment of our debt to be accelerated.

We are subject to restrictions and covenants in the Indenture (as defined in the Description of the Notes) governing the Notes and certain of our prior debt obligations including but not limited to the 2017 Bonds and the 2020 Green Notes. If we are unable to comply with the restrictions and covenants in the Indenture governing the Notes, or our current or future debt obligations and other agreements, there could be a default under the terms of these agreements. In the event of a default under these agreements, the holders of the debt could terminate their commitments to lend to us, accelerate repayment of the debt and declare all amounts borrowed due and payable or terminate the agreements, as the case may be. Furthermore, some of our debt agreements contain cross-acceleration or cross-default provisions. As a result, our default under one debt agreement may cause the acceleration of repayment of not only such debt but also other debt or result in a default under our other debt agreements. If any of these events occur, we cannot assure you that our assets and cash flow would be sufficient to repay in full all of our indebtedness, or that we would be able to find alternative financing. Even if we could obtain alternative financing, we cannot assure you that it would be on terms that are favorable or acceptable to us.

Our operations are restricted by the terms of the Notes and other debt agreements, which could limit our ability to plan for or to react to market conditions or meet our capital needs, which could increase your credit risk.

Our current debt obligations and the terms of the Notes include a number of significant restrictive covenants. These covenants restrict, among other things, our ability, and the ability of our restricted subsidiaries, to:

- incur certain indebtedness;
- make investments or other specified restricted payments;
- create, permit to exist or to effect any restrictions on distributions from restricted subsidiaries;
- sell assets;
- enter into transactions with affiliates;
- create liens;

- enter into sale and leaseback transactions; and

- merge or consolidate with another company.

These covenants could limit our ability to plan for or react to market conditions or to meet our capital needs. Our ability to comply with these covenants may be affected by events beyond our control, and we may have to curtail some of our operations and growth plans to maintain compliance.

The Notes do not contain restrictive financial or operating covenants.

The Indenture will contain various covenants intended to benefit the interests of holders of the Notes and that limit our ability to, among other things, incur liens and consolidate or merge with or into, or transfer substantially all of our assets to, another person.

These covenants are subject to a number of important exceptions and qualifications. For more details, see "*Description of the Notes.*" The Indenture, however, does not contain restrictive financial or operating covenants or restrictions on the payments of dividends, the incurrence of indebtedness or the issuance or repurchase of securities by us. In addition, the Indenture does not contain any other covenants or provisions designed to afford holders of the Notes protection in the event of a highly leveraged transaction involving us or in the event of a decline in our credit rating or the rating of the Notes as the result of a takeover, recapitalization, highly leveraged transaction or similar restructuring involving us that could adversely affect such holders. Subject to the terms of our existing corporate debt and other credit facilities, we may incur substantial additional indebtedness in the future.

We may not be able to repurchase the Notes upon a change of control.

Upon the occurrence of a change of control, the holder of each Note will have the option to require us to redeem all or some of the holder's Notes at a purchase price equal to 101% of the principal amount plus accrued and unpaid interest, if any, to the date of purchase. See "*Description of the Notes.*"

The source of funds for any such purchase would be our available cash or third-party financing. We may not, however, have enough available funds at the time of the occurrence of any change of control to redeem the outstanding Notes. Our failure to make the offer to redeem or to redeem the outstanding Notes would constitute an event of default under the Notes. The event of default may, in turn, constitute an event of default under other indebtedness, any of which could cause the related debt to be accelerated after any applicable notice or grace periods. If our other debt were to be accelerated, we may not have sufficient funds to redeem the Notes and repay the debt.

In addition, the definition of change of control for purposes of the Indenture governing the Notes does not necessarily afford protection for the holders of the Notes in the event of some highly leveraged transactions, including certain acquisitions, mergers, refinancings, restructurings or other recapitalizations, although these types of transactions could increase our indebtedness or otherwise affect our capital structure or credit ratings. The definition of change of control for purposes of the Indenture governing the Notes also includes a phrase relating to the sale of "all or substantially all" of our assets. Although there is a limited body of case law interpreting the phrase "substantially all," there is no precise established definition under applicable law. Accordingly, our obligation to make an offer to purchase the Notes, and the ability of a holder of the Notes to require us to purchase its Notes pursuant to the offer as a result of a highly-leveraged transaction or a sale of less than all of our assets may be uncertain.

We may elect to redeem the Notes prior to their maturity.

Pursuant to the terms of the Notes, we may elect to redeem the Notes prior to their maturity in whole but not in part at the price specified in the "*Description of the Notes*".

The optional redemption feature is likely to limit the market value of the Notes. During any period when we may elect to redeem the Notes, the market value of the Notes will generally not rise substantially above the price at which they can be redeemed. This may also be true prior to any redemption period.

We are likely to redeem the Notes when the cost of borrowing is lower than the interest rate on the Notes. At those times, an investor would generally not be able to reinvest the redemption proceeds at an effective interest rate as high as the interest rate on the Notes being redeemed and may only be able to do so at a significantly lower rate. Potential investors should consider reinvestment risk in light of other investments available at that time.

An active trading market for the Notes may not develop and there are restrictions on resale of the Notes.

The Notes are a new issue of securities for which there is currently no trading market. Application will be made to the Hong Kong Stock Exchange for listing of, and permission to deal in, the Notes by way of debt issues to Professional Investors only. None of the Initial Purchasers is obligated to make a market in the Notes, and if the Initial Purchasers do so they may discontinue such market-making activity at any time without notice. Further, the Notes may be allocated to a limited number of investors, in which case liquidity may be limited. In addition, the Notes are being offered pursuant to exemptions from registration under the Securities Act and, as a result, the holders of the Notes will only be able to resell the Notes in transactions that have been registered under the Securities Act or in transactions not subject to or exempt from registration under the Securities Act. It is your obligation to ensure that your offers and sales of the Notes within the United States and other counties comply with applicable securities laws. See "*Plan of Distribution*" for more details. The Company cannot predict whether an active trading market for the Notes will develop or be sustained.

The liquidity and price of the Notes following the offering may be volatile.

The price and trading volume of the Notes may be highly volatile. Factors such as variations in our revenues, earnings and cash flows, proposals for new investments, strategic alliances and/or acquisitions, changes in interest rates, fluctuations in price for comparable companies, government regulations and changes thereof applicable to our industry and general economic conditions nationally or internationally could cause the price of the Notes to change. Since the sub-prime mortgage crisis in 2008, the international financial markets have experienced significant volatility. In addition, the outcome of the Brexit could adversely affect European and worldwide economic and market conditions and could contribute to volatility in the global financial and foreign exchange markets. The referendum has also given rise to calls for the governments of other European Union member states to consider withdrawal. Since the COVID-19 outbreaks, concerns over the economic slowdown resulting from the COVID-19 have led to an increase in the market volatility. In addition, concerns over possible inflation or deflation, uncertainty relating to currency exchange rates and interest rates, the availability and cost of credit, volatility in commodity and oil prices, increased geopolitical tensions, including the escalation of Russia-Ukraine tensions and the continued uncertainty regarding the further trade policy changes resulting from the trade war between the United States and China, policy changes affecting international trade and the imposition of tariffs, and unstable financial markets have contributed to increased market volatility. These developments, or the perception that any of them could occur, may significantly reduce global market liquidity and restrict the ability of key market participants to operate in certain financial markets, which may have an adverse impact on the market price and trading volume of the Notes. If similar developments occur in the international financial markets in the future, the liquidity and price of the Notes could be adversely affected.

The ratings assigned to the Company and the Notes may be lowered or withdrawn in the future.

The Company is rated "Baa1" by Moody's with stable outlook, "BBB" by S&P with positive outlook and "BBB+" by Fitch with stable outlook. The Notes are expected to be rated "Baa1" by Moody's, "BBB" by S&P and "BBB+" by Fitch. The ratings assigned to us and expected to be assigned to the Notes address our ability to perform our obligations under the Notes respectively and the associated credit risks in determining the likelihood that payments will be made when due. A rating is not a recommendation to buy, sell or hold securities and may be subject to revision, suspension or withdrawal at any time. We cannot assure you that the ratings will be confirmed or they will remain for any given period of time or that a rating will not be lowered or withdrawn entirely by the relevant rating agency if in its judgment circumstances in the future so warrant. We have no obligation to inform holders of the Notes of any such revision, downgrade or withdrawal. A suspension, reduction or withdrawal at any time of the rating assigned to the Company or the Notes may adversely affect the market price of the Notes.

There is uncertainty as to whether the courts of China would enforce judgments of U.S. courts or entertain original actions brought in China.

The Notes and the Indenture are each governed by the laws of the State of New York. Judgments of foreign courts, including New York courts, are unlikely to be recognized or enforced in the PRC unless there is a treaty between the PRC and the country where the judgment is made or on reciprocity between jurisdictions. The PRC does not have any treaties or other agreements that provide for reciprocal recognition and enforcement of foreign judgments with the United States. As a result, there is uncertainty as to whether the courts of China would enforce judgments of U.S. courts or entertain original actions brought in China.

Since the Notes will initially be issued in book-entry form, holders must rely on DTC's procedures to receive communications relating to the notes and exercise their rights and remedies.

We will initially issue the notes in the form of one or more global notes registered in the name of Cede & Co., as nominee of DTC. Beneficial interests in global notes will be shown on, and transfers of global notes will be effected only through, the records maintained by DTC. Except in limited circumstances, we will not issue certificated notes. See "*Description of the Notes – Notes; Delivery and Form.*" Accordingly, if you own a beneficial interest in a global note, then you will not be considered an owner or holder of the notes. Instead, DTC or its nominee will be the sole holder of global notes. Unlike persons who have certificated notes registered in their names, owners of beneficial interests in global notes will not have the direct right to act on our solicitations for consents or requests for waivers or other actions from holders. Instead, those beneficial owners will be permitted to act only to the extent that they have received appropriate proxies to do so from DTC or, if applicable, a DTC participant. The applicable procedures for the granting of these proxies may not be sufficient to enable owners of beneficial interests in global notes to vote on any requested actions on a timely basis. In addition, notices and other communications relating to the notes will be sent to DTC. We expect DTC to forward any such communications to DTC participants, which in turn would forward such communications to indirect DTC participants. But we can make no assurances that you timely will receive any such communications.

There may be less publicly available information about us than is available for public companies in certain other jurisdictions.

We will follow the applicable disclosure standards for debt securities listed on the Hong Kong Stock Exchange, which standards may be different from those applicable to companies in certain other countries. The level and timeliness of information that is available may not correspond to what investors of the Notes are accustomed to. The Company is listed on the Hong Kong Stock Exchange. There may be less publicly available information about companies listed in Hong Kong than is regularly made available by public companies in certain other jurisdictions. In addition, our financial statements are prepared and presented in accordance with HKFRS, which differ in certain significant respects from generally accepted accounting principles or other accounting standards in other jurisdictions, which might be material to the financial information contained in this Offering Memorandum. We have not prepared a reconciliation of our consolidated financial statements and related footnotes between HKFRS and generally accepted accounting principles or other accounting standards in other jurisdictions. In making an investment decision, you must rely upon your own examination of us, the terms of the offering and our financial information. You should consult your own professional advisors for an understanding of the differences between HKFRS and generally accepted accounting principles and other accounting standards in other jurisdictions and how those differences might affect the financial information contained in this Offering Memorandum.

The Trustee may request holders of the Notes to provide an indemnity and/or security and/or prefunding to its satisfaction.

In certain circumstances, including without limitation giving of notice to the Company and taking enforcement steps pursuant to the Description of the Notes, the Trustee may, at its sole discretion, request holders of the Notes to provide an indemnity and/or security and/or prefunding to its satisfaction before it takes actions on behalf of holders of the Notes. The Trustee shall not be obliged to take any such actions if not indemnified and/or secured and/or prefunded to its satisfaction. Negotiating and agreeing to an indemnity and/or security and/or prefunding can be a lengthy process and may impact on when such actions can be taken. The Trustee may not be able to take actions, notwithstanding the provision of an indemnity or security or prefunding to it, in breach of the terms of the Indenture or the Description of the Notes or in circumstances where there is uncertainty or dispute as to the applicable laws or regulations and, to the extent permitted by the agreements and the applicable law, it will be for the holders of the Notes to take such actions directly.

Decisions that may be made on behalf of all holders of the Notes may be adverse to the interests of individual holders of the Notes.

The Description of the Notes contains provisions for calling meetings of holders of the Notes to consider matters affecting their interests generally. These provisions permit defined majorities to bind all holders of the Notes including holders who did not attend and vote at the relevant meeting and holders who voted in a manner contrary to the majority. Furthermore, there is a risk that the decision of the majority of holders of the Notes may be adverse to the interests of the individuals.

The Notes will be structurally subordinated to all of our secured debt and if a default occurs, we may not have sufficient funds to fulfill our obligations under the Notes.

The Notes are general senior unsecured obligations that rank equally in right of payment with all of our existing and future unsecured and unsubordinated indebtedness, including our short-term debentures. The Notes will be structurally subordinated to all our secured indebtedness and other obligations to the extent of the value of the assets securing that indebtedness and other obligations. As of December 31, 2021, we had approximately RMB652 million of secured indebtedness. In addition, the Indenture will, subject to some limitations, permit us to incur additional secured indebtedness and your Notes will be effectively junior to any additional secured indebtedness we may incur.

In the event of our bankruptcy, liquidation, reorganization or other winding up, our assets that secure our secured indebtedness will be available to pay obligations on the Notes only after all secured indebtedness, together with accrued interest, has been repaid in full from our assets. If we are unable to repay our secured indebtedness, the lenders could foreclose on substantially all of our assets which serve as collateral. In this event, our secured lenders would be entitled to be repaid in full from the proceeds of the liquidation of those assets before those assets would be available for distribution to other creditors, including holders of the Notes. Holders of the Notes will participate in the proceeds of the liquidation of our remaining assets ratably with all holders of our unsecured indebtedness that is deemed to be of the same class as the Notes, and potentially with all of our other general creditors. We advise you that there may not be sufficient assets remaining to pay amounts due on any or all the Notes when outstanding.

We may incur substantial additional indebtedness in the future, which could adversely affect our financial health.

We may from time to time incur substantial additional indebtedness. If we or any of our subsidiaries incur additional debt, the risks that we face as a result of such indebtedness and leverage could intensify. The amount of our indebtedness could have important consequences to holders of our Notes. For example, it could:

- limit our ability to satisfy our obligations under the Notes and other debt;
- increase our vulnerability to adverse general economic and industry conditions;
- require us to dedicate a substantial portion of our cash flow from operations to servicing and repaying our indebtedness, thereby reducing the availability of our cash flow to fund working capital, capital expenditures and other general corporate purposes;
- limit our flexibility in planning for or reacting to changes in our businesses and the industry in which we operate;
- place us at a competitive disadvantage compared to our competitors that have less debt;
- limit, along with the financial and other restrictive covenants of our indebtedness, among other things, our ability to borrow additional funds; and
- increase the cost of additional financing.

We may not be able to generate sufficient cash to satisfy our outstanding and future debt obligations.

Our ability to generate sufficient cash to satisfy our outstanding and future debt obligations will depend upon our future operating performance, which will be affected by prevailing economic conditions and financial, business and other factors, many of which are beyond our control. We anticipate that our operating cash flow will be sufficient to meet our anticipated operating expenses and to service our debt obligations as they become due. We may not, however, generate sufficient cash flow for these purposes. If we are unable to service our indebtedness, we will be forced to adopt an alternative strategy that may include actions such as reducing or delaying capital expenditures, selling assets, restructuring or refinancing our indebtedness or seeking equity capital. These strategies may not be instituted on satisfactory terms, if at all.

Holders of the Notes may be unable to enforce their rights under U.S. bankruptcy law.

We are incorporated in the Cayman Islands and have been advised by our Cayman Islands counsel, Maples and Calder (Hong Kong) LLP, that although there is no statutory enforcement in the Cayman Islands of judgments obtained outside of the Cayman Islands, the courts of the Cayman Islands will, based on the principle that a judgment by a competent foreign court imposes upon the judgment debtor an obligation to pay the sum for which judgment has been given, recognize as the basis for a claim at common law in the Cayman Islands a foreign judgment of a court of competent jurisdiction if such judgment is final, for a liquidated sum not in respect of taxes or a fine or penalty, is not inconsistent with a Cayman Islands judgment in respect of the same matters and was not obtained in a manner, and is not of a kind the enforcement of which is, contrary to the public policy of the Cayman Islands. A Cayman Islands court may stay proceedings if concurrent proceedings are being brought elsewhere.

The insolvency laws of the Cayman Islands and other local insolvency laws may differ from U.S. bankruptcy law or those of another jurisdiction with which holders of the Notes are familiar.

Because we are incorporated under the laws of the Cayman Islands, an insolvency proceeding relating to us, even if brought in the United States, would likely involve Cayman Islands insolvency laws, the procedural and substantive provisions of which may differ from comparable provisions of United States federal bankruptcy law.

USE OF PROCEEDS

The net proceeds of the Notes will be approximately US$545 million. The Company intends to use the net proceeds of the Notes for the refinancing of certain existing indebtedness of the Group to fund and/or refinance capital or operating expenditures, including, without limitations, the research and development, construction, acquisition and operations on new or existing Eligible Green Projects (as defined below) that promote a green and low-carbon economy, improve pollution control and energy efficiency and provide clear environmental sustainability and climate change benefits in accordance with certain prescribed eligibility criteria as described under the Green Finance Framework. See "*Green Finance Framework*" for more details.

Eligible Green Projects have each been defined in accordance with the broad categorization of eligibility for "Green Eligible Categories" as set out in the section headed "*Green Finance Framework*."

"Eligible Green Projects" are those which comprise financing within the Green Eligible Categories set out in the Green Finance Framework which, amongst other things, comply with the Green Bond Principles set by International Capital Market Association and updated in 2021 ("**Green Bond Principles**") and the Sustainable Development Goals set by the United Nations on September 25, 2015. Such Green Eligible Categories include those which relate to: renewable energy; pollution prevention and control; energy efficiency; sustainable water treatment and green buildings. Activities within and/or financings to industries involved in, among others, coal-based energy generation and distribution infrastructure for such energy, large-scale hydro power plants, nuclear fuels and activities which are in relation to hazardous chemicals and radioactive substance are specifically excluded (the "**Exclusionary Criteria**") from this definition.

Assets in all eligible categories shall reach the minimum threshold required by relevant official standards in relation to environmental impacts recognized in the relevant jurisdiction. Where no official standards are locally recognized, corresponding international standards and best practices shall apply.

The Initial Purchasers have not separately verified nor will make any assurances as to (i) whether the Notes will meet investor criteria and expectations regarding environmental impact for any investors, (ii) whether the net proceeds will be used to finance and/or refinance Eligible Green Projects, or (iii) the characteristics of Eligible Green Projects, including their environmental criteria. See "*Risk Factors*" for more details.

GREEN FINANCE FRAMEWORK

The Company has established a green finance framework (the "**Green Finance Framework**") in accordance with (i) the Green Bond Principles and (ii) the Green Loan Principles.

The Green Finance Framework is made available on the Company's website at www.ennenergy.com.

Management Statement

The Company has always been clearly positioned to develop its business in the clean energy industry, taking the harmonious development of energy and the environment as its responsibility, and striving to find clean, efficient and innovative solutions for the energy issues in China and the world. The Company believes that adhering to sustainable development enables people to have a better living environment, having actively promoted the use of natural gas, a cleaner fuel, to replace coal and other fossil fuels with high emissions. At the same time, the Company vigorously developed integrated energy business which was based on the concept of "integrating multiple energy forms, adapting to local conditions," to tailor-make integrated energy solutions according to customers' energy needs, and reduced the total cost of energy consumption for customers while improving energy efficiency and reducing emissions.

In March 2019, the Company established a committee (the "**ESG Committee**"), currently comprising three Executive Directors, a Non-Executive Director and an Independent Non-Executive Director, to support the Board in formulating environmental, social and governance ("**ESG**") strategy of the Group and supervise the implementation of ESG initiatives. The Company has also established an ESG information system with multiple functions, including reporting, reviewing, investigating, and analyzing ESG information, real-time monitoring the fulfilling and practice of responsibility carried out by headquarter and subsidiaries. It aims to enhance the awareness of performing duties and sustainable development management level.

The Company has developed the Green Finance Framework to enable the Group to fund projects that will deliver environmental and social benefits to support the Company's business strategies and vision. The Green Finance Framework intends to contribute to three main environmental objectives, namely climate change mitigation, pollution prevention and control and energy efficiency improvement.

Eligible Projects List

The net proceeds of the issuance of any relevant green bond will be allocated exclusively to finance and/or refinance the Company's own operational activities in new or existing Eligible Green Projects in one or more of the following categories ("**Green Eligible Categories**"):

- **Renewable energy:** generation of energy from renewable sources including wind, solar, seawater heat pump, biomass, small scale hydropower and geothermal, transmission and distribution projects with the sole purpose of connecting renewable energy production and development of boilers powered by biomass, which only utilize agricultural and forestry waste;

- **Pollution prevention and control and Energy efficiency:** natural gas leakage detection systems, including installing Cloud Intelligent Safety Management System; reuse of industrial residual heat and steam for downstream production limited to construction and operation of pipelines to collect waste heat and associated infrastructure for heat distribution; installation of residual gas recovery devices on LNG transportation trucks and LNG refueling stations; and tailor-made integrated energy solutions to help improve energy efficiency through ENN Ubiquitous Energy Network;

- **Sustainable water management:** the installation of drainage canals in construction sites to discharge waste water into urban sewage pipelines if emission standards are met, the installation of mud pools to avoid infiltrating into groundwater or rivers, the use of reclaimed water and rainwater in production process and adoption of water-saving appliances to reduce water consumption; and

- **Green buildings:** the renovation of buildings (including industrial premises) certified in accordance with any one of the selected certification systems (including Chinese Green Building Evaluation Label (GBL) with a requirement of 2 stars or above and U.S. Leadership in Energy and Environmental Design (LEED) with a requirement of gold or above) and on-site renewable energy installations leading to an energy use reduction of at least 15%.

Project Evaluation and Selection

The Company will follow the procedures below to evaluate and select potential financing of Eligible Green Projects:

1. Preliminary Screening

A dedicated ESG working group (the "**EWG**") has been set up, comprised of the senior members and representatives from various departments including the Chief Financial Officer, Company Secretary, Head of Investor Relations and Sustainability, the Quality, Health, Safety and Environment department and the Human Resources department. EWG will meet at least once every 12 months to discuss and select potential eligible green projects meeting the criteria set out in the "Eligible Green Projects" definition and in accordance with the Green Eligible Categories as described above. ESG Committee will work with finance, risk management, IT and other relevant functional departments to ensure there is sufficient data and information for proper assessment, and will form a list of nominated projects which will be submitted to the ESG Committee for review. Activities within and/or financings to industries involved in, the Exclusionary Criteria, mainly sectors which are prohibited by laws and regulation in China, such as child labor, gambling industry, adult entertainment and corporations which are in association with illegal activities, are excluded from the project list.

2. Review and Approval

The ESG Committee, comprising three Executive Directors, a Non-executive Director and an Independent Non-executive Director was formed in 2019 to support the Board in formulating ESG strategy of the Group and supervise the implementation of ESG initiatives. It shall review each of the nominated projects for approval as Eligible Green Projects. The approved projects will form an eligible projects list (the "**Eligible Projects List**").

The ESG Committee will select the Eligible Green Projects that fall within the eligibility criteria and other factors as set out in the Green Finance Framework, such as whether the projects comply with the overall development and sustainability policy and strategy of the Company, and whether any clear and measurable environmental benefits can be attained.

3. Update and Maintenance

In addition, EWG will be responsible for managing any future updates of the Green Finance Framework, including any expansion of requirements of use of proceeds. In case of divestments or if an Eligible Green Project no longer meets the eligibility criteria, the funds will be reallocated to other Eligible Green Projects. EWG shall review the Eligible Projects List on an annual basis and determine if any changes are necessary (for example, if a project has amortized, been prepaid, sold or otherwise become ineligible). EWG will decide any necessary update of the Eligible Projects List (such as replacement, deletion, or addition of projects) to maintain the eligibility of the use of proceeds raised from each relevant green bond.

Management of Proceeds

1. Planning for Use of Proceeds

The Company shall continuously evaluate the recent and pipeline capital spending and develop a preliminary Eligible Projects List in accordance with the procedures described above to ensure that the proceeds of each green bond can be allocated to Eligible Green Projects in a timely manner.

2. ***Management of Register***

The Company shall establish and maintain a register to record and keep track of the allocation of proceeds. The proceeds of each green bond will be deposited in the general funding accounts and earmarked pending allocation.

The register would contain detailed information of the capital source (such as the issue amount, coupon rate, issue date, maturity date and ISIN of each green bond) and the capital allocation (such as the issuer or borrower description, transaction date, interest rate of the loan and repayment or amortization profile). The register would also contain information including the remaining balance of unallocated proceeds yet to be earmarked and other relevant information such as information on the temporary investment for unallocated proceeds, to ensure that the aggregate of issuance proceeds allocated to the Eligible Green Projects is recorded at all times.

3. ***Use of Unallocated Proceeds***

Any balance of issuance proceeds which are not yet allocated to Eligible Green Projects will be held in accordance with the Company's liquidity guidelines for short term time deposits or investments or used to repay existing borrowings within the Group. The Company commits not to invest temporary unallocated proceeds to sectors and activities specified in the Exclusionary Criteria as described above.

Reporting

1. ***Allocation Reporting***

As long as any green bonds are outstanding, the Company intends to maintain the transparency of information disclosure following the best practices recommended by the Green Bond Principles. Accordingly, the Company will provide information on an annual basis on amounts equal to the net proceeds of each green bond issued and provide:

(i) key information including issuer/borrower entity, transaction date, number of transactions, principal amount of proceeds, maturity date and interest or coupon (and in the case of bonds, the ISIN number);

(ii) the aggregate amount allocated to the various Eligible Green Projects;

(iii) the amount and/or percentage of new and existing projects (share of financing and refinancing);

(iv) the remaining balance of funds which have not yet been allocated and the type of temporary investment for unallocated proceeds; and

(v) examples of Eligible Green Projects (subject to confidentiality disclosures).

2. ***Impact Reporting***

Where possible, the Company will report on the environmental impacts resulting from Eligible Green Projects funded by any green bond.

Information on its green bonds and Eligible Green Projects will be disclosed in the Company's annual Environmental, Social and Governance Report, Annual Report or on the official website of the Company until all the net proceeds have been allocated.

3. External Review

The Company has engaged Vigeo Eiris, an independent party, on an ongoing basis to act as an external reviewer of the Green Finance Framework, to provide independent review and verification of such framework against the Green Bond Principles and to provide a second party opinion. External review will cover pre-issuance assurance, an assurance report on the Green Finance Framework, issued by Vigeo Eiris. The Company has also engaged Hong Kong Quality Assurance Agency to provide independent review and verification of the Green Finance Framework against the Green Bond Principles and to provide a second party opinion. The external review report will be publicly available at http://ir.ennenergy.com/en/ir/sustainability.php. None of the second party opinions are incorporated into, or form part of, this Offering Memorandum.

CAPITALIZATION AND INDEBTEDNESS

The following table sets forth on an actual basis our cash and cash equivalents, short-term and long-term borrowings and capitalization as of December 31, 2021 and as adjusted to give effect to the issuance of the Notes in this offering after deducting the Initial Purchasers' discounts and commissions and other estimated expenses payable by us in connection with this offering and the application of the proceeds as described under "Use of Proceeds." Except as otherwise disclosed herein, there has been no material change in our capitalization since December 31, 2021.

	As of December 31, 2021			
	Actual		As adjusted	
	RMB million	*US$ million*[(4)]	*RMB million*	*US$ million*[(4)]
Cash and cash equivalents[(1)]	8,684	1,363	8,967	1,408
Short-term borrowings[(2)]				
Bank and other loans	6,150	965	2,960[(5)]	465[(5)]
Corporate bonds	2,099	329	2,099	329
Unsecured bonds	3,601	565	3,601	565
Total short-term borrowings	11,850	1,859	8,660	1,359
Long-term borrowings[(2)]				
Bank and other loans	3,318	521	3,318	521
Senior notes	4,722	741	4,722	741
Notes to be issued	–	–	3,473	545
Total long-term borrowings	8,040	1,262	11,513	1,807
Equity attributable to owners of our Company				
Share capital	117	18	117	18
Reserves	35,660	5,596	35,660	5,596
Total equity attributable to owners of our Company	35,777	5,614	35,777	5,614
Non-controlling interests	6,373	1,000	6,373	1,000
Total capitalization[(3)]	50,190	7,876	53,663	8,421

Note:

(1) Cash and cash equivalents exclude non-current restricted bank deposits of RMB622 million (US$98 million) and bank deposits of RMB363 million (US$57 million).

(2) Our borrowings do not include any capital commitments or contingent liabilities. As December 31, 2021, capital commitments were RMB1,750 million (US$275 million).

(3) Total capitalization includes total long-term borrowings, total equity attributable to owners of the Company and non-controlling interests.

(4) Calculated at the exchange rate of US$1.00 = RMB6.3726 on December 30, 2021 as published by Federal Reserve Bank of New York.

(5) Reflects the estimated repayment of RMB3,190 million (US$500 million) of our existing bank and other loans.

Except as otherwise disclosed in this Offering Memorandum, there has been no material change in our indebtedness or capitalization since December 31, 2021.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis should be read in conjunction with the Company's Audited Financial Statements, including the notes thereto, included elsewhere in this Offering Memorandum. All financial information for the Company is set forth below on a consolidated basis.

Our consolidated financial statements were prepared in accordance with HKFRS, which differ in certain respects from generally accepted accounting principles in certain other jurisdictions. Unless otherwise specified, references in this section of the offering memorandum to "2019," "2020" and "2021" refer to our financial years ended December 31, 2019, 2020 and 2021, respectively.

Overview

We are one of the largest privately-owned clean energy distributor and integrated energy solutions provider in China. Our principal business is the sale and distribution of piped gas, LNG and other multi-energy products, and the investment in, and the constructions, operation and management of, gas pipeline infrastructure, vehicle/ship refueling stations and integrated energy projects. We also conduct value added business, including the sales of gas-related appliances, energy-saving products, home safety and security products, and the provision of value added services that assist our customers in transitioning towards a low-carbon lifestyle and improving their quality of life.

We commenced operations in 1993 and have since developed into one of the leading privately-owned gas operators in the PRC. As of December 31, 2021, we had a total of 252 operational locations with a total connectable urban population of 124.3 million in China. We operate our piped gas distribution infrastructure on an exclusive basis, typically for periods ranging from 15 to 30 years, in cities and urban areas located in 20 provinces, municipalities and autonomous regions in China. We typically apply for and obtain exclusive rights from the local governments in China to distribute piped gas. We may also acquire exclusive rights by entering into joint ventures with existing local piped gas distributors. In addition, we construct and maintain city piped gas networks in locations where we have acquired exclusive rights through the above-mentioned means to supply piped gas. We charge construction and installation fees from property developers, residential customers and C&I customers according to local government's regulations. We receive recurring gas usage charges from connected customers based on the tariffs negotiated and determined within the price cap set by the local governments.

We intend to grow organically by increasing the penetration rates and the number of connected customers for our existing operational locations while continuing to develop new projects and expanding our concessions in China (including, without limitation, to add more operational locations and to acquire certain industrial park projects close to the existing operational locations), with a particular focus on the commercial and industrial zones of emerging cities. In 2019, 2020 and 2021, the number of city-gas projects under our management increased by 30, 18 and 17, respectively, in China.

Apart from our focus on city-gas projects, we adhere to the principle of integrated energy development, explore and utilize the most competitive low-carbon energy sources based on different local conditions, and develop integrated energy projects serving customers including industrial parks, factories, buildings and transportation. As of December 31, 2021, we had 150 integrated energy projects in operation and 42 projects under construction. The sales of integrated energy including cooling, heating, electricity and steam is expected to reach 36 billion kWh upon full operation over the next few years. With the direction to develop integrated energy business, we will be able to further diversify our business risks and explore more business opportunities including value added business.

For the years ended December 31, 2019, 2020 and 2021, our revenue was RMB70,183 million, RMB71,617 million and RMB93,113 million, respectively, and our net profit was RMB6,861 million, RMB7,331 million and RMB8,995 million, respectively. As of December 31, 2019, 2020 and 2021, our total net assets were RMB31,020 million, RMB36,172 million and RMB42,150 million, respectively.

Our shares were listed on the Growth Enterprise Market on May 10, 2001 and were transferred to the Main Board of the Hong Kong Stock Exchange (stock code: 2688) on June 3, 2002.

Our Critical Accounting Policies

Our critical accounting policies are those we believe are important to the portrayal of our financial condition and results of operations, or are policies that require us to exercise judgment in considering the relevant transaction. In many cases, the accounting treatment of a particular transaction is specifically dictated by HKFRS with no need for the application of our judgment. In certain circumstances, however, the preparation of consolidated financial statements in conformity with HKFRS requires that we use our judgment to make certain estimates, assumptions and decisions regarding accounting treatment. We believe that the policies described below are our critical accounting policies.

Recognition of intangible assets acquired in business acquisition

We account for acquisitions of businesses by using the acquisition method, and the consideration transferred for the business acquisition is allocated to the identifiable assets acquired and liabilities assumed based on their respective fair values as at acquisition date, including intangible assets. We usually determine the fair value of intangible assets using excess earning method, which requires a set of estimations and determination of key inputs, including the future cash flow, gross profit margins, revenue growth rates and discount rates. Any changes to these inputs may have significant impact on the fair value of intangible assets, and will consequently have further impact on the goodwill or the profit or loss in the case of a bargain purchase.

Impairment assessment of goodwill and intangible assets

Determining whether goodwill and intangible assets are impaired requires the estimation of the recoverable amount of the cash generating units ("CGUs") to which goodwill and intangible assets have been allocated which is the higher of the fair value less costs of disposal and its value in use. The value in use calculation requires that we estimate the future cash flows expected to arise from the CGU and suitable inputs, including revenue growth rate and discount rate in order to calculate the present value. Where the actual future cash flows are less than expected, or there are changes in facts and circumstances which result in a downward revision of future cash flows or upward revision of discount rate, a material impairment loss or further impairment loss may arise. As of December 31, 2019, 2020 and 2021, the carrying amount of goodwill was RMB2,379 million, RMB2,511 million and RMB2,520 million, respectively. Details of the impairment assessment is set out in in Notes 19 and 20 to the audited consolidated financial statements as of and for the year ended December 31, 2020 and Notes 19 and 20 to the audited consolidated financial statements as of and for the year ended December 31, 2021.

Fair value measurement of financial instruments

Certain of our financial instruments, including unlisted equity securities and derivative contracts amounting to RMB4,907 million, RMB4,742 million and RMB5,593 million as of December 31, 2019, 2020 and 2021, respectively, are measured at fair values with fair values being determined based on various valuation techniques and unobserved inputs. Judgment and estimation are required in establishing the relevant valuation techniques and the relevant inputs such as liquidity discount, estimates of future prices, market price volatility and credit risk. Changes in these factors could affect the fair values of these instruments. Further disclosures are set out in Note 53 to the audited consolidated financial statements as of and for the year ended December 31, 2020 and Note 53 to the audited consolidated financial statements as of and for the year ended December 31, 2021.

Depreciation of property, plant and equipment

Property, plant and equipment are depreciated on a straight-line basis over their estimated useful lives, after taking into account the estimated residual value. We assess annually the residual value and the useful life of our property, plant and equipment, and if the expectation differs from the original estimates, such differences from the original estimates will impact the depreciation charges in the year in which the estimates change. As of December 31, 2019, 2020 and 2021, the carrying amount of property, plant and equipment less accumulated depreciation and accumulated impairment losses was RMB37,955 million, RMB41,861 million and RMB46,793 million.

Factors Affecting Our Performance

The operating performance of our business is affected by the following key factors:

Government policies encouraging the adoption of cleaner burning fuels

According to the PRC Government Energy Production and Consumption Revolution Strategy (《能源生產及消費革命戰略》(2016-2030)), the PRC government intends to enhance the supply of natural gas, the development of gas pipeline network and energy saving and emission reduction. According to BP Statistical Review of World Energy 2021, the proportion of natural gas in China's total primary energy consumption was 8.2% in 2020, the PRC government targets to increase the proportion of natural gas in China's total primary energy consumption to 15% by 2030 according to the Energy Production and Consumption Revolution Strategy (2016-2030). The PRC government will implement additional regulations and programs encouraging the use of natural gas, the implementation of which is expected to be favorable for the development of the PRC natural gas industry. However, any delay in implementation of these regulations or programs could have a detrimental effect on the continued development of the PRC natural gas industry, which, in turn, could adversely affect our business.

According to the 14th Five-Year Plan, China would continue to advance low-carbon transition, and aims to peak carbon dioxide emissions by 2030 and achieve carbon neutrality by 2060. In October 2021, China formulated the Action Plan for Carbon Dioxide Peaking Before 2030, under which the Chinese government will promote green and low-carbon transition through wider adoption of natural gas across sectors and industries, encourage innovation in technologies surrounding use of natural gas, and increase the proportion of natural gas in energy consumption as a greener substitute for coal.

As a result of the priority given by the PRC government and increased urbanization in China, total natural gas demand in China increased from 191 billion m^3 in 2015 to 326 billion m^3 in 2020, representing a CAGR of 11.2%, according to the National Bureau of Statistics, China Customs and China Energy Statistical Yearbooks.

In order to promote the natural gas industry, the PRC government has made significant investment in developing natural gas infrastructure. According to the 14th Five-Year Plan, China will also continue to invest in natural gas transport and storage infrastructure, which would enhance China's peak shaving capabilities, allow efficient and responsive allocation of natural gas resources across regions and promote stable availability of natural gas. These policies have benefited and will continue to benefit our results of operations by encouraging the demand for our natural gas products. As we focus on increasing gas penetration rates across all of our operational locations and boosting connections between all of our existing gas projects, we anticipate that our results of operations will continue to be affected by government policies encouraging the adoption of cleaner burning fuels.

Our operating results have also historically depended in part on the tax concessions and preferential tax treatment accorded by the PRC government to certain business enterprises and foreign invested enterprises in the PRC natural gas industry. However, as a result of the PRC government's strategy to develop a unified tax policy with respect to both domestic and foreign invested companies, in recent years, the effective income tax rates or many of our project companies have risen closer to the standard PRC corporate tax rate of 25%. See "*Government Regulations – Taxation.*"

COVID-19 pandemic

The COVID-19 pandemic and other adverse public health developments and the more moderate economic growth in China may lower oil and gas demand and adversely affect us. As the natural gas industry is sensitive to macroeconomic trends and oil and gas prices tend to fall in recessionary periods, we may experience pricing pressure on our gas supply, which may adversely affect profitability. The COVID-19 pandemic and policies implemented by governments to deter the spread of the disease have had and may continue to have an adverse effect on consumer confidence and the general economic conditions our business is subject to. The disruptions to the supply chain and reduced levels of consumption, commercial activities and industrial production in the affected countries have precipitated an economic slowdown in those economies, including the decrease in demand of natural gas supply from our export-oriented clients, which has in turn adversely affected our results of operation and financial conditions. Our customers may also face financial difficulties due to the COVID-19 pandemic, which may lead to difficulties for us in collecting our accounts receivables and increase risks of incurring bad debt, which may adversely affect our financial conditions. Our revenue from construction and installation fees in the first half of 2020 decreased due to the delays in the construction and installation progress for new customers, as well as a decrease in revenue from our value added business as a result of the reduced frequency of face-to-face communications with our existing and potential customers caused by stringent COVID-19 control measures in most cities in the PRC. In 2021, as the outbreak of COVID-19 became relatively stabilized in China, while there were local outbreaks in various regions of China, our business development and operations were not materially and adversely affected.

General economic conditions in China

Substantially all of our projects are located in China. Thus, our results of operations and performance are substantially affected by and dependent on the overall economic growth in China. We believe that the general economic growth of China is directly correlated with the amount of natural gas consumed in China and thus greatly affects our results of operation and financial condition. Natural gas consumption in China has grown significantly in the last decade, mainly as a result of the adoption of various environmental control policies and the strong GDP growth in China. According to the National Bureau of Statistics of China, China's GDP has grown from RMB51.9 trillion in 2012 to RMB114.4 trillion in 2021, representing a CAGR, of 9.2% in nominal terms. As China's GDP is expected to continue to grow, this growth should further drive increase in energy demand in China.

Our ability to increase our natural gas sales volume and maintain and increase penetration rates in operational locations

As natural gas sales volume significantly affects our results of operations and financial condition, we are committed to promoting the use of natural gas in the areas that we operate. We also aim to expand into new markets where we have not yet established an operational presence. To increase our customer base, we aim to promote the benefits of natural gas, in terms of price, convenience, safety, cleanliness and environmental friendliness. Our promotional activities include broadcasting advertisements through media and distributing brochures and posters, and our campaigns (which may include joint promotional campaigns with the local government) to promote the benefits of natural gas and energy-saving equipment to reduce the overall costs of using natural gas, among other activities.

Our ability to maintain and increase our customer penetration rate in existing and new markets remains crucial to our financial performance and condition.

Purchase price of natural gas as a raw material

Natural gas constitutes the most important raw material for our business and the purchase price of natural gas significantly affects our results of operations and financial condition. For the three years ended December 31, 2019, 2020 and 2021, our purchases of natural gas amounted to RMB50,392 million, RMB49,157 million and RMB65,267 million (US$10,242 million), respectively, representing 85.5%, 82.9% and 82.6%, respectively, of our cost of sales.

We source natural gas with reference to the benchmark city-gate prices, and sell to end users at prices set by the local governments. The NDRC determines the benchmark city-gate price as well as the transportation cost for national long-distance transmission pipelines, but also permits natural gas purchasers and sellers to contractually agree on the specific city-gate price based on the benchmark city-gate price. On February 22, 2020, the NDRC published a notice outlining the periodical reduction of non-residential customers' gas cost and supporting enterprises in the resumption of work and production. Provincial price control bureaus determine the transportation costs for provincial gas pipelines, including provincial long-distance transmission pipelines, based on the distance from the gas wellhead. We currently purchase a majority of our natural gas from PetroChina, Sinopec and CNOOC, or their distributors, with reference to city-gate prices. The city-gate prices for our natural gas purchases are affected by factors which are outside of our control. As we expand our natural gas business into other locations, we expect our results of operations to continue to be affected by the regulation of natural gas prices in China. Since 2016, we also have commitments to acquire LNG from certain international natural gas suppliers. The delivery of LNG from such international suppliers is under a "take-or-pay" arrangement whereby we are obliged to make payment to suppliers for the quantity contracted but not delivered and the contracts last for 5 to 10 years. See also "*Business – Purchases – Gas.*"

Sale price of natural gas

During the three years ended December 31, 2019, 2020 and 2021, natural gas retail sales accounted for 57.1%, 56.6% and 52.9% of our total revenue, respectively. Our revenue correlates directly with the price of natural gas we sell to our customers.

The following tables set forth for the periods indicated, the performance highlights as well as the contribution to our revenue, from our principal business activities:

	Year ended December 31					
	2019		2020		2021	
	RMB million	*% of total*	*RMB million*	*% of total*	*RMB million*	*% of total*
Revenue						
Retail gas sales business	40,049	57.1	40,510	56.6	49,247	52.9
Integrated energy business	2,749	3.9	5,042	7.0	7,805	8.4
Wholesale of gas	18,465	26.3	17,936	25.0	25,634	27.5
Construction and installation	6,932	9.9	6,444	9.0	8,086	8.7
Value added business	1,988	2.8	1,685	2.4	2,341	2.5
	70,183	100.0	71,617	100.0	93,113	100.0

We are required to obtain approval from the relevant local pricing authorities for the retail price of the piped natural gas sold in a particular region, as well as any adjustment to the retail price. As retail prices are set by local pricing bureaus, rather than the PRC central government, they can vary significantly between cities. Specifically, in cities with established price linkage mechanisms, retail prices to downstream residential users of natural gas will be adjusted in line with adjustments in prices for upstream purchases of natural gas supply. In cities without established price linkage mechanisms, any adjustments in retail prices to residential users will be determined following hearings held by the local pricing bureaus. Indicative prices for C&I customers, and CNG vehicle refueling station customers are set by the local governments. We will confirm the final price with customers based on the indicative price set by the local government. As a result of these factors, the average selling prices at each of our operational locations could vary significantly depending on the locality.

Moreover, there is typically a time lag for us to pass through any increase in our city-gate prices to residential users because any adjustment in end user prices is subject to approval by the local pricing bureau through a public hearing. The time lag to pass on any increase in our city-gate prices to our C&I customers is often shorter than that for residential users because our C&I customer prices are often based on contract terms. These contract terms are typically based on an indicative price set by local governments that is adjustable within a negotiated range so it can be renegotiated faster after any increase in wellhead prices.

We maintain our relationships with the NDRC and local authorities to ensure they receive adequate feedback with respect to the sales prices of natural gas. Our ability to maintain or increase the sale price of natural gas remains a crucial factor in our revenue and margins.

Our ability to maintain our supply of natural gas

Our ability to maintain an adequate supply of natural gas significantly affects our results of operations and financial performance. Specifically, our business and profitability are contingent on our ability to continue to purchase natural gas from these suppliers on similar or acceptable terms, and on the timely delivery of, and quality of natural gas supplied by our suppliers via pipelines. We have entered into agreements to purchase natural gas from three major gas suppliers in China, namely PetroChina, Sinopec and CNOOC. The quantity of natural gas to be supplied to us by our suppliers is usually stated in our gas purchase agreements. Our ability to maintain our supply of natural gas remains critical to satisfy the needs of our customers and maintain our financial performance. We set out below the total volume of natural gas we purchased from major suppliers of the periods indicated:

	Year ended December 31		
	2019	2020	2021
		In millions of m^3	
Major suppliers of natural gas			
PetroChina	10,958	11,416	12,887
Sinopec	1,992	2,415	3,790
CNOOC	1,594	2,634	3,285
Others	5,380	5,488	5,307
Total volume	19,924	21,953	25,269

We also signed long-term LNG import contracts with suppliers such as Chevron U.S.A. INC., Origin Energy LNG Portfolio Pty Ltd. and Total Gas & Power Asia Private Limited, under which we purchased approximately 1.58 million tons of LNG in 2021, accounting for approximately 9% of our natural gas purchases in 2021. Meanwhile, we procure LNG from domestic suppliers and also utilize unconventional natural gas resources in areas such as Shanxi, Shaanxi, Sichuan and Chongqing. Our access to upstream gas sources has been further expanded through our cooperation with PipeChina. In addition, we are also able to access LNG receiving terminals in Zhoushan pursuant to arrangements with our controlling shareholder, which in turn allows us to have access to a variety of gas suppliers in the market. The three long-term LNG import contracts with international suppliers allow us to diversify our gas sources more effectively.

The availability and cost of adequate financing for our capital expenditures

It is essential that we have enough financing alternatives or cash flow to support our business expansion in the future. Our capital expenditures are generally comprised of the construction of citygas pipeline networks, investment in the facilities of integrated energy projects and new city-gas project acquisitions. Therefore, periodically we require large amounts of capital expenditures to finance these projects. During the year ended December 31, 2021, we spent RMB7.66 billion on capital expenditures, primarily used for piped gas projects, integrated energy projects and acquisition of new projects.

Our strategy is to finance our business and other capital expenditures primarily through business operations, financing, investment income and equity. As of December 31, 2021, our total debt amounted to RMB19,890 million. The balance of our borrowings and the total amount raised through other financing methods, as well as any interest rate fluctuations and other borrowing costs, will materially affect our finance costs, results of operations and financial condition.

Certain Income Statement Items

Revenue

We derive our revenue from selling natural gas to customers through pipelines, including both residential households and C&I customers, operating vehicle gas refueling stations to refuel vehicles with LNG and CNG, supplying various integrated energy products and solutions and operating integrated energy projects, providing construction and installation services, supplying LNG to wholesale customers, and providing value added products and services, including gas-related appliances, 360° kitchen solutions, concealed pipeline installation, heating systems, security systems, fully furnished housing facilities, LoRa digital intelligent IoT, and NFC debit cards, etc. The following table sets forth the breakdown of our revenue and as a percentage of total revenue for the periods indicated:

	Year ended December 31					
	2019		2020		2021	
	RMB million	*% of total*	*RMB million*	*% of total*	*RMB million*	*% of total*
Revenue						
Retail gas sales business	40,049	57.1	40,510	56.6	49,247	52.9
Integrated energy business	2,749	3.9	5,042	7.0	7,805	8.4
Wholesale of gas	18,465	26.3	17,936	25.0	25,634	27.5
Construction and installation	6,932	9.9	6,444	9.0	8,086	8.7
Value added business	1,988	2.8	1,685	2.4	2,341	2.5
	70,183	100.0	71,617	100.0	93,113	100.0

Cost of Sales

Our cost of sales consists primarily of the cost of supplying gas, and, to a lesser extent, of the cost of selling gas appliances and depreciation. The cost of supplying gas includes purchase of pipeline gas and pipeline gas operating costs.

We generally enter into take-or-pay contracts, other long-term supply contracts or guaranteed gas supply contracts with the major upstream pipeline gas suppliers in China, purchasing LNG at the prevailing market price. For further details about our gas supply arrangements, see "*Business – Purchases – Gas*." See also "*Risk Factors – Risks relating to Our Business – We are dependent on a limited number of suppliers of natural gas, which may affect our ability to supply natural gas to our customers*."

Other Income

Other income primarily comprises incentive subsidies, dividend income from financial assets, interest income on bank deposits and interest income on loan receivables. Incentive subsidies mainly represent refunds of various taxes as incentives and other incentives relating to our operation by governmental authorities in various cities of the PRC. Other income also comprises items such as dividend income from equity investments, rental income from investment properties and rental income from equipment.

Other Gains and Losses

Other gains and losses primarily consist of net gain of derivative financial instruments, gain on foreign exchange, impairment loss under expected credit loss model (net of reversal) and net loss of financial assets at FVTPL.

Distribution and Selling Expenses

Distribution and selling expenses principally cover salaries and benefits for our sales and marketing staff, marketing and advertising expenses as well as other business promotional expenses and maintenance costs.

Administrative Expenses

Administrative expenses mainly consist of salary, employee benefits and welfare expenses for our administrative staff, utilities expenses and certain office expenses, depreciation and amortization, travelling expenses, business entertainment expenses and other miscellaneous expenses.

Finance Costs

Finance costs primarily consist of interest on our bank or other loans, senior notes, corporate bonds, unsecured bonds and lease liabilities, adjusted for amount capitalized under construction in progress and fair value loss reclassified from equity on foreign currency derivative designated as cash flow hedges for USD debts.

Income tax expense

Under the current laws of the Cayman Islands, we are not subject to any income or capital gains tax. Additionally, dividend payments made by us are not subject to any withholding tax in the Cayman Islands.

Accordingly, taxation primarily represents the tax payable by our subsidiaries in China and represents the sum of the tax currently payable and deferred tax.

Under the EIT and the Regulations for Implementation of Enterprise Income Tax Law of the PRC（中華人民共和國企業所得稅法實施條例）, the enterprise income tax rate applicable to our PRC subsidiaries is 25%, subject to exceptions for certain of our PRC subsidiaries that are entitled to various concessionary rates, as discussed below.

Certain subsidiaries of the Company are qualified as "High and New Tech Enterprises," which are subject to a preferential enterprise income tax rate of 15% of the estimated assessable profit as determined in accordance with relevant tax rules and regulations in the PRC. This preferential rate can be applied for three years, and subsidiaries are eligible to apply the tax concession again upon the expiry of the three-year period.

In accordance with the relevant tax laws, rules and regulations in China, Sino-foreign joint ventures and wholly owned foreign enterprises are liable to pay income tax on net profits. Accordingly, our Sino-foreign joint ventures and wholly owned foreign enterprises are subject to an income tax rate of 25% unless a preferential rate applies according to relevant tax laws, rules and regulations in PRC. Furthermore, depending on the nature of the enterprise's business and subject to obtaining approval from the relevant tax authority, they may qualify for tax concessions. Certain of our project companies, such as, Zhejiang Xinao Intelligent Equipment Trading Company Limited, Xinao Hengxin Energy Development Company Limited and Xuancheng Xinao Gas Company Limited qualify for this tax concession. In addition to income tax, value added tax, or VAT, is payable on gas usage charges and sales of gas appliances in China. The net VAT payable is calculated as 9% of revenue from sales of piped natural gas and 13% of revenue from sales of gas appliances after deducting input credit VAT, which is VAT paid on cost of goods sold.

Hong Kong profit tax is calculated at 16.5% of the estimated assessable profit.

Our Results of Operations

The following table sets forth, for the periods indicated, certain items derived from our consolidated statements of comprehensive income:

	Year ended December 31,			
	2019	2020	2021	
	RMB million	*RMB million*	*RMB million*	*US$ million*
Revenue	70,183	71,617	93,113	14,611
Retail gas sales business	40,049	40,510	49,247	7,728
Integrated energy business	2,749	5,042	7,805	1,225
Wholesale of gas	18,465	17,936	25,634	4,023
Construction and installation	6,932	6,444	8,086	1,269
Value added business	1,988	1,685	2,341	366
Cost of sales	(58,918)	(59,285)	(79,057)	(12,406)
Gross profit	11,265	12,332	14,056	2,205
Other income	861	952	1,077	169
Other gains and losses	644	282	984	154
Distribution and selling expenses	(976)	(951)	(1,122)	(176)
Administrative expenses	(3,099)	(3,230)	(3,725)	(584)
Share of results of associates	326	306	261	41
Share of results of joint ventures	547	476	438	69
Finance costs	(727)	(609)	(576)	(90)
Profit before tax	8,841	9,558	11,393	1,788
Income tax expense	(1,980)	(2,227)	(2,398)	(376)
Profit for the year	6,861	7,331	8,995	1,412
Other comprehensive income (expense):				
Fair value change of equity instruments at fair value through other comprehensive income	(1)	65	15	2
Fair value change of properties transferred from property, plant and equipment to investment properties	3	–	16	3
Income tax relating to items that will not be reclassified	–	(16)	(7)	(1)
Exchange differences arising on translating foreign operations	–	1	5	1
Release of exchange reserve to profit or loss upon deregistration of a subsidiary	3	–	–	–
Fair value change of derivative financial instruments under hedge accounting	–	(122)	164	26
Income tax relating to items that may be reclassified	–	14	(37)	(6)
Other comprehensive income (expense) for the year	5	(58)	156	25
Total comprehensive income for the year	6,866	7,273	9,151	1,437

Year Ended December 31, 2021 Compared to Year Ended December 31, 2020

Revenue

Revenue increased by RMB21,496 million, or 30.0%, to RMB93,113 million (US$14,611 million) in 2021 from RMB71,617 million in 2020. This increase was due to increases in every component of our revenue, as further described below.

Retail gas sales business

Revenue from our retail gas sales business increased by RMB8,737 million, or 21.6%, to RMB49,247 million (US$7,728 million) in 2021 from RMB40,510 million in 2020, primarily due to (i) the increase of the total natural gas sales volume as a result of the accelerated growth of energy demand stimulated by the stabilization of the COVID-19 and economic recovery, and (ii) the increase in the upstream natural gas procuring price, resulting in an increase in the average sales price of retail gas as we conducted price pass-through to our customers. Total volumes of retail gas sales increased by 3,316 million m^3, or 15.1%, to 25,269 million m^3 in 2021 from 21,953 million m^3 in 2020. Revenue from retail gas sales business represented 52.9% of our total revenue in 2021 as compared to 56.6% of our total revenue in 2020.

Integrated energy business

Revenue from our integrated energy business increased by RMB2,763 million, or 54.8%, to RMB7,805 million (US$1,225 million) in 2021 from RMB5,042 million in 2020. This was principally as a result of the increased number of integrated energy projects put into operation in 2021. Revenue from sales of integrated energy accounted for 8.4% of our total revenue in 2021 as compared to 7.0% of our total revenue in 2020.

Wholesale of gas

Revenue from wholesale of gas increased by RMB7,698 million, or 42.9%, to RMB25,634 million (US$4,023 million) in 2021 from RMB17,936 million in 2020. This was principally as a result of the increase in the upstream natural gas procuring price, resulting in an increase in our average wholesale price of gas. Revenue from wholesale of gas accounted for 27.5% of our total revenue in 2021 as compared to 25.0% of our total revenue in 2020.

Value added business

Revenue from our value added business increased by RMB656 million, or 38.9%, to RMB2,341 million (US$366 million) in 2021 from RMB1,685 million in 2020. The increase in revenue from our value added business was primarily due to that we enriched our portfolio with more diversified value-added services and high-end and smart products.

Construction and installation

Our service fees from construction and installation increased by RMB1,642 million, or 25.5%, to RMB8,086 million (US$1,269 million) in 2021 from RMB6,444 million in 2020. The increase was due to the increase of natural gas connections for new customers. Natural gas connections for new residential households increased by 14.3% from 2.3 million connections in 2020 to 2.6 million connections in 2021; while natural gas connections for new C&I customers increased by 23.2% from 17.078 million m^3 of installed daily capacity in 2020 to 21.036 million m^3 installed daily capacity in 2021. 75.1% of the gas connection fees in 2021 were derived from residential households compared to 77.8% of the gas connection fees in 2020, with the remainder of the fees derived from C&I customers. At the end of 2021, we had achieved a piped gas penetration rate for residential households of 62.4%, up from 62.0% at the end of 2020. Construction and installation fees accounted for 8.7% of our total revenue in 2021 as compared to 9.0% of our total revenue in 2020.

Cost of sales

Cost of sales increased by RMB19,772 million, or 33.4%, to RMB79,057 million (US$12,406 million) in 2021 from RMB59,285 million in 2020, primarily due to increased gas sales, leading to a corresponding increase in costs associated with the purchase of gas.

Gross profit

As a result of the foregoing factors, our gross profit increased by RMB1,724 million, or 14.0%, to RMB14,056 million (US$2,205 million) in 2021 from RMB12,332 million in 2020.

Our gross profit margin decreased to 15.1% in 2021 from 17.2% in 2020. The decrease was primarily due to the decrease in the profit margin of our retail gas sales business, the revenue of which accounted for 52.9% of our total revenue in 2021. The decline in profit margin of our retail gas sales business was mainly attributable to the price inflation of natural gas as a result of the global natural gas supply shortage, and that the cost pass-through to our customers was not completed during the year. In addition, the proportion of our revenue represented by construction and installation, which feature a higher profit margin, slightly decreased from 9.0% of our total revenue in 2020 to 8.7% in 2021.

Other income

Other income increased 13.1% to RMB1,077 million (US$169 million) in 2021 from RMB952 million in 2020. The increase was primarily the result of an increase of our dividends income from financial assets at fair value through profit or loss of RMB124 million from RMB73 million in 2020 to RMB197 million in 2021.

Other gains and losses

In 2021, there was a gain of RMB984 million (US$154 million) compared to a gain of RMB282 million in 2020. The gain in 2021 was primarily the result of the increase in crude oil prices, which led to an increase of our net gain of derivative financial instruments of RMB878 million mainly from our commodity derivative contracts. This effect was partially offset by a decrease of our gain on foreign exchange in 2021 arising from the translation of senior notes, unsecured bonds and bank loans denominated in U.S. dollars to RMB due to exchange rate fluctuations.

Distribution and selling expenses

Distribution and selling expenses increased 18.0% to RMB1,122 million (US$176 million) in 2021 from RMB951 million in 2020, primarily due to (1) the decrease in distribution and selling expenses in 2020 as a result of the Group's work from home policy and reduction of non-essential business trips of employees during COVID-19 outbreak in 2020, and (ii) the increase in staff costs incurred in connection with an increase in our group size and business growth in 2021, as more new project companies were formed and our distribution and selling expenses increased in line with our increases in revenue. As a percentage of revenue, distribution and selling expenses were 1.2% in 2021, down slightly from 1.3% in 2020.

Administrative expenses

Administrative expenses increased 15.3% to RMB3,725 million (US$584 million) in 2021 from RMB3,230 million in 2020, primarily as a result of the increase in staff costs incurred in connection with an increase in our group size and business growth, as more new project companies were formed and our administrative expenses increased in line with our increases in revenue. As a percentage of revenue, administrative expenses were 4.0% in 2021, down from 4.5% in 2020.

Share of results of associates

Our share of results of associates decreased 14.7% to RMB261 million in 2021 (US$41 million) from RMB306 million in 2020 primarily due to the decrease in revenue of our associates, as a result of their decreased gas sales caused by the increase in market price of nature gas.

Share of results of joint ventures

In 2021, our share of results of joint ventures decreased 8.0% to RMB438 million (US$69 million) from RMB476 million in 2020. The decrease was primarily attributable to the decrease in revenue of our joint ventures, as a result of their decreased gas sales caused by the increase in market price of nature gas.

Finance costs

Finance costs decreased 5.4% to RMB576 million (US$90 million) in 2021 from RMB609 million in 2020, due primarily to the lower interest rates on our bank and other loans.

Profit before tax

As a result of the cumulative effect of the foregoing, profit before income tax increased 19.2% to RMB11,393 million (US$1,788 million) in 2021 from RMB9,558 million in 2020.

Income tax expense

Income tax expense increased 7.7% to RMB2,398 million (US$376 million) in 2021 from RMB2,227 million in 2020 mainly due to the increase of our profit before tax in 2021. See "– *Certain Income Statement Items – Income tax expense.*" Our effective tax rate decreased from 23.3% in 2020 to 21.0% in 2021.

Profit for the year

As a result of the foregoing factors, our profit for the year in 2021 increased by 22.7% to RMB8,995 million from RMB7,331 million in 2020.

Year Ended December 31, 2020 Compared to Year Ended December 31, 2019

Revenue

Revenue increased by RMB1,434 million, or 2.0%, to RMB71,617 million (US$11,238 million) in 2020 from RMB70,183 million in 2019. This increase was due to increases in certain components of our revenue, as further described below.

Retail gas sales business

Revenue from our retail gas sales business increased slightly by RMB461 million, or 1.2%, to RMB40,510 million (US$6,357 million) in 2020 from RMB40,049 million in 2019, primarily due to an increase in the volume of retail gas sales but partly offset by the decrease in natural gas retail price after we conducted cost pass-through. Total volumes of retail gas sales increased by 2,029 million m^3, or 10.2%, to 21,953 million m^3 in 2020 from 19,924 million m^3 in 2019. Revenue from retail gas sales business represented 56.6% of our total revenue in 2020 as compared to 57.1% of our total revenue in 2019.

Integrated energy business

Revenue from our integrated energy business increased significantly by RMB2,293 million, or 83.4%, to RMB5,042 million (US$791 million) in 2020 from RMB2,749 million in 2019. This was principally the result of an increase in customer demand for integrated energy solutions given the advantages such projects bring in terms of improved energy efficiency, reduction in carbon emissions and overall energy costs. Revenue from sales of integrated energy accounted for 7.0% of our total revenue in 2020 as compared to 3.9% of our total revenue in 2019.

Wholesale of gas

Revenue from wholesale of gas decreased by RMB529 million, or 2.9%, to RMB17,936 million (US$2,815 million) in 2020 from RMB18,465 million in 2019 was primarily due to lower LNG market prices during the year. Revenue from wholesale of gas accounted for 25.0% of our total revenue in 2020 as compared to 26.3% of our total revenue in 2019.

Value added business

Revenue from our value added business decreased by RMB303 million, or 15.2%, to RMB1,685 million (US$264 million) in 2020 from RMB1,988 million in 2019. The decrease in revenue from our value added business was primarily due to the impact of COVID-19 on the Company in the first half of 2020 which caused the Company to reduce the provision of certain face-to-face services and direct communications to the customers.

Construction and installation

Our service fees from construction and installation decreased by RMB488 million, or 7.0%, to RMB6,444 million (US$1,011 million) in 2020 from RMB6,932 million in 2019. The decrease was due to the COVID-19 pandemic, which has caused delays in the construction and installation progress for new customers in the first half of 2020. Natural gas connections for new residential households decreased by 4.3% from 2,397,202 connections in 2019 to 2,293,070 connections in 2020; and natural gas connections for new C&I customers decreased by 5.9% from 18.156 million m^3 of installed daily capacity in 2019 to 17.078 million m^3 installed daily capacity in 2020. 77.8% of the gas connection fees in 2020 were derived from residential households compared to 78.9% of the gas connection fees in 2019, with the remainder of the fees derived from C&I customers. At the end of 2020, we had achieved a piped gas penetration rate for residential households of 62.0%, up from 60.4% at the end of 2019. Construction and installation fees accounted for 9.0% of our total revenue in 2020 as compared to 9.9% of our total revenue in 2019.

Cost of sales

Cost of sales increased slightly by RMB367 million, or 0.6%, to RMB59,285 million (US$9,303 million) in 2020 from RMB58,918 million in 2019, primarily due to an increase in costs associated with the purchase of gas as a result of the increased gas sales volume, which was largely offset by a decrease in our average gas purchasing cost per unit.

Gross profit

As a result of the foregoing factors, our gross profit increased by RMB1,067 million, or 9.5%, to RMB12,332 million (US$1,935 million) in 2020 from RMB11,265 million in 2019.

Our gross profit margin increased to 17.2% in 2020 from 16.1% in 2019. The increase was primarily due to the increase of the gross profit margin of retail gas sales and wholesale of gas businesses from 14.2% to 16.0%, and 0.9% to 2.0%, respectively.

Other income

Other income increased 10.6% to RMB952 million (US$149 million) in 2020 from RMB861 million in 2019. The increase was primarily due to the increase of the amount of government incentives received by us.

Other gains and losses

In 2020, there was a gain of RMB282 million (US$44 million) compared to a gain of RMB644 million in 2019, mainly due to the impact of exchange differences, changes in the fair value of derivative financial instruments and asset impairments. During the year, the exchange rate of RMB against U.S. dollar moved higher by year end. As a result, the Group recorded a net foreign exchange gain of RMB608 million. In terms of derivative financial instruments, due to changes in accounting policies, oil prices, exchange rate and other valuation factors, the gain from derivative contracts decreased by RMB813 million to RMB102 million in 2020. The business of vehicle gas refueling stations continued to be affected by external factors, including online car hailing service and supportive policy of electric automobiles by local governments, coupled with the impact from COVID-19 which reduced people's frequency of commuting, the Group has decided to further optimize its vehicle gas refueling network by eliminating inefficient sites.

Distribution and selling expenses

Distribution and selling expenses decreased 2.6% to RMB951 million (US$149 million) in 2020 from RMB976 million in 2019, primarily due to the Group's work from home policy and reduction of non-essential business trips of employees during COVID-19 outbreak in the year. As a percentage of revenue, distribution and selling expenses were 1.3% in 2020, down slightly from 1.4% in 2019.

Administrative expenses

Administrative expenses increased 4.2% to RMB3,230 million (US$507 million) in 2020 from RMB3,099 million in 2019, primarily as a result of the Group's various prevention measures to minimize the risk of COVID-19 infection, and the procurement of sanitary supplies and protective equipment to protect the safety of our customers and employees. As a percentage of revenue, administrative expenses were 4.5% in 2020 compared to 4.4% in 2019.

Share of results of associates

Our share of results of associates decreased 6.1% to RMB306 million in 2020 (US$48 million) from RMB326 million in 2019 primarily attributable to impact of COVID-19 on some of our associates.

Share of results of joint ventures

In 2020, our share of results of joint ventures decreased 13.0% to RMB476 million (US$75 million) from RMB547 million in 2019. The decrease was primarily attributable to impact of COVID-19 on some of our associates.

Finance costs

Finance costs decreased 16.2% to RMB609 million (US$96 million) in 2020 from RMB727 million in 2019, due primarily to the low interest rate environment globally, and the concessional loans obtained by some of the Group's project companies to fight against the epidemic during the year.

Profit before tax

As a result of the cumulative effect of the foregoing, profit before income tax increased 8.1% to RMB9,558 million (US$1,500 million) in 2020 from RMB8,841 million in 2019.

Income tax expense

Income tax expense increased 12.5% to RMB2,227 million (US$349 million) in 2020 from RMB1,980 million in 2019 mainly due to the increase in profit before tax. See "– *Certain Income Statement Items – Income tax expense.*" Our effective tax rate increased from 22.4% in 2019 to 23.3% in 2020.

Profit for the year

As a result of the foregoing factors, our profit for the year in 2020 increased by 6.9% to RMB7,331 million from RMB6,861 million in 2019.

Liquidity and Capital Resources

Our primary uses of cash have been, and are expected to be, the funding of operating and capital expenditures. We have funded, and expect to continue to fund, our operating and capital expenditures through operating cash flows (particularly revenue from gas sales which has become our major source of income), internal liquidity, equity and note issuances and bank and other loans. Our most recent offshore note issuance was the issuance of US$750 million green senior notes due 2030 on September 17, 2021. See "*Description of Other Material Indebtedness.*"

Our cash and cash equivalents as of December 31, 2019, 2020 and 2021 were RMB7,373 million, RMB8,630 million and RMB8,684 million, respectively. As of December 31, 2019, 2020 and 2021, our total debt was RMB19,145 million, RMB19,684 million and RMB19,890 million, respectively. Our net debt to total equity ratio (including non-controlling interests), was 37.9% in 2019, 30.6% in 2020 and 26.6% in 2021.

As of December 31, 2019, 2020 and 2021, we had net current liabilities of RMB11,773 million, RMB9,665 million and RMB14,021 million, respectively.

The current liabilities mainly include a large amount of receipts in advance of gas fee, and construction and installation contracts. These funds are stable and will normally not be returned; therefore, we will invest the funds in the development of new projects and maintain a reasonable cash level, resulting in net current liabilities.

As of December 31, 2021, our net current liabilities increased as compared to last year due to the impending maturity of our three corporate bonds and unsecured bonds with an aggregate amount of RMB5,700 million. We will continue to monitor the market change in order to take advantage of any opportunity to refinance our senior notes through the issuance of offshore long-term bonds.

We will continue to meet our working capital requirements and future capital expenditure requirements through our stable operating cash flow, high quality current assets and good credit ratings, plus sufficient cash on hand, unutilized banking facilities and debt issuance quota.

Cash Flow

As we are a holding company with no material business operations, sources of income or operating assets of our own other than our interests in subsidiaries, our cash flow and, consequently, our ability to meet debt servicing obligations, is dependent upon the funds paid to us by our subsidiaries in the form of dividends, loans, advances or otherwise.

The following table presents selected cash flow data from our consolidated statements of cash flow for the years ended December 31, 2019, 2020 and 2021:

	Year ended December 31			
	2019	**2020**	**2021**	
	RMB million	*RMB million*	*RMB million*	*US$ million*
Net cash from operating activities				
Operating cash flows before movements in working capital[1]	9,556	11,031	12,168	1,909
Net movements in working capital[2]	3,589	374	471	74
Cash generated from operation	13,145	11,405	12,639	1,983
Net cash generated from operating activities	11,690	9,696	10,466	1,642
Net cash used in investing activities	(6,696)	(6,491)	(6,766)	(1,062)
Net cash used in financing activities	(5,547)	(1,901)	(3,636)	(571)
Net (decrease) increase in cash and cash equivalents	(553)	1,304	64	10

Notes:

(1) Represents profit before tax as adjusted for items such as share of results of associates and joint ventures, exchange differences, net loss of financial assets, net gain on fair value change of derivative financial instruments, impairment loss under expected credit loss model (net of reversal), impairment losses on and loss on disposal of property, plant and equipment, gain on disposal of right-of-use assets, loss (gain) on disposal of subsidiaries and joint ventures, gain on disposal of associates, loss on deemed disposal of an associate and repurchase of unsecured bonds, dividends income from financial assets and equity instruments, decrease in fair value of investment properties, share-based payment expenses, depreciation of property, plant and equipment and right-of-use assets, amortization of intangible assets, interest income on bank deposits and loan receivables, finance costs, gain on disposal of an financial asset and financial guarantee income.

(2) Represents the movements in inventories, trade and other receivables, contract assets, contract liabilities, amounts due from associates, amounts due from joint ventures, amounts due from related companies, trade and other payables, amounts due to joint ventures, amounts due to associates, deferred income and amounts due to related companies.

Cash flows from operating activities

We recorded net cash generated from operating activities of RMB10,466 million for the year ended December 31, 2021. Our operating cash flows before movements in working capital were RMB12,168 million. The primary movements in our working capital were an increase in trade and other payables of RMB1,508 million, an increase in contract liabilities of RMB447 million and an increase in amounts due to associates of RMB141 million. These movements were partially offset by an increase in trade and other receivables of RMB1,291 million and an increase in inventories of RMB234 million. In addition, our resulting cash generated from operating activities of RMB12,639 million was partially offset by PRC enterprise income tax paid of RMB2,173 million.

We recorded net cash generated from operating activities of RMB9,696 million for the year ended December 31, 2020. Our operating cash flows before movements in working capital were RMB11,031 million. The primary movements in our working capital were an increase in contract liabilities of RMB1,480 million, an increase in trade and other payables of RMB348 million and an increase in amounts due to joint ventures of RMB201 million. These movements were partially offset by an increase in trade and other receivables of RMB1,297 million and a decrease in amounts due to related companies of RMB165 million. In addition, our resulting cash generated from operating activities of RMB11,405 million was partially offset by PRC enterprise income tax paid of RMB1,709 million.

We recorded net cash generated from operating activities of RMB11,690 million for the year ended December 31, 2019. Our operating cash flows before movements in working capital were RMB9,556 million. The primary movements in our working capital were an increase in contract liabilities of RMB2,185 million, a decrease in trade and other receivables of RMB1,631 million, an increase in amounts due to related companies of RMB266 million and a decrease in inventories of RMB216 million. These movements were partially offset by a decrease in trade and other payables of RMB445 million and an increase in amounts due from joint ventures of RMB198 million. In addition, our resulting cash generated from operating activities of RMB13,145 million was partially offset by PRC enterprise income tax paid of RMB1,455 million.

Cash flows from investing activities

Net cash used in investing activities was RMB6,766 million for the year ended December 31, 2021. The net cash used in investing activities in 2021 was primarily attributable to our purchase of wealth management products of RMB10,733 million, our purchase of property, plant and equipment of RMB6,253 million, amounts advanced to third parties of RMB2,661 million and gross cash outflow from derivative financial instruments of RMB1,516 million, partially offset by our redemptions of wealth management products of RMB10,651 million, the amounts repaid by third parties of RMB2,430 million, our gross cash inflow from derivative financial instruments of RMB1,558 million and the release of restricted bank deposits of RMB703 million.

Net cash used in investing activities was RMB6,491 million for the year ended December 31, 2020. The net cash used in investing activities in 2020 was primarily attributable to our purchase of wealth management products of RMB10,364 million, our purchase of property, plant and equipment of RMB5,515 million and the amounts advanced to third parties of RMB1,421 million, partially offset by our redemptions of wealth management products of RMB10,310 million, the amounts repaid by third parties of RMB1,233 million, release of restricted bank deposits of RMB793 million and dividends received from joint ventures of RMB405 million.

Net cash used in investing activities was RMB6,696 million for the year ended December 31, 2019. The net cash used in investing activities in 2019 was primarily attributable to our purchase of property, plant and equipment of RMB7,146 million and the acquisition of subsidiaries and businesses of RMB1,175 million, partially offset by amounts repaid by joint ventures of RMB812 million and dividends received from joint ventures of RMB404 million.

Cash flows from financing activities

We had net cash used in financing activities of RMB3,636 million for the year ended December 31, 2021. The net cash used in financing activities in 2021 was primarily due to the repayment of bank loans and senior notes of RMB8,245 million and RMB2,372 million, respectively, and the dividends paid to shareholders and non-controlling shareholders of RMB2,827 million and RMB747 million, respectively. These amounts were partially offset by new bank loans raised of RMB11,182 million.

We had net cash used in financing activities of RMB1,901 million for the year ended December 31, 2020. The net cash used in financing activities in 2020 was primarily due to the repayment of bank loans of RMB13,586 million and dividends paid to shareholders of RMB1,719 million. These amounts were partially offset by new bank loans raised of RMB9,941 million and proceeds from issuance of the 2020 Green Notes of RMB5,065 million.

We had net cash used in financing activities of RMB5,547 million for the year ended December 31, 2019. The net cash used in financing activities in 2019 was primarily due to the repayment of bank loans of RMB10,561 million, repayment of corporate bonds of RMB2,500 million, dividends paid to shareholders of RMB1,176 million and amounts repaid to joint ventures of RMB1,106 million. These amounts were partially offset by new bank loans raised of RMB9,900 million and proceeds from the issuance of corporate bonds of RMB2,093 million.

Indebtedness

Borrowings

As of December 31, 2021, our total debt was RMB19,890 million (US$3,121 million) compared to total debt of RMB19,684 million as of December 31, 2020.

As of December 31, 2021, our total debt included U.S. dollar denominated bank loans and notes (including our 2017 Bonds and 2020 Green Notes) amounted to US$1,891 million. The remaining bank and other loans included in our total debt as of December 31, 2021 were Renminbi-denominated loans. See "*Description of Other Material Indebtedness.*"

In addition to the 2017 Bonds and 2020 Green Notes, the 2019 Corporate Bonds are also at fixed coupons. Our other U.S. dollar loans bear interest at fixed rates. The remaining Renminbi bank and other loans, which were granted to certain of our project companies to cover capital expenditures, working capital and operating expenditures, bear interest at fixed rate or at floating rate with reference to a benchmark rate, such as the interest rates announced by the PBOC.

The only debt that was secured as of December 31, 2021 were bank and other loans in amounts equivalent to RMB652 million. The secured loans were mainly secured by pledge of property, plant and equipment, restricted bank deposits, bills receivables and rights to receive fee income of certain of our subsidiaries and joint ventures. As of December 31, 2021, the net asset value of the assets securing the loans was RMB1,059 million.

As of December 31, 2021, our short-term loans amounted to RMB11,850 million.

Contingent Liabilities

As of December 31, 2021, we had guarantees issued to banks to secure loan facilities granted to an associate and joint ventures for RMB520 million compared to RMB775 million as of December 31, 2020.

Capital Commitments and Contractual Obligations

As of December 31, 2019, 2020 and 2021, we had capital commitments of RMB1,021 million, RMB899 million and RMB824 million, respectively, from capital expenditures in respect of acquisition of property, plant and equipment contracted for but not provided in the consolidated financial statements. As of December 31, 2019, 2020 and 2021, we also had capital commitments of RMB495 million, RMB518 million and RMB479 million, respectively, related to investments in joint ventures. As of December 31, 2019, 2020 and 2021, we also had capital commitments of RMB518 million, RMB469 million and RMB445 million, respectively, related to investments in associates. As of December 31, 2019, 2020 and 2021, we had other commitments amounting to RMB259 million, RMB2 million and RMB2 million, respectively, related to other equity investments.

The following table presents as of December 31, 2021, the scheduled maturities of our contractual obligations for debts and operating leases. The amounts included in the following table include future interest payments and are not discounted to take into account the time value of money.

	Payments due by period			
Contractual Obligations	**Total**	**Less than 1 year**	**After 1 year but within 5 years**	**More than 5 years**
	RMB million	*RMB million*	*RMB million*	*RMB million*
Current debt obligations	12,244	12,244	–	–
Non-current debt obligations	9,550	–	2,861	6,689
Operating lease obligations[1]	430	92	215	123
Total	22,224	12,336	3,076	6,812

Note:

(1) Represents our commitments for future minimum lease payments under non-cancellable operating leases in respect of rented premises.

Capital Expenditures

Our capital expenditures were RMB8.92 billion in 2019, RMB6.74 billion in 2020 and RMB7.66 billion in 2021. In 2021, our capital expenditures were primarily used for piped gas projects, integrated energy projects and acquisition of new projects.

Our future capital requirements will include expenditures for similar activities. We expect to finance these capital requirements from cash flows from operations, internal liquidity, bank loans, bond issuances and the net proceeds received from the offering of the Notes. As discussed above, as of December 31, 2021 we had contractual commitments for capital expenditures of RMB1,750 million, primarily for purposes of acquiring property, plant and equipment. In 2022, we plan to continue to invest in capital projects primarily for acquisition of property, plant and equipment, investments in new piped gas projects and integrated energy projects and acquiring new projects.

After giving effect to the offering of the Notes, and taking into account our operating cash flows and bank borrowings, we believe we will have sufficient resources to meet our anticipated capital expenditure requirements during the 2022 fiscal year. See "*Use of Proceeds*." In order to finance our continued expansion, we may in the future consider public offerings or private placements of equity, debt or convertible securities. However, we cannot assure you that we will be able to raise additional capital to meet our capital expenditure requirements on terms acceptable to us or at all. See "*Risk Factors – Risks Relating to Our Business – If we are unable to fund our substantial capital expenditure requirements and current liabilities on terms we deem acceptable, it may adversely affect our prospects and future operations.*"

Off-Balance Sheet Arrangements

In the ordinary course of our business, we enter into operating lease commitments, capital commitments and other contractual obligations, as discussed above. These commitments and obligations are disclosed in our consolidated financial statements in accordance with HKFRS.

Market Risks

Our operations expose us to foreign currency exchange risk, interest rate risk, commodity price risk and other price risk.

Foreign Currency Risk

The functional currency of most of our entities is RMB in which most of our transactions are denominated. However, certain loans, senior notes and unsecured bonds issued by us, receivables and payables and certain bank balances kept by us are denominated in foreign currencies.

To mitigate the foreign exchange exposure, we enter into various foreign currency derivatives with certain financial institutions during the current and prior years as set out in Note 24 to our audited consolidated financial statements as of and for the year ended December 31, 2021. Our management monitors foreign exchange exposure and will consider to hedge its foreign exchange exposure should the need arises.

The carrying amounts of our foreign currency denominated monetary assets and monetary liabilities at the end of the reporting period are as follows:

	Assets			Liabilities		
	2019	2020	2021	2019	2020	2021
	(RMB million)					
Foreign currency:						
U.S. dollar	129	578	1,024	11,702	12,549	11,995
HK$	23	101	43	1,380	–	–

The following table details our sensitivity to a reasonable possible change in exchange rate of each foreign currency against RMB, while all other variables are held constant. The sensitivity analysis includes only outstanding monetary items denominated in foreign currency without considering the impact of the foreign currency derivatives and adjusts their translations at the end of the reporting period for a change in foreign currency exchange rate as set out below:

	U.S. dollar			HK$		
	2019	2020	2021	2019	2020	2021
	(%)					
Possible change in foreign exchange rate	5	5	5	5	5	5

	2019	2020	2021	2019	2020	2021
	(RMB million)					
(Decrease) increase in profit after taxation for the year:						
If RMB weakens against foreign currencies	(580)	(431)	(460)	(68)	5	2
If RMB strengthens against foreign currencies	580	457	477	68	(5)	(2)

In the opinion of the Directors, the sensitivity analysis is unrepresentative of the inherent foreign exchange risk as the year end exposure and does not reflect the exposure during the year, and some of the Group's foreign currency exposure has been reduced due to the offsetting effect of the foreign currency derivatives.

See "*Risk Factors – Risks Relating to the PRC – Fluctuations in the value of Renminbi may adversely affect our business and the value of distributions by our PRC subsidiaries*" for a description of the risks relating to fluctuations in the value of the Renminbi.

Interest Rate Risk

We do not have any specific interest rate hedging policy except that we would regularly review the market interest rates to capture the potential opportunities to reduce the cost of borrowings. Accordingly, we will enter into interest rate swap arrangement to mitigate the interest rate risk if appropriate.

Fair value interest rate risk

Our fair value interest rate risk relates primarily to non-current amounts due from associates and joint ventures, amounts due to associates and joint ventures, and fixed-rate bank and other loans, corporate bonds, senior notes and unsecured bonds (see Notes 29, 30, 40, 41, 42 and 43 to our audited consolidated financial statements as of and for the year ended December 31, 2021 for details of these amounts, loans, bonds and notes respectively).

The fair value interest rate risk on bank balance and deposits is insignificant as the terms of the fixed deposits are relatively short.

Cash flow interest rate risk

Our cash flow interest rate risk relates primarily to floating-rate bank loans (see Note 40 to our audited consolidated financial statements as of and for the year ended December 31, 2021 for details of these amounts). The Directors consider that the Group is not exposed to significant cash flow interest rate risk relating to bank deposits, which are primarily short-term in nature and basically carried at stable market interest rates.

Our sensitivity to cash flow interest rate risk has been determined based on the exposure to interest rates for the floating rate bank loans. The analysis is prepared assuming that the amount of liabilities outstanding at the end of the reporting period was outstanding for the whole year and excluding the interest expected to be capitalized.

	2019	**2020**	**2021**
Possible change in interest rate	50 basis points	50 basis points	50 basis points

	2019	**2020**	**2021**
		(RMB million)	
(Decrease) increase in profit after taxation for the year			
As a result of increase in interest rate	(14)	(9)	(6)
As a result of decrease in interest rate	14	9	6

The possible change in the interest rate does not affect the equity of the Group in the periods presented.

Commodity Price Risk

In the normal course of our business, we imported LNG to satisfy the demands of downstream customers under long-term "take-or-pay" purchase agreements as set out in Note 50 to our audited consolidated financial statements as of and for the year ended December 31, 2021. Accordingly, we are exposed to fluctuations in prevalent crude oil/gas market prices, which are used for the determination of the price of LNG. This exposure is managed with the use of derivative financial instruments. The profit or loss generated from these derivatives is dependent on the combination of contracts which generate payoffs in any particular range of commodity prices.

Derivative financial instruments are used solely for financial risk management purposes and we do not hold or issue derivative financial statements for speculation purposes. The management of the Group monitors commodity price risk exposure regularly and will consider to hedge its commodity price risk exposure should the need arises.

Sensitivity analysis on commodity derivative contracts

An increase of 20% at the end of the year ended December 31, 2021, a decrease of 10% at the end of the year ended December 31, 2020 and a decrease of 5% at the end of the year ended December 31, 2019 in relevant commodity prices would have affected profit or loss for the years by amount shown below (see Note 53 to our audited consolidated financial statements as of and for the year ended December 31, 2021 for details). These amounts represent the change in fair value of commodity derivative contracts at the reporting date.

	2019	2020	2021
		(RMB million)	
Increase/(decrease) in profit before taxation for the year	(7)	(40)	56

Other Price Risk

We are mainly exposed to price risk through equity instruments measured at FVTPL and FVTOCI. The Directors do not implement specific measurements to mitigate the price risk.

If the market price of equity instruments measured at FVTPL and FVTOCI increased or decreased by 5%, the Group would recognize additional gains or losses for the year ended December 31, 2019, 2020 and 2021 of RMB248 million, RMB249 million and RMB233 million, respectively.

Natural Gas Market in the PRC

As a high-quality energy source, natural gas features high heat value, stable burning process and environmental friendliness. Natural gas reserves are abundant globally. Enhancing the integrated utilization of natural gas may not only carry fundamental practical significance in safeguarding national energy supply, energy security and protecting ecological environment, but also perform an irreplaceable role in making structural adjustments in energy, industrial, transportation and electricity sectors in China.

The Chinese government is committed to minimizing environmental pollution, and natural gas is greatly supported by the Chinese government as a type of fossil fuel that burns cleaner than oil or coal in China's attempt to improve the environment. After two decades of effort, China has grown natural gas usage from nothing to around 8.2% of its primary energy consumption in 2020 according to BP Statistical Review of World Energy. According to the 14th Five-Year Plan, China would continue to advance low-carbon transition, and aims to peak carbon dioxide emissions by 2030 and achieve carbon neutrality by 2060. In October 2021, China formulated the Action Plan for Carbon Dioxide Peaking Before 2030, under which the Chinese government will promote green and low-carbon transition through wider adoption of natural gas across sectors and industries, encourage innovation in technologies surrounding use of natural gas, and increase the proportion of natural gas in energy consumption as a greener substitute for coal. China will also continue to invest in natural gas transport and storage infrastructure, which would enhance China's peak shaving capabilities, allow efficient and responsive allocation of natural gas resources across regions and promote stable availability of natural gas. The Chinese government continues to promote domestic gas production through tax incentives for natural gas exploration projects. Meanwhile, the Chinese government also encourages imports of energy resources from a wide variety of sources, and has introduced a series of tax and other policy incentives to facilitate imports of piped natural gas and LNG.

Favorable Government Policies

In recent years, the PRC government has issued a series of policies to encourage the development and adoption of natural gas. Below are examples of favorable government policies in the PRC:

Control Emissions and Promote Clean Energy to Meet Carbon Peaking and Carbon Neutrality Goals

- Implement "cap and intensity dual control" in carbon emissions. In terms of intensity control, China aims to cut carbon dioxide emissions and energy consumption per unit GDP by 18.0% and 13.5%, respectively, from 2021 to 2025. At the same time, China is stepping up its efforts against climate change by unprecedentedly announcing plans to set overall caps on carbon emissions. This may foster more rapid, aggressive emission cut measures;

- Encourage low-carbon transition especially in selected key sectors including the industrial, construction and transportation sectors, which may drive natural gas demand in these sectors; and

- Optimize energy mix and implement the "coal-to-gas" policy and alike to encourage clean energy.

Accelerate Domestic Natural Gas Exploration and Development and Drive the Rapid Growth of Natural Gas Reserves and Production

- Expand access to domestic natural gas exploration market and encourage development of deep-ocean, deep-earth and non-conventional natural gas resources; and

- Exempt tariffs and import value added tax for imported equipment used in natural gas and coalbed methane ("**CBM**") exploration.

Facilitate Construction of Natural Gas Pipeline Networks and Storage Facilities

- Continue to enhance backbone natural gas pipeline network, and rapidly expand the scale of natural gas pipelines from 850,552 km in 2020 to 1,630,000 km in 2025, representing a CAGR of 13.9%; and

- Facilitate construction of natural gas storage facilities, including regional underground storage tanks, and expand and improve coastal LNG and urban natural gas storage and peak shaving facilities.

Increase Piped Natural Gas and LNG Imports

- Provide tax incentives, including tax refund for import value added tax, to support imports of piped natural gas and LNG;

- Diversify natural gas supplies by maintaining four major strategic import channels, including the northeast channel (Russia-China), the northwest channel (Central Asia-China), the southwest channel (Myanmar-China) and by sea (LNG); and

- Continue to construct LNG terminals to facilitate import of LNG. To further overcome regasification constraints, the Ministry of Transport drafted a plan to build coastal and riverside LNG terminals. The draft plan aims to increase LNG receiving capacity by 165 million tonnes per annum by adding 34 berths in 13 important sites in the Bohai Rim, Yangtze River Delta and Guangdong-Guangxi region.

Improve Natural Gas Pricing Mechanism

- Continue to promote natural gas market reform and create a pricing mechanism that reflects scarcity of resources and market supply-demand dynamics, and relax competitive pricing based on the principle of "keeping midstream in control while liberalizing upstream and downstream";

- Establish an automatic pass-through pricing mechanism; and

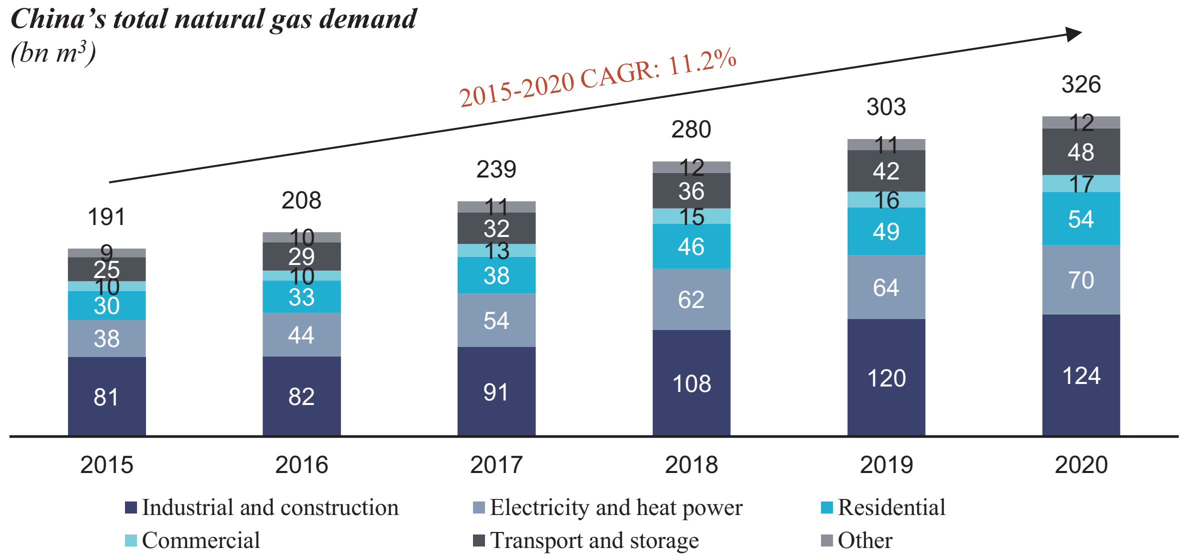
- Enhance governmental pricing and monitoring of transmission and distribution.

Natural Gas Demand in the PRC

The development and utilization of natural gas in China have been growing quickly since the commencement of formal commercial operation of the West-East Gas Pipeline Project in 2004. The momentum of rapid growth in natural gas consumption in China has been driven by: on the one hand, completion of natural gas infrastructure projects including the West-East Gas Pipeline, China-Central Asia Gas Pipeline, China-Myanmar Gas Pipeline, the Power of Siberia (China-Russia East-Route Natural Gas Pipeline) and LNG receiving terminals, which has brought about stable supply of natural gas in China; and on the other hand, the Chinese government's efforts in low-carbon, "coal-to-gas" transition and encouraging the use of natural gas as a cleaner substitute for coal to meet pollution control objectives.

Total natural gas demand in China increased from 191 billion m^3 in 2015 to 326 billion m^3 in 2020, representing a CAGR of 11.2%. Moreover, according to BP Statistical Review of World Energy, China has become the second largest LNG importer and the third largest natural gas consumer in the world, accounting for 19.3% and 8.6% of the world's total LNG imports and natural gas consumption in 2020, respectively.

The chart below sets forth China's natural gas demand by segment from 2015 to 2020.



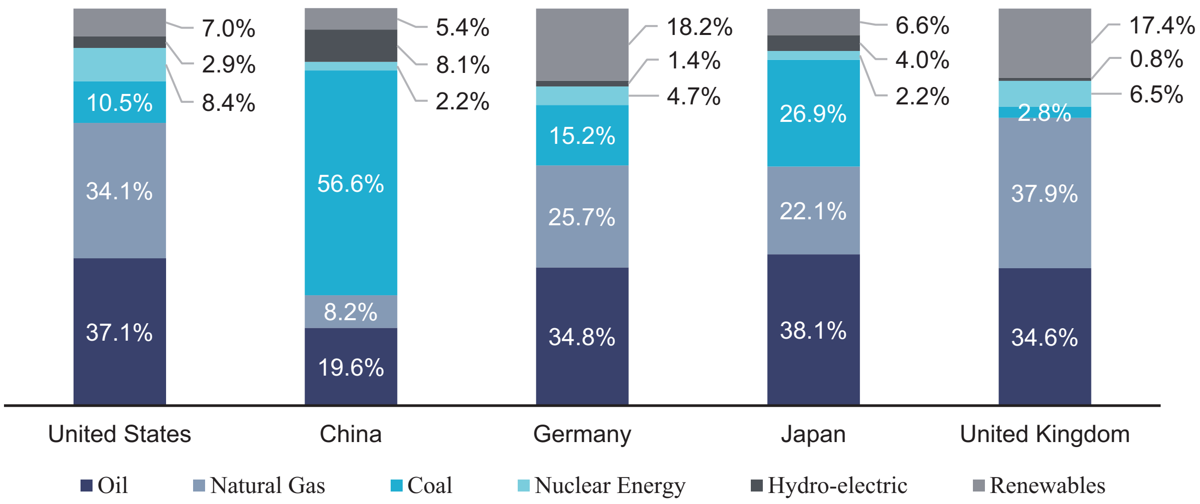
Sources: National Bureau of Statistics, China Customs and China Energy Statistical Yearbooks.

The industrial and construction sector uses natural gas as a fuel for heating, in combined heat and power systems, and as a raw material (feedstock) to produce chemicals, fertilizer, and hydrogen. In 2020, the industrial and construction sector accounted for about 38.2% of China's total natural gas demand. The power and heating sector uses natural gas to generate electricity and produce heating. In 2020, the power and heating sector accounted for about 21.5% of China's total natural gas demand. The residential sector uses natural gas to heat buildings and water, to cook, and to dry clothes. In 2020, the residential sector accounted for about 16.7% of China's natural gas consumption. The commercial sector uses natural gas to heat buildings and water, to operate refrigeration and cooling equipment, to cook, to dry clothes, and to provide outdoor lighting. Some consumers in the commercial sector also use natural gas as a fuel in combined heat and power systems. In 2020, the commercial sector accounted for about 5.3% of China's total natural gas consumption. The transport and storage sector uses natural gas as a fuel to operate compressors that move natural gas through pipelines and as a vehicle fuel in the form of compressed natural gas and liquefied natural gas. In 2020, the transport and storage sector accounted for about 14.6% of China's total natural gas consumption.

Going forward, the market for natural gas in China is expected to continue to benefit from favorable government policies, and there remains significant room for potential growth in demand. According to the 14th Five-Year Plan, China will implement "cap and intensity dual control" in carbon emissions and aims to peak carbon dioxide emissions by 2030 and reach carbon neutrality by 2060. According to the Action Plan for Carbon Dioxide Peaking Before 2030, China will continue to promote "coal-to-gas" policy and alike to encourage clean energy. According to the China Natural Gas Development Report published by the National Energy Administration, it is forecasted that China's natural gas demand will continue to grow at a relatively strong growth rate between 2021 and 2030, reaching around 550 billion m^3 to 600 billion m^3 by 2030. Even after carbon emission peak in 2030, demand for natural gas is expected to continue to grow, with plateau expected to come around 2040.

As of 2020, the proportion of natural gas in China's primary energy consumption remained relatively low at 8.2%, as compared to the international average of 24.7% and other economies such as the United States, Germany, Japan and the United Kingdom. With coal still accounting for 56.6% of China's primary energy consumption as of 2020, and as China continues to optimize its energy mix and moves away from coal to meet its carbon commitments, demand for natural gas – an economic and clean substitute for coal – may continue to enjoy rapid growth momentum in China.

Primary energy consumption by fuel type (2020)

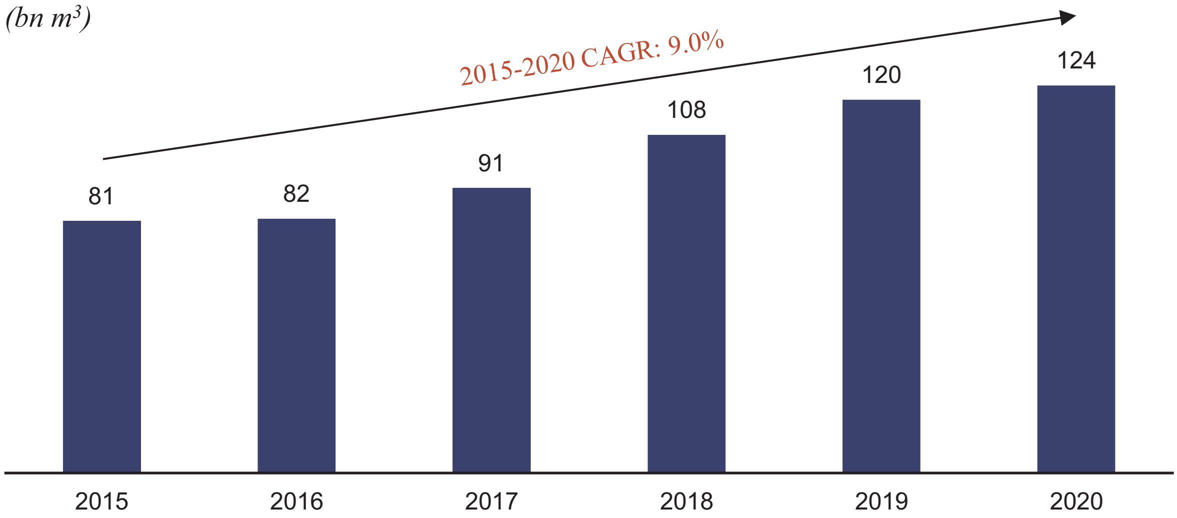


Source: BP Statistical Review of World Energy.

Natural gas demand – industrial and construction

China has a large, energy-intensive industrial sector that accounted for 30.9% of China's GDP in 2020, and the construction sector accounted for a further 7.1%. Demand from the industrial and construction sector has been, and is expected to continue to be, the key driver of China's natural gas demand. Driven by increase in industrial activities and the "coal-to-gas" campaign, China's natural gas demand from the industrial and construction sector rose from 81 billion m^3 in 2015 to 124 billion m^3 in 2020, representing a CAGR of 9.0%. As of 2020, China's industrial and construction gas demand accounted for about 38.2% of the overall natural gas demand.

China's natural gas demand — industrial and construction
(bn m^3)



Sources: National Bureau of Statistics, China Customs and China Energy Statistical Yearbooks.

Going forward, according to the Action Plan for Carbon Dioxide Peaking Before 2030, the Chinese government will focus its low-carbon reform efforts and continue to increase the proportion of natural gas in energy consumption in the industrial sector. The Chinese government also plans to take more aggressive strategies against industrial pollution, including phrasing-out outdated production capabilities, strictly controlling and placing limits on consumption of coal, and even threatening to suspend high-emission projects. These measures are expected to further incentivize wider adoption of natural gas and to drive increasing natural gas demand from the industrial sector in China.

Natural gas demand – power and heating

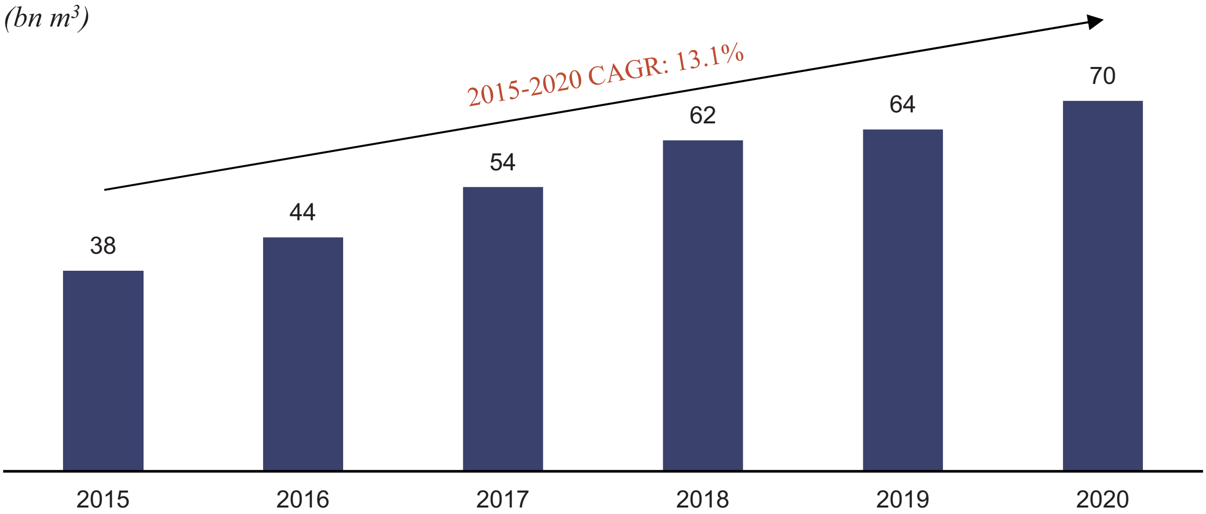
Natural gas consumption for power and heating is another key driver of increase in natural gas consumption in China.

Winter heating needs generate significant demand for energy resources, including natural gas, each year. In northern China, the Chinese government operates an extensive subsidized centralized heating scheme. Centralized heating in China has been traditionally powered by coal, but natural gas and other cleaner energy sources are increasing used in wake of environmental pollution issues surrounding the burning of coal. Echoing the "coal-to-gas" policy, NDRC's winter heating plans for northern China in December 2017 introduced four green heating methods: centralized coal heating (or clean coal), gas, electricity and renewables, as alternatives to the current bulk coal. According to the plan, gas contribution to winter heating should rise from 11% in 2016 to 23% by 2021. Commencement of piped natural gas imports via the Power of Siberia in December 2019 also eased natural gas supply constraints and promoted further growth in natural gas usage for heating in northeastern China.

In recent years, in response to public demand, local governments of cities in southern China (especially in the Yangtze River Delta) that are outside of the centralized heating scheme have begun to lead or encourage enterprises to offer local heating solutions based on natural gas, creating new growth markets for gas heating demand. For example, in Hefei and Guiyang, some newly built communities are offering centralized heating within the community; in Hangzhou, local natural gas companies have also begun to offer natural gas-based household heating solutions.

China's natural gas demand from power and heating rose from 38 billion m^3 in 2015 to 70 billion m^3 in 2020, representing a CAGR of 13.1%. As of 2020, China's power and heating gas demand accounted for about 21.5% of the overall natural gas demand.

China's natural gas demand — power and heating
(bn m^3)

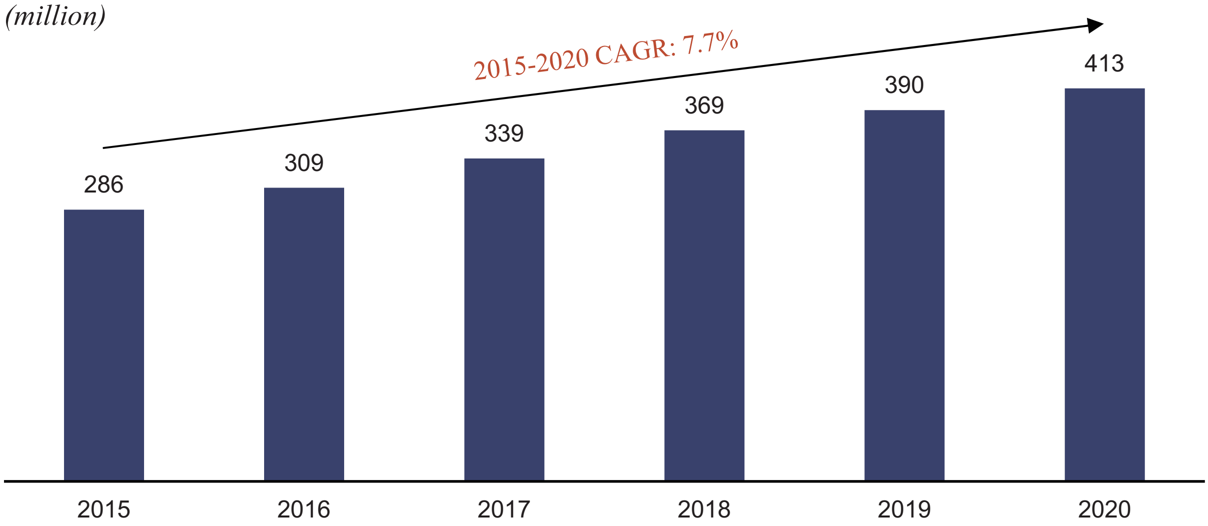


Sources: National Bureau of Statistics, China Customs and China Energy Statistical Yearbooks.

Natural gas demand – residential

Another rising driver is the introduction of rural gas, which kicked off in later 2016. The initial implementation was in 2+26 cities (Beijing + Tianjin + 26 other cities in northern China). Total heating area is expected to increase from 1.2 billion m^3 in 2016 to 3.0 billion m^3 in 2021, with rural gas accounting for 37% of the increment. Compared with the national plan, the 2+26 area would account for 72% of the incremental gas heating demand. According to the Blue Sky Action Plans released in July 2018, the gas-based heating area was expanded to Fenwei Plains (11 cities and 1 demonstration zone in Shaanxi, Shanxi and Henan). In addition, rapid development of urbanization helped boost the number of residential households connected to natural gas, and the increasing household penetration rate also contributes to the increasing residential gas consumption. According to the National Bureau of Statistics, residential population connected to natural gas increased from 286 million in 2015 to 413 million in 2020, representing a CAGR of 7.7%.

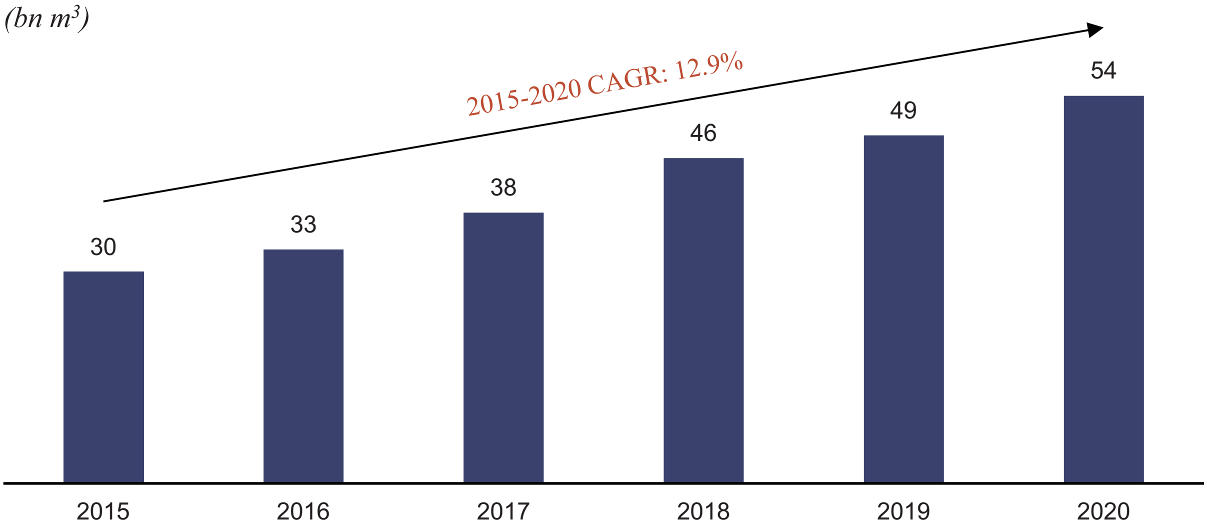
Residential population connected to natural gas
(million)



Source: National Bureau of Statistics.

China's natural gas demand from the residential sector rose from 30 billion m^3 in 2015 to 54 billion m^3 in 2020, representing a CAGR of 12.9%.

China's natural gas demand — residential
(bn m^3)



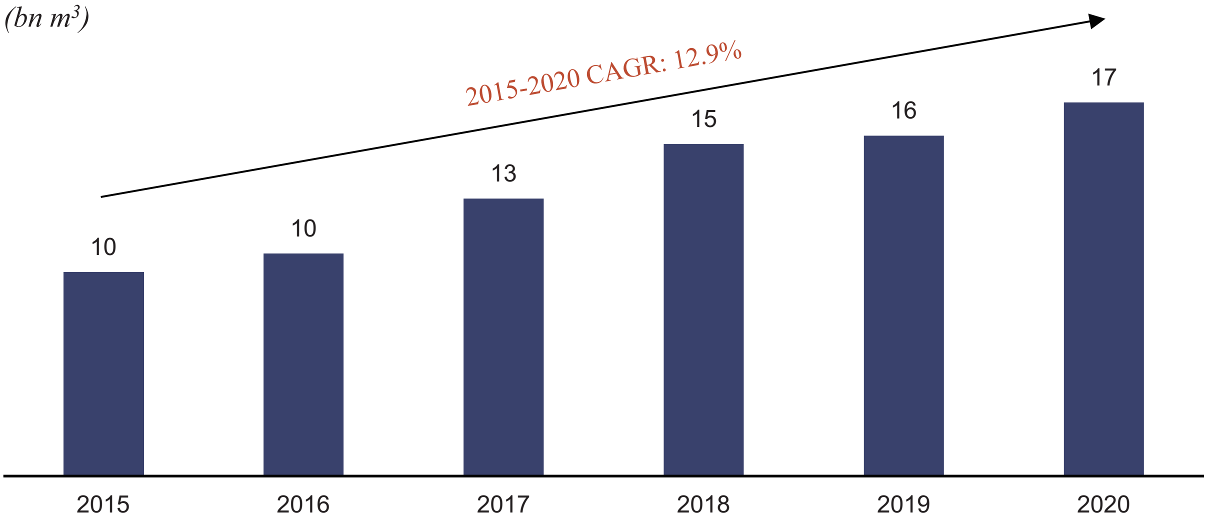
Sources: National Bureau of Statistics, China Customs and China Energy Statistical Yearbooks.

Natural gas demand – commercial

This group of customers is generally fragmented but less sensitive to utility costs. Despite lower contribution (representing about 5.3% of overall gas demand in 2020), commercial gas sales (including hotels, restaurants, hospitals, schools and other general public services) have been steadily increasing during recent years.

China's natural gas demand from the commercial sector rose from 10 billion m^3 in 2015 to 17 billion m^3 in 2020, representing a CAGR of 12.9%.

China's natural gas demand — commercial
(bn m^3)



Sources: National Bureau of Statistics, China Customs and China Energy Statistical Yearbooks.

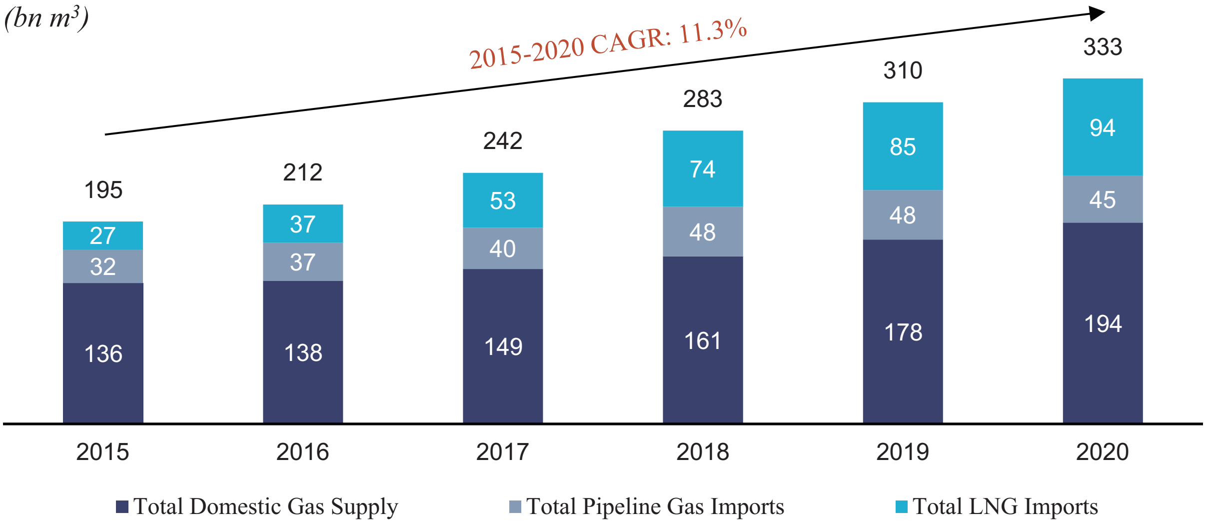
Natural Gas Supply in the PRC

As natural gas plays an important role in China's evolving energy mix and China's environmental policies, China has also made significant efforts in boosting domestic natural gas production levels and supported natural gas imports.

In State Council's Natural Gas Coordination and Development Plans published in early September 2018, the long-standing emphasis on demand has moved to a coordinated natural gas development plan covering demand, supply and storage. Together with the ongoing industry reform of allowing more third-party access to production and infrastructure, some of the city gas companies could also benefit from supply side opportunities. To meet the increasing demand for natural gas, three supply side drivers have been identified: (1) increase in domestic production, especially from unconventional sources such as shale gas and CBM; (2) Russian gas coming into Northeast China bringing in a new round of gasification boom; and (3) more seaborne LNG imports supported by more LNG receiving terminals and related infrastructure.

According to BP Statistical Review of World Energy, China's total natural gas supply rose from 195 billion m^3 in 2015 to 333 billion m^3 in 2020, representing a CAGR of 11.3%. In 2020, domestic gas supply, imported gas from pipelines and imported LNG accounted for 58%, 14% and 28% of total China natural gas supply, respectively.

China's total natural gas supply
(bn m^3)



Source: BP Statistical Review of World Energy.

Natural gas supply – domestic

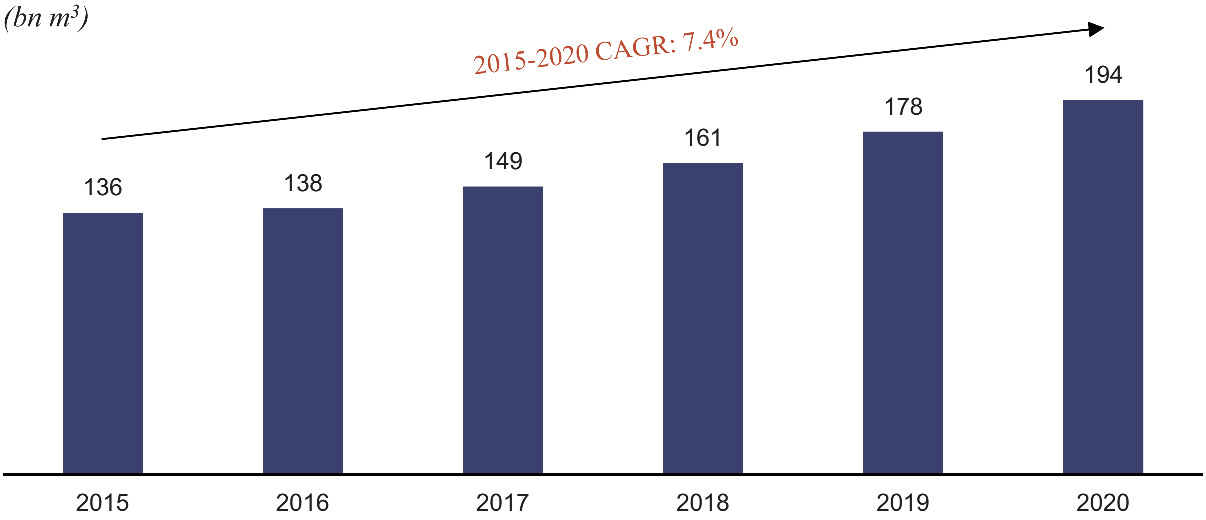
While Chinese government's environmental commitments continue to drive natural gas demand, national energy security is being re-emphasized as a key agenda item in China in light of trade tensions. While imports are necessary to meet China's enormous natural gas demand, the Chinese government has highlighted the importance of, and introduced favorable government policies to support, domestic natural gas production to ensure import dependency is under control.

In September 2018, the State Council issued a document with plans on encouraging China's natural gas development. The document itself is more of a top-down directional order and left a number of actionable items to working-level ministries. Noteworthy is that the document stated clearly that Chinese National Oil Companies ("**NOCs**") should increase domestic upstream exploration and development effort – obviously with the aim of stimulating domestic production. Other highlights include accelerating gas storage facilities construction, accelerating gas pipeline spin-off process, as well as ensuring new residential gas prices are properly implemented after the May 2018 price convergence announcement. Both CNPC and CNOOC have vowed to increase exploration and development efforts in response to State Council's call. Moreover, according to the 14th Five-Year Plan, China will also expand access to domestic natural gas exploration market, and accelerate exploration and development of deep-ocean, deep-earth and non-conventional natural gas resources.

Official policies and directives encouraging natural gas exploration has driven significant increases in China's proved reserves of natural gas. During 2016 to 2020, proved reserves of natural gas in China increased by 5.6 trillion m^3. Proved reserves of conventional natural gas increased by 3.97 trillion m^3, exceeding the goal set by the 13th Five-Year Plan. Proved reserves of shale gas and CBM also increased by 1.46 trillion m^3 and 0.16 trillion m^3, respectively, during the same period.

According to BP Statistical Review of World Energy, China's natural gas supply from domestic production rose from 136 billion m^3 in 2015 to 194 billion m^3 in 2020, representing a CAGR of 7.4%.

China's natural gas supply — domestic
(bn m^3)



Source: BP Statistical Review of World Energy.

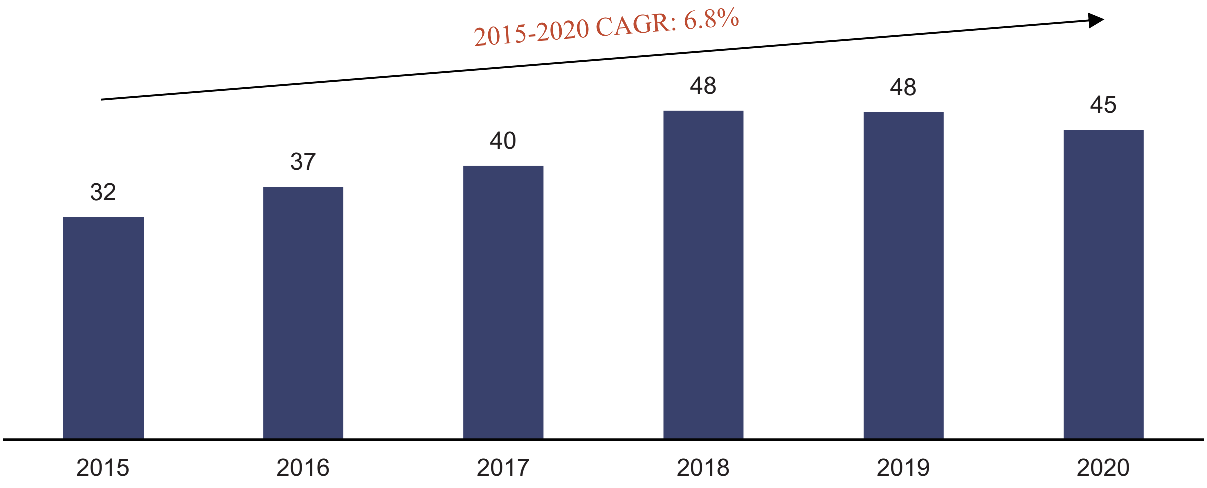
Natural gas supply – pipeline gas imports

Another new supply is Russian gas. Russia has been looking into the opportunity of selling natural gas to China over the past two decades, in a way to diversify its risk of selling solely into Europe via Ukraine. Discussions between China and Russia started since 2004 when the first agreement of strategic cooperation was signed.

In May 2014, Gazprom and CNPC signed the purchase and sales agreement for gas to be supplied via northeast China. The 30-year agreement provides for Russian gas deliveries to China in the amount of 38 billion m^3 per annum. On December 2, 2019, the Power of Siberia (China-Russia East-Route Natural Gas Pipeline) was brought into operation and the first-ever pipeline supplies of Russian gas to China were launched.

According to BP Statistical Review of World Energy, China's natural gas supply from pipeline gas imports rose from 32 billion m^3 in 2015 to 45 billion m^3 in 2020, representing a CAGR of 6.8%.

China's natural gas supply — pipeline gas imports
(bn m^3)



Source: BP Statistical Review of World Energy.

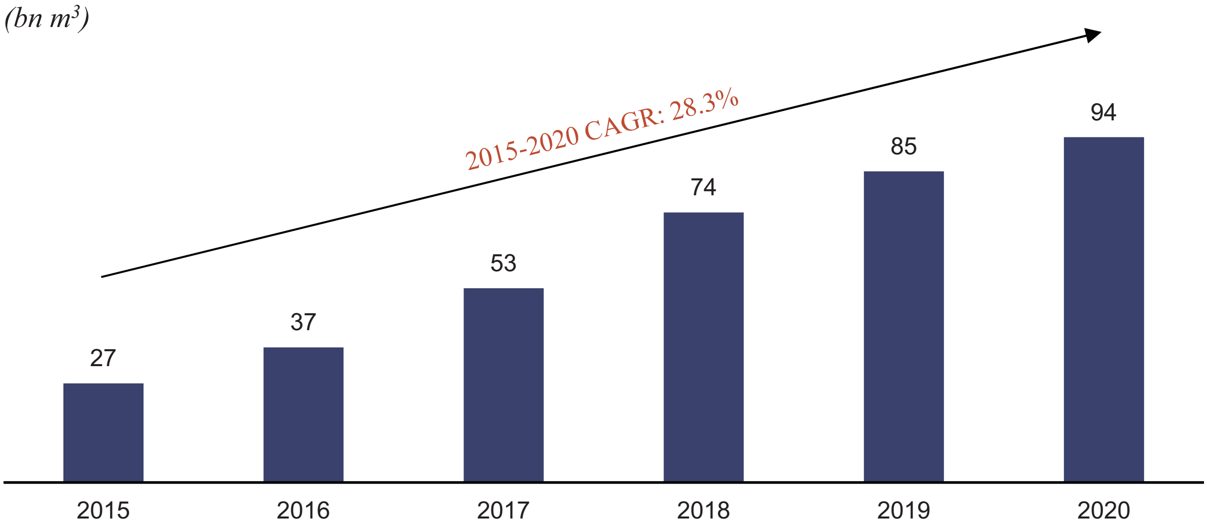
Natural gas supply – LNG imports

Another important driver of natural gas supply in China is LNG imports. In particular, LNG plays a critical role in meeting coastal China's gas demand as China's domestic natural gas production and piped natural gas imports are concentrated in inland regions. Meanwhile, increasing LNG imports are also driven by more and more downstream gas players who are seeking to import LNG directly to diversify their supply source and to improve their bargaining power over NOCs. Tax incentives including tariff cuts offered by the Chinese government for LNG imports has also continued to boost LNG imports.

According to BP Statistical Review of World Energy, China's LNG imports mostly originate from Australia (40.6 billion m^3) and Qatar (11.2 billion m^3), followed by Malaysia (8.3 billion m^3), Indonesia (7.4 billion m^3) and other countries. U.S. LNG supply found its way to China through spot purchases and portfolio suppliers. However, U.S. LNG imports into China almost came to a halt in 2019 due to the escalation of the trade war between the two countries. Following waivers of import tariffs, Chinese importers resumed imports from the U.S. in April 2020.

According to BP Statistical Review of World Energy, China's natural gas supply from LNG imports rose from 27 billion m^3 in 2015 to 94 billion m^3 in 2020, representing a CAGR of 28.3%.

China's natural gas supply — LNG imports
(bn m³)



Source: BP Statistical Review of World Energy.

Development of Natural Gas Infrastructure

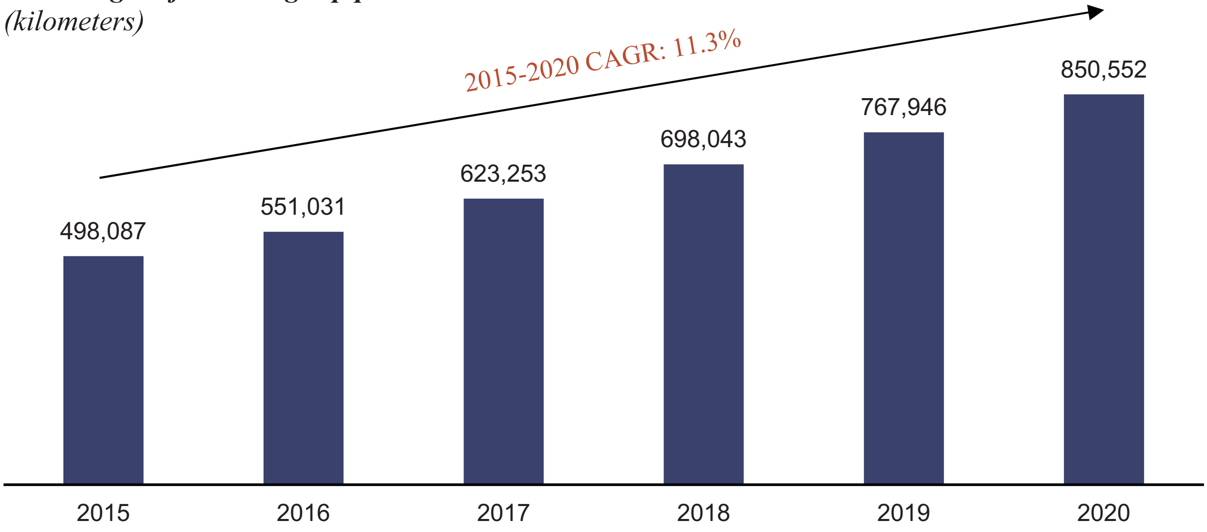
The PRC government has heavily invested in expanding natural gas infrastructure including pipeline networks and LNG terminals. This is expected to help secure nation-wide natural gas supply, and further support and promote the penetration and wider application of natural gas.

Development of natural gas pipeline transport facilities

China's population and industrial activities are mostly located in coastal regions (and to some extent, central China), but China's domestic natural gas production as well as piped gas imports (before completion of the Power of Siberia gas pipelines in 2019) were concentrated in western China. To secure stable supply of natural gas nation-wide and promote wider adoption of natural gas across sectors, industries and regions, China has invested heavily in natural gas transport facilities and built an extensive, interconnected natural gas pipeline network in its territory.

According to the National Bureau of Statistics, the total length of natural gas pipelines in China have grown at a CAGR of 11.3% from 498,087 km in 2015 to 850,552 km in 2020. According to the National Energy Administration, in 2021, the Chinese government completed 25 major oil and gas pipeline projects, upgrading China's natural gas transport capabilities by 40 million m^3 per day.

Total length of natural gas pipelines in China
(kilometers)



Source: National Bureau of Statistics.

According to the 14th Five-Year Plan, in building a modern energy system, China will speed-up the construction of natural gas main pipelines and enhance its interconnected oil and natural gas network. According to the Medium and Long-term Oil and Gas Pipeline Network Planning, the Chinese government will continue to rapidly expand the scale of its natural gas pipeline network with a goal of reaching 1,630,000 km in length by 2025, representing a CAGR of 13.9% from 2020 to 2025. China has also announced key pipeline network infrastructure project plans such as domestic expansion of the China-Russia East-Route Natural Gas Pipeline and Phase 2 of Sichuan-Shanghai Gas Pipeline. Enhanced infrastructure will continue to enhance availability of natural gas in China. Meanwhile, also according to the 14th Five-Year Plan, the Chinese government will also accelerate construction of underground natural gas storage facilities to upgrade China's natural gas storage and peak shaving capabilities, and to enhance national energy security.

Development of LNG receiving facilities

China has also made significant investments in LNG receiving facilities to support LNG imports. On the one hand, imports of LNG via coastal receiving facilities address the significant demand for, and occasional shortage of, natural gas at the developed coastal regions; on the other hand, the large number of LNG exporters available globally present China with more import options, and expansion of import sources is consistent with China's policy call for energy security. By December 2020, 22 terminals were in operation across 11 coastal provinces, while 10 greenfield terminals were under construction and several more were in the pipeline.

Historically, the key operators of terminals are China's NOCs along with local government partners with some limited foreign participation. While LNG terminals continue to be largely dominated by the NOCs to date, LNG import licenses have been granted to other domestic companies. City gas distributors, power utilities, local energy companies and trucked LNG players are becoming increasingly active in building and proposing LNG receiving terminals in coastal cities. There is also a growing preference to import LNG directly and bypass NOCs. These emerging buyers have been progressive in obtaining approvals for new terminals and are expected to drive further development of LNG receiving facilities and LNG imports.

Reform of the PRC's Oil and Gas Industry

Reform in the oil and gas sector has been a recurring theme from the 13th Five-Year Plan to the 14th Five-Year Plan. Reform efforts are gradually taking shape and are expected to continue to take place throughout the oil and gas value chain, through which the PRC government aims to establish a modern natural gas market system characterized by a complete set of regulations, unified and open market and orderly competition.

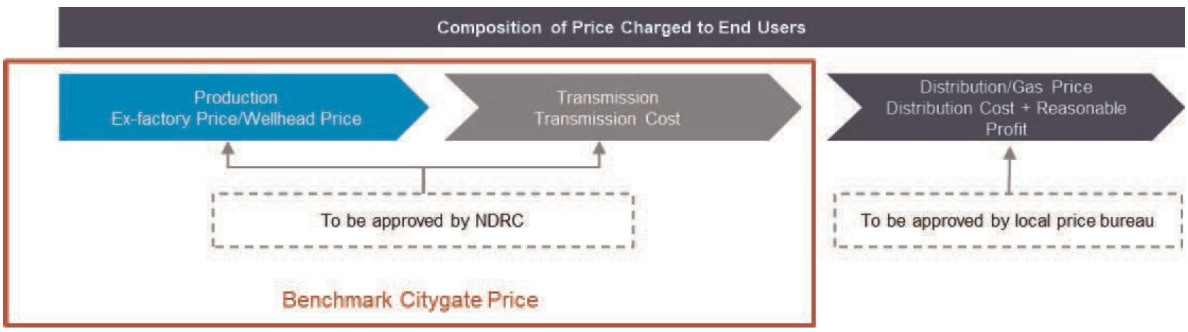
China's natural gas sector reform gained momentum in 2019. In June 2019, the Chinese government removed oil and gas exploration from the Special Administrative Measures for Foreign Investment Access (Negative List), marking further liberalization and the opening of the upstream oil and gas production market to foreign investment. Furthermore, as a milestone step in China's energy sector reform, PipeChina was established in December 2019, followed by the US$56 billion asset acquisition in July 2020. PipeChina consolidated a large portion of pipelines owned by the state-owned energy giants PetroChina, Sinopec and Sinopec Kantons. As a state-owned neutral player focusing on the midstream of the oil and gas value chain, PipeChina aims to provide open and transparent access to pipeline infrastructure for all market players. The establishment of PipeChina would facilitate diversification of supply sources and is expected to allow greater flexibility in gas procurement by privately-owned companies in the natural gas market. Over time, the reform could pave the way for China's transition towards a market-based gas price mechanism, enabling direct gas purchase from a wider range of suppliers at competitive prices, and thereby driving the growth in supply and consumption of natural gas.

The 14th Five-Year Plan also signaled that China will continue its efforts in market reform, including the introduction of more competition and anti-monopoly regulations in the energy industry. Going forward, China's natural gas market still offers extensive room for development, as rationalized market structure, diversified resources supply, complete storage and transportation facilities, unified laws and regulations, orderly competitive modern natural gas sector regime gradually comes into existence.

Natural Gas Regulation and Pricing Mechanism in the PRC

The PRC government is carrying out natural gas reform. It is anticipated that China's natural gas price will be increasing market-driven. With the formation and optimization of the linkage to upper and lower range, the hike of natural gas price will be promptly passed on to end-users which can secure reasonable return on investment for downstream operators.

The following chart illustrates the pricing structure of natural gas in the PRC:



Ex-factory Price and Transmission Cost

City-gate price is ex-factory price plus cost of pipeline transmission. The price specified by the PRC government applies. Gas consumption can be divided into residents and non-residents. Gas consumption by non-residents will be subject to the benchmark city-gate price management. Suppliers and buyers may agree on the specific city-gate price based on the benchmark city-gate price, which cannot be more than 20% higher than the benchmark city-gate price.

Distribution Cost and Reasonable Profit

For city gas and compressed natural gas, price adjustments for gas consumption by non-residents are required to be approved by municipal regulators, while price adjustments for gas consumption by residents are determined in hearings except where such adjustments are due to a corresponding change in the city-gate price.

For LNG, its price is market driven depending on demand and supply and is characterized by a high degree of seasonal characteristics. Cost hike can have rapid spill-over effects.

Reform of Natural Gas Pricing in the PRC

According to the Action Plan for Deepening Price Mechanism Reform During the 14th Five-Year Plan Period published by the NDRC, China will continue to reform natural gas pricing along the lines of "keeping midstream in control while liberalizing upstream and downstream". At the supply end (upstream), China will continue to diversify sources of natural gas and allow wider participation in gas exploration, development and supply. At the retail end (downstream), China will continue to liberalize city-gate and end-user pricing, and to enhance the linkage between upstream cost and downstream end-user price. According to the plan, by 2025, gas prices shall be primarily driven by market competition.

Meanwhile, at the midstream, the Chinese government will continue to reinforce its role in pricing and regulation of transmission and distribution segments, which are considered to be prone to monopoly. The Chinese government implements grade-based and category-based cross-provincial and intra-provincial pipeline transmission costs, urban gas distribution price and detailed administrative measures based on the principle of "permitted cost plus reasonable profit" for gas transmission and distribution. Through the establishment of PipeChina, China aims to create more open and fair access to pipelines, and will continue to refine and enhance regulation over transmission and distribution prices. Efforts are being made to increase investment for grid management, control over operation and maintenance cost and information disclosure. The Chinese government intends to:

- Enhance local control over intra-province pipeline transmission cost and distribution cost and bring down excessively high intra-province pipeline transmission cost and distribution cost;

- Cut down intermediary segments in gas supply and encourage large users to employ direct supply through pipeline transmission; and

- Regulate and rationalize various charges by natural gas transmission and distribution players and strive to reduce cost of end users.

Integrated Energy Market in the PRC

Energy cost savings, enhanced energy efficiency, and tightening environmental protection requirements underpin the huge potential in the integrated energy industry in China, as China transitions towards increasing the proportion of clean energy consumption. An integrated energy system combines different types of energy, such as natural gas, industrial waste heat, solar energy, geothermal energy and wind power, in an on-site distributive system highly customized to suit different customers' needs. It provides a broad range of energy solutions, including gas, electricity, cooling, heating and steam.

Government support and favorable policies

Under the 14th Five-Year Plan, China has set clear goals and plans for energy-saving and de-carbonization: as a short- to mid-term goal, China aims to reduce CO_2 emissions per unit of GDP by 18.0% and reduce energy consumption per unit of GDP by 13.5% by 2025; in the long run, China aims to peak carbon dioxide emissions by 2030 and achieve carbon neutrality by 2060. Achieving these goals and targets require further development of clean energy and improvement of energy efficiency. Apart from "coal-to-gas" initiatives, the Chinese government has also rolled-out a range of policies to support the development and adoption of integrated energy systems, which may generate enormous demand for integrated energy.

As a classic use case of integrated energy systems, China continues to encourage newly built industrial parks to adopt integrated energy systems and existing industrial parks to transform their energy supply towards integrated energy solutions. According to the Plan for Environmental-Friendly Development in National High-Tech Zones in 2021, by 2025:

- the energy consumption per unit of industry value added of national high-tech zones will be reduced to less than 0.4 tons of standard coal per RMB10,000 of output, 50% of which will be reduced to less than 0.3 tons of standard coal per RMB10,000 of output; and

- CO_2 emissions per unit of industry value added will be reduced by over 4% each year.

China's policy support for integrated energy extends beyond industrial parks; integrated energy solutions are being promoted at a social-wide scale as a key part of China's "modern energy system." According to the 14th Five-Year Plan on Modern Energy System Planning, China is expected to:

- *Implement energy-saving and carbon reduction measures in key industries*. China will promote energy-saving transformation of key industries, advance green manufacturing, accelerate the transformation to electricity and low-carbon energy sources in the construction industry, establish a green and low-carbon transportation system, as well as actively promote centralized cooling in the southern China and combined cool and heat supply in the Yangtze River region;

- *Improve electrification level*. The Chinese government will actively promote the use of new energy vehicles in areas such as urban public transportation, carry out pilot and demonstration projects for new types of charging and battery swap stations integrating solar energy, energy storage, battery charging and swapping services;

- *Enhance electricity coordination capabilities.* Electricity from flexible dispatching will account for around 24% of total electricity supply by 2025, and response ability from demand side will represent around 3% to 5% of maximum load;

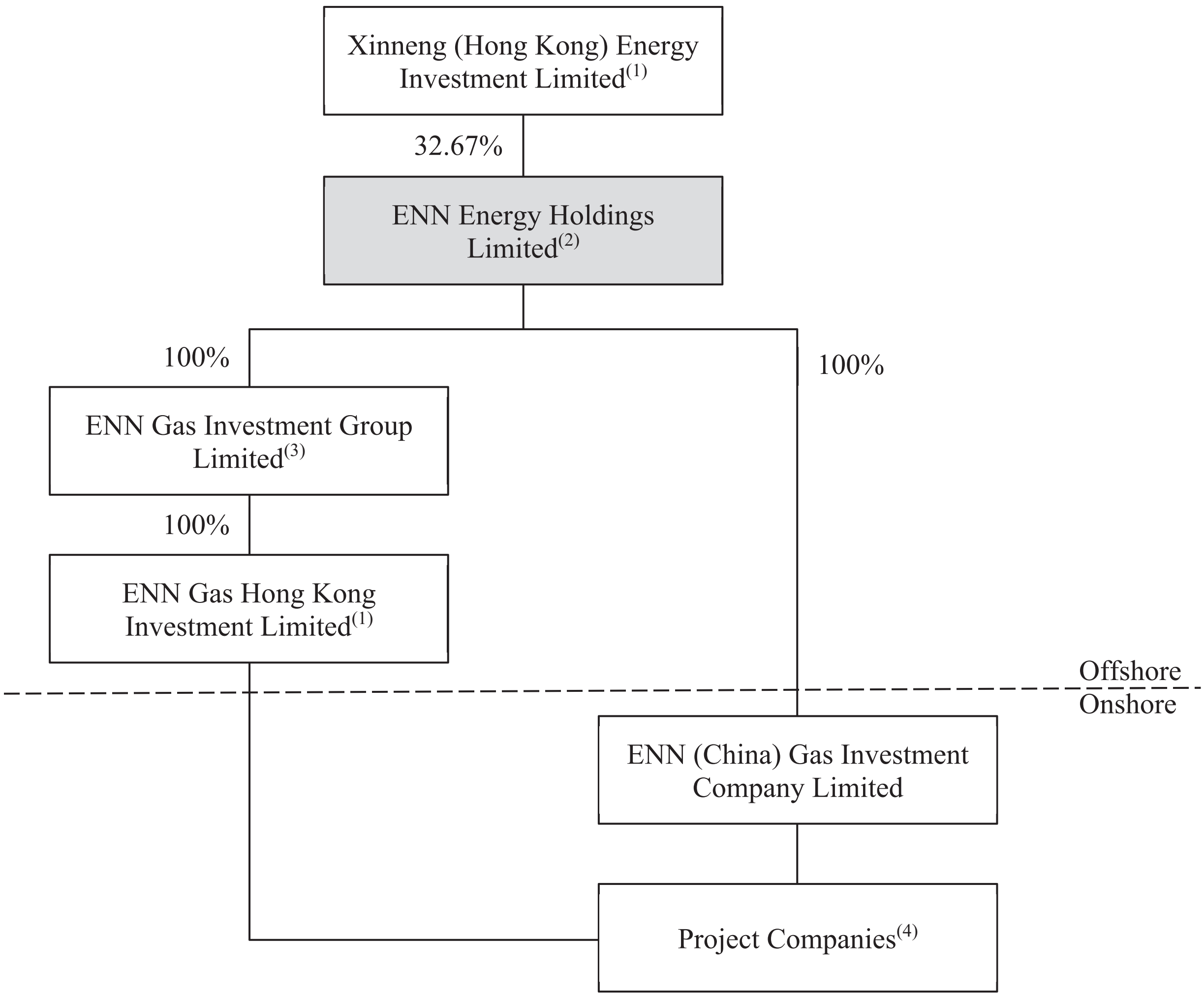
- *Carry out smart energy demonstration projects*. The Chinese government will carry out smart energy system technology demonstration projects such as smart dispatching, energy efficiency management and intelligent load control, in new business models and formats – including clean energy base featuring diversified energy, integrated project combining electricity supply, grid, load and storage, comprehensive energy services, smart micro grid, virtual power plant, etc.;

- *Accelerate the development of wind power and solar power*. China will accelerate the construction of distributed wind power and solar projects in load centers and neighboring areas, promote the application of the low-speed wind power technology, actively advance development and utilization of rooftop solar power generation in industrial parks and economic development zones, promote integration of solar power generation with buildings. The highlight on development of wind power and solar power in distributed energy systems is again echoed by The Action Plan for Carbon Dioxide Peaking Before 2030 as well as the 2022 Energy Work Guiding Opinions; and

- *Develop other renewable energy based on local conditions*. The Chinese government will promote diversified utilization of biomass energy, steadily develop incineration of municipal solid waste, actively promote heating and cooling using geothermal energy, and conduct demonstration project of geothermal energy power generation in areas with high temperature geothermal resources.

CORPORATE STRUCTURE

The following chart sets forth our simplified corporate structure as of December 31, 2021:



Notes:

(1) A company incorporated under the laws of Hong Kong.

(2) The Company is incorporated under the laws of the Cayman Islands and listed on the Main Board of the Hong Kong Stock Exchange.

(3) A company incorporated under the laws of the British Virgin Islands.

(4) We control most of the project companies for our 252 operational locations.

BUSINESS

OVERVIEW

We are one of the largest privately-owned clean energy distributor and integrated energy solutions provider in China. Our principal business is the sale and distribution of piped gas, LNG and other multi-energy products, and the investment in, and the constructions, operation and management of, gas pipeline infrastructure, vehicle/ship refueling stations and integrated energy projects. We also conduct value added business, including the sales of gas-related appliances, energy-saving products, home safety and security products, and the provision of value added services that assist our customers in transitioning towards a low-carbon lifestyle and improving their quality of life.

We commenced operations in 1993 and have since developed into one of the leading privately-owned gas operators in the PRC. As of December 31, 2021, we had a total of 252 operational locations with a total connectable urban population of 124.3 million in China. We operate our piped gas distribution infrastructure on an exclusive basis, typically for periods ranging from 15 to 30 years, in cities and urban areas located in 20 provinces, municipalities and autonomous regions in China. We typically apply for and obtain exclusive rights from the local governments in China to distribute piped gas. We may also acquire exclusive rights by entering into joint ventures with existing local piped gas distributors. In addition, we construct and maintain city piped gas networks in locations where we have acquired exclusive rights through the above-mentioned means to supply piped gas. We charge construction and installation fees from property developers, residential customers and C&I customers according to local government's regulations. We receive recurring gas usage charges from connected customers based on the tariffs negotiated and determined within the price cap set by the local governments.

We intend to grow organically by increasing the penetration rates and the number of connected customers for our existing operational locations while continuing to develop new projects and expanding our concessions in China (including, without limitation, to add more operational locations and to acquire certain industrial park projects close to the existing operational locations), with a particular focus on the commercial and industrial zones of emerging cities. In 2019, 2020 and 2021, the number of city-gas projects under our management increased by 30, 18 and 17, respectively, in China.

Apart from our focus on city-gas projects, we adhere to the principle of integrated energy development, explore and utilize the most competitive low-carbon energy sources based on different local conditions, and develop integrated energy projects serving customers including industrial parks, factories, buildings and transportation. As of December 31, 2021, we had 150 integrated energy projects in operation and 42 projects under construction. The sales of integrated energy including cooling, heating, electricity and steam is expected to reach 36 billion kWh upon full operation over the next few years. With the direction to develop integrated energy business, we will be able to further diversify our business risks and explore more business opportunities including value added business.

For the years ended December 31, 2019, 2020 and 2021, our revenue was RMB70,183 million, RMB71,617 million and RMB93,113 million, respectively, and our net profit was RMB6,861 million, RMB7,331 million and RMB8,995 million, respectively. As of December 31, 2019, 2020 and 2021, our total net assets were RMB31,020 million, RMB36,172 million and RMB42,150 million, respectively.

Our shares were listed on the Growth Enterprise Market on May 10, 2001 and were transferred to the Main Board of the Hong Kong Stock Exchange (stock code: 2688) on June 3, 2002.

RECENT DEVELOPMENTS

Impact of COVID-19

The global outbreak of COVID-19, which was declared a pandemic by the World Health Organization in March 2020, has spread to almost every country in the world. The global impact of the outbreak continues to rapidly evolve, and many countries, including the PRC, have instituted quarantines, restrictions on travel, closed financial markets and/or restricted trading, and closed or limited hours of operations of non-essential businesses. Such actions are creating severe economic contraction and adversely impacting many industries. While most cities in the PRC gradually lifted the public health restrictions, recurring COVID-19 outbreaks have led to the re-introduction of such restrictions in several regions from time to time. Moreover, even where restrictions have been lifted, self-imposed social distancing and isolation measures may continue for a more prolonged period.

In response to the COVID-19 pandemic, the headquarter of the Group and all its member companies have formed an epidemic prevention and control team to coordinate epidemic prevention and control in accordance with national and local government requirements. We have implemented various policies to keep our employees safe and healthy, including regular disinfection at office areas, canteens, apartments and official vehicles; daily monitoring of the physical health of its employees; utilizing iCome platform for daily epidemic report mechanism to analyze the health statuses of employees, tracking health statuses of employees on quarantine and preparing contingency plans in advance to ensure the orderly implementation of epidemic prevention. As a leading enterprise in the public utilities sector, we are determined to ensure the safety of people's livelihood and gas usage during the outbreak, raise awareness of epidemic prevention both internally and externally, and ensure all departments are working closely together to protect frontline employees, providing masks, protective suits, goggles and other supplies to ensure that employees can provide services to customers safely. During the pandemic, most services provided by us have been diverted to mobile application and online platform, which lays a good foundation for us to develop value added business and explore more business opportunities. In 2021, as the outbreak of COVID-19 became relatively stabilized in China, while there were local outbreaks in various regions of China, our business development and operations were not materially and adversely affected. We cooperated with local governments to implement pandemic control measures and to ensure a stable gas supply. We also actively provided support to our customers to resume their operations and production with the stabilization of the pandemic. See also "*Risk Factors – Risks relating to Our Business – Our business, financial condition and results of operations may be materially and adversely affected by market fluctuations and economic slowdowns in the PRC and the global economy, particularly as a result of the COVID-19 pandemic.*"

Repayment of Two Tranches of the 2019 Corporate Bonds

One of our wholly owned subsidiaries, Xinao (China) issued three tranches of corporate bonds in 2019 (together, the "**2019 Corporate Bonds**"). The first tranche was issued on January 22, 2019 with a face value of RMB500,000,000, which is unsecured, carries an interest rate of 4.19 per cent. per annum and is payable on January 22, 2022. The second tranche was issued on March 8, 2019 with a face value of RMB1,000,000,000, which is unsecured, carries an interest rate of 4.20 per cent. per annum and is payable on March 8, 2022. The third tranche was issued on November 11, 2019 with a face value of RMB600,000,000, which is unsecured, carries an interest rate of 3.98 per cent. per annum and is payable on November 12, 2022. We have fully repaid the first and second tranches of the 2019 Corporate Bonds as of January 22, 2022 and March 8, 2022, respectively.

Signing of LNG Sale and Purchase Agreement with Energy Transfer LNG Export

On March 28, 2022, we, as purchaser, entered into a LNG Sale and Purchase Agreement with Energy Transfer LNG Export, LLC ("**ET LNG**"), a subsidiary of Energy Transfer LP which is listed on the New York Stock Exchange (stock code: ET), as seller. Pursuant to the agreement, we are expected to procure 0.9 million tonnes of LNG from ET LNG, per annum on a free-on-board basis. The purchase price is indexed to the Henry Hub benchmark plus a fixed liquefaction charge. The agreement has a term of 20 years and the first deliveries are expected to commence as early as 2026. The agreement will become fully effective upon the satisfaction of certain conditions precedent by ET LNG, including reaching a final investment decision, or FID.

Announcement of Unaudited Operational Data for the Three Months Ended March 31, 2022

On April 28, 2022, we announced certain unaudited operational data of our Group and our joint ventures and associates for the three months ended March 31, 2022 in our announcement published on the website of the SEHK.

As of 31 March 2022, we had 156 integrated energy projects in operation and our sales volume of integrated energy increased by 46.4% to 5,525 million kWh for the three months ended March 31, 2022 as compared to 3,774 million kWh for the corresponding period in 2021. Our retail gas sales volume increased by 6.8% to 6,840 million m^3 for the three months ended March 31, 2022 from 6,407 million m^3 for the corresponding period in 2021. Our wholesale gas volume also slightly increased to 2,105 million m^3 for the three months ended March 31, 2022 as compared to 2,082 million m^3 for the corresponding period in 2021. We completed constructions and installation for 450 thousand of newly-developed residential customers during the three months ended March 31, 2022, representing an increase of 13.9% as compared to the number of newly-developed residential customers during the corresponding period in 2021. The installed designed daily capacity for newly-developed C&I customers increased by 33.5% to 5.02 million m^3 for the three months ended March 31, 2022, as compared to 3.76 million m^3 for the corresponding period in 2021. For more information, please refer to our announcement dated April 28, 2022 published on the website of the SEHK.

COMPETITIVE STRENGTHS

We believe that our position as a leading integrated energy supplier in China is largely attributed to the following competitive strengths:

Leading integrated energy supplier satisfying strong growth in customers' demand for energy and value added services

As one of the first privately owned companies to invest in the piped gas industry in China, through almost three decades of strategic expansion and experience in the industry, we have become a leading natural gas distributor in China having a broad geographical coverage with 252 city gas projects across 20 provinces, municipalities and autonomous regions as of December 31, 2021. As we have selectively expanded into areas where both demand for and supply of natural gas is strong, our projects typically generate positive cash flows quickly and allow us to maintain rapid growth, and at the same time, ensure rapid expansion of our customer base. As of December 31, 2021, we covered an urban population of 124.3 million with natural gas and maintained 202,459 C&I customers. We have obtained exclusive rights from local governments to supply gas to substantially all of our existing operational locations including, but not limited to, cities and urban areas in Anhui, Guangdong, Guangxi, Hebei, Henan, Hunan, Sichuan, Beijing Municipality, Fujian, Jiangxi, Yunnan, Inner Mongolia, Heilongjiang, Jiangsu, Shanghai, Tianjin, Shaanxi, Shandong, Zhejiang and Liaoning.

Building upon our leadership in the natural gas industry and benefiting from our extensive customer base, we have developed a diversified portfolio of value-added, extended and integrated products and services. We provide tailor-made integrated energy solutions based on availability of energy sources at the project location and customer's energy demand. With a focus on four use cases – low-carbon factories, low-carbon buildings, low-carbon transportation and low-carbon industrial parks – we had 150 integrated energy projects in operation as of December 31, 2021 with another 42 integrated energy projects in development. We also offer flexible natural gas pricing packages to meet the needs of different customers, including tariff packages (i.e. lower rates for usage within a planned amount), seasonal rates packages (i.e. differing rates for peak and non-peak seasons) and pass-through packages (i.e. rates on a cost plus premium basis). Meanwhile, we have developed a portfolio of value-added products and services, such as safe home, smart kitchen, one-stop heating and security system, low-carbon and digital-intelligent products and services, to meet the diversified and differentiated needs of our customers and provide one-stop solutions to our customers.

Well-positioned in the fast-growing natural gas and integrated energy markets in China driven by favorable environmental policies

We have strategically focused our business on the clean energy sector. Our strategic positioning in the clean energy industry enables us to take advantage of the rapid growth of natural gas and integrated energy markets in China.

Natural gas consumption in China has been growing rapidly. According to the National Bureau of Statistics, China Customs and China Energy Statistical Yearbooks, total natural gas demand in China increased from 191 billion m^3 in 2015 to 326 billion m^3 in 2020, representing a CAGR of 11.2%. According to the China Natural Gas Development Report published by National Energy Administration, it is forecasted that China's natural gas demand will maintain a relatively strong growth rate between 2021 and 2030, reaching about 550 billion m^3 to 600 billion m^3 by 2030. Even after achieving the carbon emission peak goal in 2030, demand for natural gas in China is expected to continue to grow, with plateau expected to come around 2040.

We are also well-positioned to benefit from the city-gas pricing mechanism reform in China which promotes an increasingly market-oriented pricing mechanism. In 2017, the NDRC published guidelines articulating the principle of "permitted costs plus reasonable returns" and specifying a 7% cap on the return ratio for suppliers. The calculation of such capped return ratio does not count in fees charged for construction and installation of pipelines, which we may charge separately. From 2018, the NDRC sets benchmark price instead of a ceiling price for household natural gas supplies and permits it to be adjusted upward and allows seasonal fluctuations and price negotiations.

In a move aimed at optimizing the allocation of pipeline infrastructure and market-based pricing in China, PipeChina was established in December 2019 to hold and operate the gas transmission infrastructures that were previously solely operated by China's three state-owned oil and gas companies. PipeChina offers third parties with access to spare capacity at its LNG terminals, natural gas pipeline network and storage facilities, which is expected to improve the liquidity of the upstream natural gas market and also increase the supply of natural gas in China.

The growth of integrated energy market in China is supported by a series of national decarbonization goals of the Chinese government. According to the 14th Five-Year Plan, in the long run, China will continue to advance low-carbon transition, and aims to peak carbon dioxide emissions by 2030 and achieve carbon neutrality by 2060. As a short- to mid-term goal, China aims to reduce CO_2 emissions per unit of GDP by 18% and reduce energy consumption per unit of GDP by 13.5% by the end of the 14th five-year plan period, i.e., 2025. Achieving these goals and targets requires further development of clean energy market and more efficient utilization of energy resources, which we believe will generate enormous demand for the integrated energy services and provide significant growth potential for our integrated energy business. In addition, the development of our integrated energy business is also supported by various favorable policies. For example, under the 14th Five-Year Plan on Modern Energy System Planning, the Chinese government will further promote green manufacturing, transportation decarbonization, smart energy demonstration projects and renewable energy development, which will also drive the demand for integrated energy services.

We believe these national goals and policies rolled out by the Chinese government provide strong support to the development of natural gas and integrated energy markets in China and creates enormous opportunities for our natural gas and integrated energy businesses.

Diversified business portfolio that enables us to secure a stable and sustainable profitability

After years of development and business transformation, we developed a diversified business portfolio comprising various business segments and covering a wide range of geographical locations and customers. We also secured a diversified and stable natural gas supply from a number of supply sources. Our diversified business portfolio enables us to lower the risks in relation to industry cyclical fluctuation and to secure a stable and sustainable profitability.

For the year ended December 31, 2021, we derived revenue primarily from our principal businesses including (i) retail gas sales business, (ii) integrated energy business, (iii) wholesale of gas, (iv) construction and installation, and (v) value added business. The following table sets forth a breakdown of our gross profit for the years ended December 31, 2019, 2020 and 2021 by business segments, and each expressed as a percentage of our total gross profit for the period indicated:

	Year ended December 31					
	2019		2020		2021	
	RMB million	*% of total*	*RMB million*	*% of total*	*RMB million*	*% of total*
Gross profit						
Retail gas sales business	5,671	50.3%	6,491	52.6%	6,164	43.9%
Integrated energy business	473	4.2%	903	7.3%	1,365	9.7%
Wholesale of gas	166	1.5%	362	2.9%	358	2.5%
Construction and installation	3,719	33.0%	3,264	26.5%	4,446	31.6%
Value added business	1,236	11.0%	1,312	10.6%	1,723	12.3%
	11,265	100.0%	12,332	100.0%	14,056	100.0%

Our business covers a diversified composition of customers. For example, we supply gas to three major categories of customers in our retail gas sales business, including residential customers, C&I customers and vehicle customers. In 2021, the sales volume of natural gas sold to residential customers, C&I customers and vehicle customers accounted for 18.6%, 78.8% and 2.6% of the total sales volume of our retail gas sales business, respectively. Also, we benefit from a balanced composition of sales across geographical locations. We strategically developed our businesses in (i) cities with established commercial and industry zones (i.e., significant presence of C&I customers and relatively high average income households) with high density urban population or high growth potential and (ii) selected second-tier or third-tier cities in the PRC, where industrial customers have a substantial growing demand for energy consumption.

In addition, we secured a diversified and stable natural gas supply with competitive prices. We established strategic cooperation with three major upstream natural gas suppliers in China, namely PetroChina, Sinopec and CNOOC and entered into agreements to purchase natural gas from them or their distributors, under which we procured approximately 79% of our natural gas purchases in 2021. We also signed long-term LNG import contracts with suppliers such as Chevron U.S.A. INC., Origin Energy LNG Portfolio Pty Ltd. and Total Gas & Power Asia Private Limited, under which we purchased approximately 1.58 million tons of LNG in 2021, accounting for approximately 9% of our natural gas purchases in 2021. Meanwhile, we procure LNG from domestic suppliers and also utilize unconventional natural gas resources in areas such as Shanxi, Shaanxi, Sichuan and Chongqing. Our access to upstream gas sources has been further expanded through our cooperation with PipeChina. We are also able to access LNG receiving terminals in Zhoushan pursuant to arrangements with our controlling shareholder, which in turn allows us to have access to a variety of gas suppliers in the market.

Continue to experience low-risk and strong organic growth

We develop our business with steady and focused expansion strategies, take prompt responses to opportunities and cultivate new drivers for growth, which allow us to maintain a strong growth momentum while limiting our risk exposure. Our revenue increased from RMB70,183 million in 2019 to RMB93,113 million in 2021 representing a CAGR of 15.2%. The growing demand of natural gas represents significant growth potential for us. Our gas sales volume, including gas sales on both retail and wholesale basis, increased from 26,963 million m^3 in 2019 to 33,097 million m^3 in 2021, representing a CAGR of 10.8%.

We enjoy strong organic growth momentum with our diversified business structure. Our integrated energy business has also become a major driver of our business growth and is expected to continue to drive our growth under China's "dual carbon" goals. Our sales volume of integrated energy increased from 6,847 million kWh in 2019 to 19,065 million kWh in 2021 at a CAGR of 66.9%, and the number of our integrated energy projects that have been put into operation increased from 98 to 150 during the same period. We strategically focus our integrated energy solutions to four main categories of energy-consuming customers, including low-carbon factories, low-carbon industrial parks, low-carbon buildings, and low-carbon transportation. Revenue from our integrated energy business increased significantly from RMB2,749 million in 2019 to RMB7,805 million in 2021 at a CAGR of 68.5%, while its gross profit grew from RMB473 million to RMB1,365 million at a CAGR of 69.9%.

Our value added business also experienced rapid growth. Through continuously extending the breadth of our products and depth of our services based on our understanding and recognition of customers' needs, we offer safe, low-carbon and smart solutions to meet diversified and differentiated needs of our customers and developed a diversified portfolio of value added products and services, including 360° kitchen solutions, concealed pipeline installation, heating systems, security systems, fully furnished housing facilities, LoRa digital intelligent IoT, NFC debit cards, etc. Revenue from our value added business grew from RMB1,988 million in 2019 to RMB2,341 million in 2021 at a CAGR of 8.5%, while the gross profit grew from RMB1,236 million to RMB1,723 million at a CAGR of 18.1%.

While our business is growing, we have maintained an effective control over our capital expenditure management. Our capital expenditures were RMB8.92 billion, RMB6.74 billion and RMB7.66 billion for the years ended December 31, 2019, 2020 and 2021. We were able to cover our capital expenditure by our cash flows generated from operating activities in each of 2019, 2020 and 2021.

Proven track record and experienced management team with strong execution capability

We have been operating in the natural gas industry in China for more than 20 years and have a proven track record in business growth, profitability, customer service, supply stability and safety. We have accumulated extensive experience in, and substantial understanding of, the natural gas industry in China. In addition, we have acquired an extensive and diversified customer base and also developed good working relationships with local governments and established strategic cooperation with three major upstream natural gas suppliers in China, namely PetroChina, Sinopec and CNOOC.

We have a highly experienced senior management team composed of well-regarded experts in their relevant fields. Our senior management team is led by our founder and board chairman, Mr. Wang Yusuo, who has a doctorate degree in business management and over 30 years of experience in energy sector. He was a vice chairman of the 9th executive committee of the All-China Federation of Industry and Commerce. Mr. Zheng Hongtao, being the vice chairman of our board, has more than 20 years of experience in natural gas industry, especially in the fields including international LNG procurement and trading and domestic natural gas sales. Our president, Ms. Wu Xiaojing, has extensive experience in the business operation and market development of energy companies. Mr. Wang Dongzhi, being one of our Executive Directors, is a certified public accountant in the PRC and has accumulated more than 20 years of experience in natural gas industry. Mr. Liu Jianfeng, our CFO, also has more than 20 years of experience in various fields including financial management, asset management, acquisitions and investment. For details regarding the profile of our directors and senior management team, see "*Management*."

We believe our experienced and professional management team has contributed to our success. By virtue of the implementation of their visionary development strategy, we have been able to capture business opportunities and ride the tide of growing clean energy market in China. We also benefit from their prudent management, which has ensured our stable and balanced growth and guarded us against business risk and adverse market conditions.

STRATEGIES

We intend to maintain our position as a leading gas operator in China by focusing on the development of our core business of retail gas sales while growing our integrated energy, wholesale of gas, construction and installation and value added businesses to achieve synergistic development.

We intend to achieve our strategic objectives by:

Develop integrated energy business to expand business scale and improve service quality

We are committed to developing our integrated energy business and become a high-quality integrated energy service provider in the market. Based on our understanding and recognition of customers' needs, we will continue to expand the scale and improve the quality of our integrated energy services to meet the demands of our existing and new customers. We will continue to develop our integrated energy business with a focus on providing comprehensive energy solutions serving customers including low-carbon factories, low-carbon industrial parks, low-carbon buildings and low-carbon transportation, to improve customers' energy utilization efficiency, lower energy consumption costs and optimize the management and operation of their facilities. We will not only extend integrated energy services to our existing gas customers but will also expand our customer coverage through continuously extending the breadth of our products and depth of our services. For example, we plan to expand the scope of our integrated energy services to cover energy and carbon consulting, low-carbon planning, energy utilization services, digital intelligence platform and other services.

We also plan to further enrich the service portfolio of our integrated energy business. We have been actively and strategically exploring the generation of energy from renewable sources. For example, we have been deploying distributed photovoltaics in the country, and we are also exploring the utilization of biomass to produce renewable energy. We will also further develop and upgrade our electricity services. We plan to roll out green power trading agent services and upgrade our electricity sales from a traditional sales model to provide load aggregation and virtual power plants services, and we will also expand the scope of electricity services into power usage optimization, power site management, expert diagnosis and other services. In addition, we will further develop our energy storage business and explore the integrated solution of "load, source, network and storage." We are also exploring the development of carbon services, including carbon emission consulting and certification, carbon asset management and other related business.

Expand and strengthen gas distribution business

We plan to optimize the scale and coverage of our gas supply structure. We will strengthen our strategic cooperation with the three major upstream natural gas suppliers in China, namely PetroChina, Sinopec and CNOOC, to secure a stable supply of natural gas. We also aim to cooperate with various other upstream suppliers to diversify and enhance natural gas supply capacity, and ensure flexible procurement of unconventional gas sources while reducing procurement costs.

We endeavor to innovate our distribution model to better align the upstream supply with downstream demand in order to make full use of resources. We conduct gas demand forecast for each category of our customers and aim to optimize the alignment of resources and distribution channels with customers' demand. We also offer flexible natural gas pricing packages to meet the needs of different customers.

We intend to further scale up our gas distribution business by continuously promoting the use of natural gas to replace high-carbon energy among customers with high emissions and high energy consumption, promoting the "coal-to-gas" transition among our C&I customers and increasing gas penetration rates of residential customers. In addition, we may explore opportunities to acquire city-gas projects from third parties.

Improve the safety and distribution capacity of pipeline network, increase efficiency and reduce costs by leveraging digital intelligence technologies

We have been focusing on improving the safety and operational efficiency of our pipeline network through a variety of methods. For instance, we implement a full lifecycle management of pipeline networks, under which we carry out assessment and intelligent management of pipelines to ensure the safety of operations, effectively control operational risks and strengthen operational capacity of the pipelines.

In addition, we try to innovate our integrated pipeline management model by applying various digital intelligence technologies, including IoT, sensing technology, supervisory control and data acquisition (SCADA) system, and geographic information system (GIS) in the planning, design, construction and operation of pipelines, which enhances the safety and efficiency of our gas distribution and pipeline operation.

Upgrade the business model of our value added business

We intend to upgrade our business model of value added business to create new opportunities and develop an integrated platform to provide "Smarty City and Smart Home" services to customers. We strive to foster and establish a business ecosystem which engage a range of business partners, including (i) energy providers, such as city-gas operators and energy companies, (ii) safety and energy solution providers, (iii) suppliers of green products, such as producers of energy-saving appliances and green building materials and providers of green certification services, and (iv) household service providers, including smart home electrical appliance producers, property management companies and network operators. In collaboration with business partners within the ecosystem, we aim to provide safe, low-carbon, customized and smart lifestyle services and products to our customers. Data from the smart homes will also play a vital role in our further development of smart city services.

HIGHLIGHTS OF OUR OPERATIONS IN THE PRC

	For the year ended/as of December 31,		
	2019	2020	2021
Key operating data			
Number of city-gas projects in China	217	235	252
Urban population coverage (thousand)	103,880	112,331	124,271
New natural gas customers developed during the year:			
– residential households (thousand)	2,397	2,293	2,622
– C&I customers (sites)	27,656	28,367	25,331
– installed designed daily capacity for C&I customers (thousand m^3)	18,156	17,078	21,036
Accumulated number of piped gas customers:			
– residential households (thousand)	20,920	23,213	25,835
– C&I customers (sites)	148,761	177,128	202,459
– installed designed daily capacity for C&I customers (thousand m^3)	124,709	141,787	162,822
Piped gas penetration rate (%)	60.4	62.0	62.4
Retail gas sales volume (million m^3)	19,924	21,953	25,269
Wholesale of natural gas sales volume (million m^3)	7,039	7,616	7,828
Combined daily capacity of natural gas processing stations (thousand m^3)	147,802	155,264	181,464
Total length of existing intermediate and main pipelines (km)	54,344	63,096	72,849
Accumulated number of integrated energy projects in operation	98	119	150
Integrated energy projects under construction	22	24	42
Sales volume of integrated energy (million kWh)	6,847	12,042	19,065

AREAS OF OPERATIONS

We have obtained exclusive rights from local governments to supply piped gas to substantially all of our existing operational locations including, but not limited to, cities and urban areas in Anhui, Guangdong, Guangxi, Hebei, Henan, Hunan, Sichuan, Beijing Municipality, Fujian, Jiangxi, Yunnan, Inner Mongolia, Heilongjiang, Jiangsu, Shanghai, Tianjin, Shaanxi, Shandong, Zhejiang and Liaoning.

The table and the map below shows the locations in which we have exclusive operation rights in the provision of natural gas in the PRC as of December 31, 2021 and their respective contribution percentage of gas sales volume for the year ended December 31, 2021.

	Natural gas sales volume for the year ended December 31, 2021
	% of total
Guangdong	16
Shandong	13
Hebei	12
Zhejiang	11
Fujian	11
Jiangsu	9
Anhui	8
Hunan	7
Henan	7
Other provinces	6
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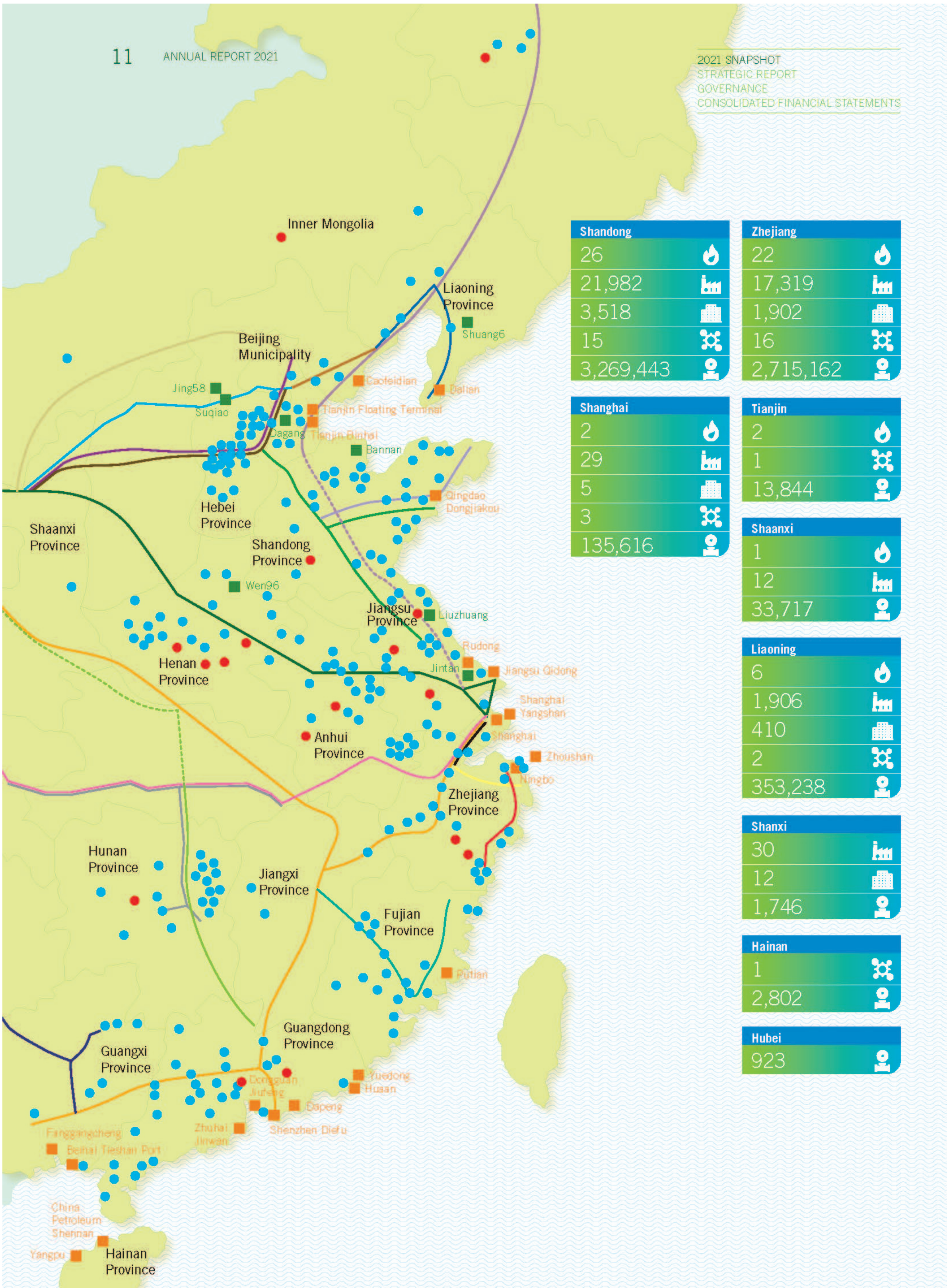
OUR BUSINESS PROFILE

Province	City Gas Projects	Installed Designed Daily Capacity for Connected C/I Customers ('000 m³)	Connected Residential Customers ('000 household)	Integrated Energy Projects	Retail Gas Sales Volume ('000 m³)
Anhui	27	13,415	2,493	18	1,958,844
Hebei	34	22,658	4,146	17	3,034,310
Beijing Municipality	1	560	84		63,316
Guangdong	29	20,527	2,407	21	3,921,076
Henan	21	12,321	2,583	18	1,789,673
Fujian	17	12,942	959	7	2,880,069
Guangxi	7	1,646	490	6	389,342
Jiangxi	5	1,507	38		133,483
Hunan	17	14,134	3,514	13	1,853,195
Sichuan	2	22	1		75,594
Yunnan	3	351	90		89,597
Inner Mongolia	2	468	220	2	169,402
Heilongjiang	3	513	40	1	23,405
Jiangsu	25	20,480	2,923	9	2,361,006

- City Gas Projects
- Installed Designed Daily Capacity for Connected Commercial/Industrial Customers ("C/I Customers") ('000 m³)
- Connected Residential Customers ('000 household)
- Integrated Energy Projects
- Retail Gas Sales Volume ('000 m³)

- ENN Project
- New projects added in 2021
- LNG Terminal
- National Gas Storage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Fujian Province
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Fangchengang
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Shandong
26
21,982
3,518
15
3,269,443
Zhejiang
22
17,319
1,902
16
2,715,162
Shanghai
2
29
5
3
135,616
Tianjin
2
1
13,844
Shaanxi
1
12
33,717
Liaoning
6
1,906
410
2
353,238
Shanxi
30
12
1,746
Hainan
1
2,802
Hubei
923

OUR BUSINESS ACTIVITIES IN THE PRC

Our principal businesses include the sale and distribution of piped gas, and investment in, and the construction, operation and management of, gas pipeline infrastructure, integrated energy projects and vehicle and ship refueling stations, liquefied natural gas and other multi-energy products, wholesale gas business and provision of other services in relation to energy supply in the PRC.

Integrated Energy Business

Our mission is "Building a Modern Energy System, Co-building a Better Ecology." We adhered to the principle of integrated energy development, exploring and utilizing competitive resources based on different local conditions to develop integrated energy projects. In order to meet customers' needs, we leverage our technological know-how on clean energy and transportation resources accumulated over a long time and develop the most efficient tailor-made energy solutions for clients. We reduce the harm to the environment caused by economic development by promoting clean energy and conducting energy saving and emission reduction projects.

In 2021, the number of our operational projects increased to 150, generating a total of 19,065 million kWh of integrated energy sales, including cooling, heating, electricity and steam, representing an increase of 58.3% as compared to that in 2020. We also had 42 integrated energy projects under construction. Our integrated energy solutions not only brought sustainable energy profit to our Group, but also ensured efficient use of energy for our clients. Such consumption of integrated energy in 2021 replaced energy consumption from burning of coal in an amount equivalent to the burning of approximately 2.12 million tons of standard coal which would have emitted approximately 6.67 million tons of carbon dioxide.

We believe our integrated energy business will develop rapidly by focusing on providing comprehensive energy solutions serving customers including low-carbon factories, low-carbon buildings, low-carbon transportation and low-carbon industrial parks, to improve customers' energy utilization efficiency, lower energy consumption costs and optimize the management and operation of their facilities. We will also benefit from the policies and industry reform supporting low-carbon economy, including China's goal to reach carbon peak by 2030 and achieve carbon neutrality by 2060. In addition, we have been actively and strategically deploying distributed photovoltaics and energy storage business and exploring the integrated solution of "load, source, network and storage". The capacity of distributed photovoltaics that we contracted in 2021 reached 380MW.

Retail Gas Sales Business

In 1993, we launched our piped gas business in Langfang, Hebei Province. In 2000, we expanded the business to Miyun (Beijing), Liaocheng (Shandong Province) and Huludao (Liaoning Province). As of December 31, 2021, we had exclusive operating rights in 252 city gas projects, covering a total of 20 provinces, municipalities and autonomous regions in China. We supplied piped gas to 25.8 million residential households and 202,459 sites of C&I customers in China. Natural gas sold to C&I customers, residential customers and gas refueling stations increased by 15.1% from 2020 to 2021 to 25,269 million m^3, increasing revenue by 21.6% to RMB49,247 million. Currently, our piped gas business is our most important source of revenue and profit. We intend to grow organically by increasing the penetration rate and the number of connected customers for our existing operational locations while continuing to develop new projects.

Our gas pipeline infrastructure comprises intermediate pipelines, natural gas processing stations, main pipelines, branch pipelines and other ancillary facilities such as gas storage tanks and pressure-regulating stations. The expansion of our gas pipeline infrastructure, from the identification of a project to the supply of gas to end users, is described as follows:

Identifying and securing new operational locations

Preliminary review and feasibility studies

We select new operational locations after conducting preliminary evaluations and extensive feasibility studies on the target locations and after assessing the project's return on investment to our Group.

Some of the factors we consider include:

- size and concentration of population;
- current gas penetration rate;
- extent and concentration of industrial and commercial activities;
- likely level of construction and installation fees and gas usage charges;
- extent of the local government's commitment to environmental protection, environmental policies in place, and the local population's awareness of environmental issues;
- whether exclusive operational rights and preferential treatment on tax and governmental fees will be obtained;
- types of gas supply (piped gas, CNG or LNG) and methods of delivery, whether by way of intermediate pipeline (if the gas source or long-distance pipeline is located within a short distance), by CNG trucks (if the gas source or long-distance pipeline is located within a middle distance) or by LNG trucks (if the gas source or long-distance pipeline is located within a long distance);
- economic statistics of the relevant locations; and
- in the case of acquisition of existing gas projects, the cost of acquisition, quality of assets and/or business to be acquired, extent of liabilities of the business and whether we are able to resolve problems perceived or encountered in respect of the relevant existing gas projects.

Based on the findings of feasibility studies, which cover the above-mentioned factors, our business development team decides whether to make a recommendation to the management for approval to proceed with discussions and negotiations on the new project.

Securing a new operational location

A detailed gas project proposal would be prepared and submitted to the local government and commence negotiations on major issues such as the granting of exclusive rights or rights of first refusal to supply gas to that location, proposed construction and installation fees and gas usage charges and whether any tax and other concessions or favorable policies would be granted by the local government. Concurrently, we may also commence negotiations with a potential local joint venture partner who is familiar with the local environment. In instances where we take over an existing gas project (whether acquiring assets or a business), we commence negotiations with the owner(s) of the gas project. A state-owned gas project must be acquired through a public tender process.

We attempt to reach an agreement with the local government on the proposed construction and installation fees and gas usage charges, but such fees and charges are subject to final approval of the local state pricing bureau. After the formation of a project company, we negotiate gas purchase agreements with suppliers.

Investment in the construction of gas pipeline infrastructure

Design stage

We appoint a government-approved design institute to carry out the design of the gas pipeline infrastructure for a gas project (which includes the intermediate pipelines, natural gas processing stations, main pipelines and other ancillary facilities such as gas storage tanks and pressure-regulating stations) in accordance with our technical requirements and taking into account the size and needs of the local population, the state and developmental needs of the economy, the utilization of energy resources and environmental conditions. The master design is subject to approval by experts appointed by the local city construction department. The design stage typically takes two to three months. To better allocate our natural gas resources and ensure steady natural gas supply, we typically cluster our piped gas projects around major natural gas pipelines. During the design stage, we also account for building pipelines between certain projects in order to allow us to better control gas supply and working capital.

Construction stage

We generally enter into turnkey contracts with contractors for construction, installation and maintenance of gas pipe. We generally provide progress payments during the course of construction, installation or maintenance work with the remainder to be paid upon completion of a project. In the case of delay or failure on the part of the contractor to complete the project, we are entitled to claims for damages or, in some instances, rescission of the contract. Upon entering such contracts, we will commence the sourcing of raw materials such as pipes, gas regulating equipment and machinery. We have strict quality control procedures for the sourcing of supplies for construction purposes.

Our internal engineers and independent external inspectors monitor the entire construction process to ensure that each stage of construction meets our quality and safety standards and the relevant legal requirements. In particular, we have set up a construction visualization platform, which enables us to better control the progress and quality of construction.

Although gas pipeline infrastructure is designed to cover the entire operational location, our construction program generally focuses on early gas delivery to areas of concentrated customer demand within an operational location so that gas supply can commence as soon as the essential gas pipeline infrastructure and facilities (such as the natural gas processing stations and the intermediate pipelines) are completed. Construction work in an initial target area will gradually be extended to cover the whole operational location.

Connection to gas users

Once we enter into a gas supply contract with a customer, we begin the design and construction of the branch pipelines and customer pipelines. Unless complex designs are involved, the designs of branch pipelines and customer pipelines are normally prepared by us, reviewed by a government-approved design institute, and carried out by external contractors. This process takes about one to three months.

Wholesale Gas Business

We conduct wholesale of gas business by sales of natural gas on a wholesale basis. We believe our wholesale gas business features an asset-light model with manageable business risks, as we are able to allocate gas sources to the demand side through the efficient use of our advanced dispatch system, logistics fleet and upstream resources. We assess the gas demand, credibility of customers and draw up trade contracts to ensure the timely collection of receivables. In 2021, our gas sales volume of the wholesale of gas business reached 7,828 million m^3, representing an increase from 2020 by 2.8%.

We have developed one of the first e-commerce websites in the PRC, "greatgas.cn," featuring online and offline multi-dimensional cooperation with source gas suppliers, which facilitate the communication between suppliers and customers. The "greatgas.cn" website had 2,132 certified users and recorded approximately 6,751 registered users in 32 provinces and cities in the PRC as of December 31, 2021. In

2015, we acquired a 7% equity interest in the Shanghai Petroleum and Natural Gas Exchange, which commenced operation in July 2015 by providing a natural gas trading, settlement and clearing platform and an online service system to realize market-based operation through spot trading of natural gas. In January 2017, the Company also acquired a 7% equity interest in Chongqing Petroleum and Natural Gas Exchange. The Chongqing Petroleum and Natural Gas Exchange aims at building an oil and gas spot trading market leveraging the diversified gas sources and well-developed pipeline network facilities in Sichuan and Chongqing with a focus on piped gas and natural gas chemical products as major products. It is the second national bulk energy commodity trading platform following the Shanghai Petroleum and Natural Gas Exchange, in which the Company currently owns 7% equity interest. We believe we are able to further expand our wholesale gas business by taking advantage of the market opportunity created by establishment of PipeChina and leveraging our cooperation with Shanghai and Chongqing Petroleum and Natural Gas Exchanges and our access to LNG receiving terminals in Zhoushan.

Value Added Business

We adhered to the "customer oriented" business philosophy and have been developing our value added business to focus on customers' needs while exploring new business opportunities. We developed a comprehensive product portfolio which offers safe, low-carbon and smart solutions to meet the diversified and differentiated needs of our customers, including 360° kitchen solutions, concealed gas pipeline installation, heating systems, security systems, fully furnished housing facilities, digital intelligent internet-of-things ("IoT") featuring LoRa technology and NFC-enabled cards for payment of utility bills.

CUSTOMER BASE

Our customers can be classified into three broad categories: (i) residential customers, (ii) C&I customers, and (iii) vehicle customers. We have adopted different marketing strategies for different customer groups. The following table provides a breakdown of our customer base by number of customers and volume of gas sales for the periods indicated:

	As of or for the year ended December 31		
	2019	2020	2021
Customer base			
Number of residential customers (thousand)	20,920	23,213	25,835
Unit of natural gas sold to residential customers (million m^3)	3,802	4,185	4,703
Number of C&I customers (sites)	148,761	177,128	202,459
Unit of natural sales to C&I customers (million m^3)	14,877	16,878	19,900
Total installed designed daily capacity for C&I customers (thousand m^3)	124,709	141,787	162,822
Unit of natural gas sold to vehicles (million m^3)	1,245	890	665
Wholesale of gas volume (million m^3)	7,039	7,616	7,828

Residential Customers

Gas is primarily used by residential owners for cooking and water and space heating. We focus on marketing to property developers, government departments and organizations and state-owned enterprise ("**SOEs**") as these entities enter into master supply contracts with us for the connection of gas to all the units within a residential development (including new or existing, owned by such entities or their employees). These entities are responsible for, or coordinate, the advance payment of construction and installation fees to us, while gas usage charges are paid by the individual users. Due to PRC government policies promoting energy conservation and emission reductions and increased urbanization in China, these policies have presented us with enormous opportunities for developing urban residential market. We also continued to work with local governments on implementing their development initiatives to assist the local governments in achieving the replacement of scattered coals for the prevention and control of air pollution.

During the years ended December 31, 2019, 2020 and 2021, we completed piped natural gas connections to approximately 2.4 million, 2.3 million and 2.6 million residential households, respectively. The average construction and installation fee in 2021 was RMB2,536 per household, maintaining at a stable level over the past few years. As of December 31, 2021, we had connected piped gas to a total of 25.8 million residential customers in China cumulatively, raising the average piped gas penetration rate to 62.4%, compared with 62.0% as of December 31, 2020.

As of December 31, 2021, we cumulatively developed 25.8 million natural gas space heating users and most projects had established residential tier-pricing mechanism. Benefiting from the increased gas consumption by newly developed residential customers and natural gas space heating users, the volume of natural gas sold to residential users increased by 12.4% to 4,703 million m^3, accounting for 18.6% of retail gas sales volume in 2021.

Commercial and Industrial Customers

Commercial customers use natural gas primarily for air conditioning, water and space heating and cooking purposes. These customers include, among others, owners of hotels, restaurants, office buildings, shopping malls, hospitals, educational establishments, sports and leisure facilities and exhibition halls. Natural gas has a wide variety of applications for industrial customers, such as fueling industrial boilers, furnaces, ovens, incinerators, foundries and steamers as well as water and space heating in staff canteens and dormitories within the industrial customers' premises. We enter into supply contracts with these customers for the connection of gas to their premises, and both construction and installation fees (payable in advance by instalments based on the percentage of completion of the pipeline construction work) and gas usage charges (payable monthly in arrears) are borne by such customers.

Although the existing number of C&I customers is less than the number of residential customers, these customers are more important to us as they are much higher volume gas users than residential customers and their demand for natural gas tends to be less seasonal. As most of our projects are located in key areas of air pollution prevention and control where local governments strictly implement environmental protection policies, we will continue to take advantage of the opportunities arising from air pollution prevent and control to tap the potential of the C&I market and actively promote the replacement of coal-fired boilers for C&I users. In addition, we will also leverage on the benefits from us owning multiple industrial park concessions and opportunities arising from the relocation of industrial facilities to industrial parks.

During the years ended December 31, 2019, 2020 and 2021, the accumulated installed designed daily capacity for C&I customers were 124.7 million m^3, 141.8 million m^3 and 162.8 million m^3, respectively.

SALES

For the years ended December 31, 2019, 2020 and 2021, retail gas sales accounted for 57.1%, 56.6% and 52.9% of our total revenue, respectively; and construction and installation accounted for 9.9%, 9.0% and 8.7% of our total revenue, respectively. For the same periods, value added business accounted for 2.8%, 2.4% and 2.5% of our total revenue, respectively; wholesale of gas accounted for 26.3%, 25.0% and 27.5% of our total revenue, respectively; and integrated energy business accounted for 3.9%, 7.0% and 8.4% of our total revenue, respectively.

The following table sets forth for the periods indicated, the performance highlights as well as the contribution to our revenue, from our principal business activities:

	Year ended December 31,					
	2019		2020		2021	
	RMB million	*% of total*	*RMB million*	*% of total*	*RMB million*	*% of total*
Revenue						
Retail gas sales business	40,049	57.1	40,510	56.6	49,247	52.9
Integrated energy business	2,749	3.9	5,042	7.0	7,805	8.4
Wholesale of gas	18,465	26.3	17,936	25.0	25,634	27.5
Value added business	1,988	2.8	1,685	2.4	2,341	2.5
Construction and installation	6,932	9.9	6,444	9.0	8,086	8.7
	70,183	100.0	71,617	100.0	93,113	100.0

Retail Gas Sales Business

Retail gas sales business constituted our most significant source of revenue for the years ended December 31, 2019, 2020 and 2021. During 2021, we sold 4,703 million m^3 of natural gas to residential households and 19,900 million m^3 to C&I customers. For the years ended December 31, 2019, 2020 and 2021, the revenue derived from sales to C&I customers made up 56.6%, 52.5% and 60.1%, respectively of the total revenue of gas sales. Gas usage charges are based on actual usage on a per m^3 basis. The gas usage charges per m^3 vary between operational locations, and the payment mechanism between different categories of customers is different.

Residential customers of our project companies typically purchase gas units with details of the prepaid gas units stored electronically in a stored value card. The stored value card is inserted into a stored value card gas meter installed at the users' premises to activate the gas supply. Units of gas used are deducted from the stored value card. When the level of prepaid gas units drops to a certain level (currently pre-set at 2 m^3), the gas meter will produce a sound signal to remind the customer to replenish the value stored in the stored value card. The stored value prepaid card system minimizes payment default risks with respect to gas sales to residential customers and save huge administrative expenses, thus enhancing our cash flow. For commercial and industrial customers, smart gas meters are installed at the users' premises and meter readings are automatically transferred to our smart operation platform every day. Weekly, bi-weekly or monthly bills based on the prior period's actual usage are then sent to customers. In general, settlements are received by us about one week from the date of billing. In the event a customer defaults in the payment of gas usage charges, the customer's gas supply will generally be suspended within one month of billing. In respect of commercial and industrial users with large gas usage volume, we may offer discounts on the approved charges, the extent of which will be subject to negotiation and agreement.

Construction and Installation Fees

The level of construction and installation fees varies among operational locations and are approved by the relevant local state pricing bureau. An individual residential customer is required to pay the construction and installation fee in full prior to commencement of connection work. Construction and installation fees are generally paid by the real estate developers constructing a new residential development. In respect of new residential developments, construction and installation fees are collected in advance by instalments based on the percentage-of-completion of the pipeline construction work. We generally provide property developers with a credit period of 60 to 90 days after construction is completed irrespective of whether the units are sold or occupied. However, the actual supply of gas will only commence after all construction and installation fees are settled. In the event supply contracts are entered into for the connection of gas to a large number of households within a residential development (e.g. staff quarters of SOEs or governmental organizations), we may offer discounts of the approved fee payable, the extent of which will be subject to negotiation and agreement of the contract parties. Our customers are usually required to provide 30% of the construction and installation fees as deposits upon signing of the supply contracts, 40% to 50% of the construction and installation fees during the construction periods and the remaining 20% to 30% upon completion.

During the years ended December 31, 2019, 2020 and 2021, we completed piped natural gas connections to 2.4 million, 2.3 million and 2.6 million residential households, respectively. During 2021, the average construction and installation fee charged by us was RMB2,536 per household.

For C&I customers, the construction and installation fee is determined based on the designed capacity of the gas appliance facilities (on a per m^3 per day basis) installed at the customers' premises. If any additional appliance is installed subsequently, additional construction and installation fees will be charged to reflect the additional capacity installed. Discounts of the approved fee payable may be offered to high gas usage volume of C&I customers, subject to negotiation and agreement of the contract parties. Construction and installation fees are collected in advance by instalments based on the percentage-of-completion of the pipeline construction work. In general, a C&I customer is required to provide 30% of the construction and installation fee as deposit upon signing of supply contract, 40% to 50% of the construction and installation fee during the construction period and the remaining 20% to 30% upon completion. In the event of customers default in the payment of construction and installation fees, we will not start the supply of gas to these customers until the construction and installation fees are fully paid. The deposits received from customers upon the signing of supply contracts would normally cover our costs.

During the years ended December 31, 2019, 2020 and 2021, we completed piped natural gas connections to 27,656, 28,367 and 25,331 C&I customers, respectively. During 2021, the average construction and installation fee charged by us to C&I customers was RMB108 per m^3.

Wholesale of Gas Business

We derived a portion of our revenue from the wholesale of gas. In 2021, our gas sales volume of the wholesale of gas business reached 7,828 million m^3, representing an increase from 2020 by 2.8%.

Integrated Energy Business

In addition to the distribution of natural gas to residential, C&I and vehicle customers, we also distribute other energy in the forms of steam, heating, cooling, electricity, etc. through our integrated energy projects.

With continued economic growth in China, there has been significant pressure on China's energy resources. Moreover, high energy consumption, pollution and greenhouse gas emissions have imposed a serious threat to China's environment and society, thus, the government aims at reducing energy intensity per unit of GDP growth. In response to this development, we have begun providing integrated energy solutions to our customers, which utilize the most competitive and cleanest local energy resources to achieve cascade use of energy and increase overall energy utilization to 80% or higher. Integrated energy projects possess better peak shaving ability, more efficient, cleaner and safer compared to conventional centralized energy supply, and it reduces customers' overall energy bills, thus, welcomed by customers as well as local governments.

Currently, we are actively developing integrated energy business in key regions. We have initiated various municipal, industrial and commercial integrated energy projects, which are energy systems tailored to customers' demands. As of December 31, 2021, we had 150 integrated energy projects in operation, serving customers including airport, railway stations, industrial parks and municipal areas. Revenue from our integrated energy business reached RMB7,805 million, representing a 54.8% increase in integrated energy sales.

All of these projects greatly enhance the utilization efficiency of energy resources and lower energy consumption costs for customers through the transformation, recycle use, cascading use, in-depth processing and diversified supply of energy resources. We intend to grow our integrated energy business to generate a new recurring revenue stream and boost our gas sales volume, as well as to help increase energy efficiency and reduce greenhouse gas emissions.

Value Added Business

During 2021, revenue from value added business amounted to RMB2,341 million, up 38.9% year-on-year. Benefiting from our diversified value added services provided to customers and continuous efforts to promote high-end and smart products, gross profit increased significantly by 31.3% year-on-year to RMB1,723 million. Gas appliances and various household products under our own brand, "GRATLE" (formerly known as "GREAT"), achieved higher sales to 556,876 units during the year, representing a year-on-year growth of 19.1%. Currently, penetration rate of value added business among the Group's overall customers is only 9%, while among the newly developed customers during the year, penetration rate was 21%, reflecting the rapid development of this business and its huge growth potential. We intend to further increase the penetration rate of the value added business amongst existing customer base to enhance customers' loyalty and drive the Group's profit growth.

PRICING

Currently in China, gas pipeline construction and installation fees and gas usage fees are subject to the approval of the local pricing bureau. Gas pipeline construction and installation fees may be determined after an analysis of factors, such as estimated capital expenditure, number of users, growth in penetration rates, income levels and affordability of the local end-users.

Gas usage fees for residential end-users and any adjustment to such fees may only be approved by local pricing bureaus following a hearing, except for the projects where the end-user price is automatically linked to upstream costs. In cities with established price linkage mechanisms, retail prices to downstream residential users of natural gas will be adjusted in line with adjustments in prices for upstream purchases of natural gas supply.

Indicative prices for C&I customers, and CNG/LNG vehicle refueling station customers are set by the local governments. We will confirm the final price with customers based on the indicative price set by the local government. The PRC government has been gradually liberalizing the prices for gas supply. On November 18, 2015, the NDRC issued the Notice on Reducing Non-Residential Natural Gas City-Gate Prices and Further Promoting the Reform toward Market-Oriented Prices, pursuant to which (i) the maximum city-gate price for non-residential users was reduced by RMB0.7 per m^3, effective on November 20, 2015; and (ii) suppliers and buyers can negotiate prices subject to a cap of 20% premium to relevant city-gate price and without price floor. The NDRC set city-gate prices as a benchmark instead of ceiling price and permit to adjust it upward from November 20, 2016. On June 20, 2017, the NDRC published the Guidelines which articulated the principle of "permitted costs plus reasonable returns" with a 7% cap on the return ratio for natural gas distributors in determining the natural gas distribution tariff. On March 13, 2020, the NDRC published the Central Pricing Catalogue, which removes the natural gas city-gate prices from the scope of national pricing while maintains the pipeline transportation tariff of the piped natural gas. See "*Risk Factors – Risks Relating to Our Business – We are subject to price controls in certain markets and may not be able to pass through increased costs to end-customers.*"

SALES AND MARKETING

Our head office is responsible for structuring our overall sales and marketing strategies. The individual sales and marketing team of each project company works closely together with the head office to formulate an appropriate plan with reference to a specific operational location's situation and needs. The sales and marketing team is responsible for company imaging and brand building as well as promoting the use of natural gas as an indispensable green, low-carbon and sustainable way of life.

For new projects, after a project company is established, we implement a series of promotional campaigns (which may include joint promotional campaigns with the local government) to increase public awareness of piped gas in the operational location. We also commence active marketing negotiations on the terms of supply contracts with target customers (both residential and C&I customers) with the aim of entering into supply contracts with them as soon as possible. For example, we market our businesses to owners' committees of existing buildings that do not have piped gas supply. Representatives of the owners' committees may consult individual households as to whether they wish to have piped gas supply and coordinate the collection of construction and installation fees from the users on our behalf. Construction and installation fees are payable in advance by both residential and C&I customers. In contrast, gas usage charges are paid in advance by residential customers and some of our C&I customers.

Our customers' energy demand is gradually shifting from single source of energy to an integrated solution with diversified energy sources. As a result, we try to expand our services to our existing customers by providing the refitting services to C&I customers to enhance their energy utilization efficiency and reduce their energy consumption costs.

Taking the advantage of innovative information technology, we have employed a wide array of advanced technological tools to enhance our business and improve our management. For example, we employed information systems to analyze regional customer needs and preferences, which enables us to implement more effective targeted marketing initiatives and develop new business opportunities. With the implementation of the market insight and sales operation system for over two years, we have successfully maintained our customer-oriented approach in response to changes in customer needs, thereby greatly enhancing our sales.

PURCHASES

Our main categories of purchase are gas, pipes, machinery, equipment and gas appliances. None of our directors, their respective associates or, to the best knowledge of our directors, any of our shareholders who own more than 5% of the issued share capital of our Company, has any interest in any of our five largest suppliers.

We have established firm business relationships with our major suppliers for long periods. We also benefit from long-term gas supply contracts between the local government of each operational location and one or more upstream gas suppliers who guarantee to the local government an adequate supply of gas to the operational location for 15 to 30 years. In addition, we have entered into and intend to continue to enter into take-or-pay or other long-term gas supply contracts with upstream gas suppliers or their distributors for some of our operational locations to secure long-term gas supply for such operational locations. In addition, we continue to step up our efforts to maintain and strengthen cooperation with our long-term suppliers in a wide range of areas. For instance, we have entered into a strategic cooperation framework agreement with Sinopec Marketing Co., Ltd., a subsidiary of China Petroleum & Chemical Corporation, in various aspects, including the procurement and transportation of natural gas. We believe our scale has given us bargaining power in securing more favorable terms relative to most other piped gas companies. We believe we have good relationships with our suppliers and we have not experienced any difficulty in the sourcing of natural gas or other major supplies.

Gas

To achieve the goal of promoting the use of clean energy in China, the Chinese government has been expanding its investment in natural gas infrastructure in recent years by constructing onshore and offshore infrastructure, connecting pipelines within and outside China. In August 2018, Zhoushan LNG receiving terminal was put into operation in Zhejiang, China and it processed 3.51 million tons of LNG for the year ended December 31, 2021. In addition, we have contracted with some LNG processing plants in China with a combined daily capacity of over 1 million m^3. Furthermore, China continues to expand its gas supply infrastructure, and more pipelines and LNG terminals are being constructed and will be put into operation in the near future. Therefore, we believe that our gas projects will be able to enjoy stable supplies of natural gas.

Leveraging on the natural gas infrastructure in China, we have established a multi-dimensional network of securing natural gas supply from a diversified sources in a cost-efficient manner, which includes entering into take-or-pay contracts, other long-term supply contracts, or guaranteed gas supply contracts with the major upstream pipeline gas suppliers in China, purchasing CNG and LNG at the prevailing market price, mobilizing and expanding our non-pipeline transmission capacity, and utilizing third-party or our own LNG processing plant resources.

We have entered into agreements to purchase natural gas from three major upstream natural gas suppliers in China, namely PetroChina, Sinopec and CNOOC, or their distributors. These take-or-pay or other long-term supply contracts usually whose volume can be renewed. Additionally, in 2016, we entered into long-term LNG sale and purchase agreements, which last for 5 to 10 years, with Chevron U.S.A INC., Origin Energy LNG Portfolio Pty Ltd. and Total Gas & Power Asia Private Limited, pursuant to which we are obliged to import up to 1.44 million tons of LNG per year starting from the second half of 2018 progressively.

The gas procurement cost of our city-gas projects is agreed between us and the suppliers with an upward adjustment range not exceeding 20% of the applicable city-gate price set by the NDRC. No price floor is applicable for any downward adjustment from the applicable city-gate price. See "*Business – Pricing*" for details.

The quantity of natural gas to be supplied to us by our upstream suppliers is usually stated in our gas purchase agreements. Except for certain projects located in areas surrounding the long-distance pipelines such as the West-East Pipeline Project in connection with which we have entered into long-term take-or-pay gas purchase contracts with upstream suppliers, we are only required to pay the actual quantity purchased. We believe that the stated quantities of natural gas as set out in the relevant existing gas purchase agreements are sufficient for the potential demand of gas by the respective project companies.

Payments for the piped gas supplied to us are made on a weekly basis, the calculation of which includes elements of both payment in arrears based on actual use and payment in advance based on estimated usage. We believe that such arrangement is beneficial to us because it enables the relevant projects to secure long-term guaranteed gas supply at a predictable price level (since the contracts are subject to caps on annual price increases), which is of strategic importance in the long run as we believe that demand for natural gas in China will continue to increase.

Any delivery of gas is recorded by a meter installed at the point where our intermediate pipelines are connected with the suppliers' long-distance pipelines. We pay for gas through bank drafts or remittance denominated in Renminbi in accordance with the gas supply agreements. For the years ended December 31, 2019, 2020 and 2021, the cost of gas purchases accounted for 85.5%, 82.9% and 82.6% of our cost of sales, respectively.

We purchase CNG and LNG, as appropriate, at the prevailing market price to supplement our natural gas supply. Our supply agreements are generally entered into by individual project companies with our upstream natural gas suppliers. The pricing terms under these agreements may vary depending on the supplier and the locality of our operations. Under certain agreements, we have to pay a higher price if our natural gas needs exceed the amount contracted for. Other agreements provide for two purchase prices, namely a basic gas price and an industrial gas price. We specify what percentage of our gas will be supplied for industrial use and pay upstream suppliers accordingly. Our natural gas sales/purchase contracts generally state that the stipulated selling/purchase price of natural gas is subject to adjustment according to any new PRC government pricing policies.

Pipes, Machinery and Equipment

We purchase pipes of various diameters and wall thickness for installation in different segments of the gas pipeline infrastructure (the specifications of which must comply with PRC standards and regulations). We purchase all of our pipes, machinery and equipment domestically and settle our payments in Renminbi with credit terms ranging from 30 to 90 days.

Gas Appliances

In addition to gas connection services, we sell certain gas appliances, including cooking stoves, water boilers, heaters and other gas appliances to our customers. We usually purchase such gas appliances in bulk directly from manufacturers in China and hold a limited amount of stock for resale. We have also developed and launched our own brand, "GRATLE" (formerly known as "GREAT"), for certain gas appliances. We will provide repair and maintenance services for such appliances. These gas appliance facilities typically have a warranty period of three years.

STORAGE AND TRANSPORTATION NETWORK AND CAPACITY

Our project companies are equipped with energy storage systems and complete energy distribution networks. We also provide such companies with capacity in pipelined and non-pipelined gas storage and transportation.

We have built an integrated energy storage and transportation network, including roads, waterways, railways, pipelines and reserves, which facilitates the distribution within China as well as the importing of natural gas. We are able to dispatch a fleet of LNG/CNG trucks, which substantially facilitates the allocation of gas sources for city-gas projects, vehicle refueling stations and wholesale business.

As of December 31, 2021, we had 209 natural gas processing stations with a combined daily supply capacity of more than 181 million m^3, which guarantees our gas supply. We generally own the land use right and facilities of our storage centers. We may sell the LNG in storage to any purchaser, including our competitors.

SAFETY AND QUALITY CONTROL

Safety

We place great emphasis on safety and continue to maintain a good record of safe operation. We have established a dedicated safety department to oversee safety issues for the project companies and adopted a comprehensive safety administration system targeting to rectify and control all the hidden dangers. We utilize IoT and digital intelligence technologies to improve our safety management of the process of gas production and operation. We are committed to building an excellent safety management system, reducing and containing risks, encouraging organizations to perform daily monitoring and report any potential dangers through digital and visual management platforms, and formulating comprehensive safety guidelines and measures to ensure that our safety performance meets the highest standard. We have established our health, safety and environmental management system and launched the "3-Zero" Campaign (zero accident, zero personal injury and zero harmful act to the environment) to further strengthen the implementation of such system. We carry out, through our project companies, routine inspection of the branch pipelines, customer pipelines, gas meters and gas appliances at customers' premises more than once a year. These inspections are free unless major repairs are required, in which case we charge the customers for labor, replacement parts and other materials used for the repairs.

We believe in educating users about safety procedures. Accordingly, before gas is actually supplied, we give a thorough explanation of safety procedures to users, and arrange regular seminars or distribute brochures and booklets on safety for end users. We also have in operation the "95158" national 24-hour hotline for enquiries and reporting of emergency matters. In order to ensure the safety of gas usage for residential users, we conduct door-to-door safety inspections for our end users once or twice a year. We also promoted the "Smart Safety Inspection System V2.0" in response to the social distancing measures implemented due to COVID-19, which provided our end users with online safety self-inspection and self-test programs to guide them to report the status of indoor gas levels in accordance with the safety inspection procedures shown on the system. Our customer service staff would follow up on the self-inspection results uploaded by users and contacted users to address safety issues as needed.

We have also prescribed and implemented the Operational Safety and Management Supervision Manual for the detection and prevention of the occurrence of accidents in facilities such as the long-distance natural gas transmission pipelines, natural gas processing stations, natural gas compression facilities, and CNG/LNG vehicle refueling stations and during the natural gas pipeline or CNG/LNG vehicle refueling station operating process. The Operational Safety and Management Supervision Manual was drafted in accordance with the People's Republic of China Industry Standards-Urban City Gas Facilities Operations, Maintenance and Emergency Repair and Maintenance Safety Technology Guidelines and our internal Xinao Gas Maintenance and Emergency Repair Coordination Plan.

For us to effectively monitor the operations of the pipelines, in particular, gas usage, gas leakages, or any other irregularities, we collect information about the temperature, pressure and volume of gas from key points along the main pipelines. The information is analyzed in the control center located in the head office of each operational location. We use a computerized system known as the Supervisory Control and Data Acquisition system in several operational locations whereby a number of small detectors are installed along the main pipelines to collect such information and relay it back to the control center electronically. In other locations, information collection is currently carried out manually by the operational location's own personnel. Each project company conducts a major inspection of its pipelines, natural gas processing station(s) and other equipment more than once a year. Should gas leakages or any other irregularities be detected, we will take remedial action immediately. We continue to upgrade the information technology systems of our project companies to enhance our safety monitoring and management efficiency. We also focus on providing safety training to our staff.

In response to the ongoing COVID-19 pandemic, our headquarters and each of our member companies has formed an epidemic prevention and control team, coordinating epidemic prevention and control in accordance with national and local government requirements. We have implemented various policies to keep our employees safe and healthy, including regular disinfection at office areas, canteens, apartments and official vehicles; daily monitoring of the physical health of our employees; utilizing iCome platform for daily epidemic report mechanism to analyze the health statuses of employees, tracking health statuses of employees on quarantine and preparing contingency plans in advance to ensure the orderly implementation of epidemic prevention. As a leading enterprise in the public utilities sector, we are determined to ensure the safety of people's livelihood and gas usage during the COVID-19 pandemic, strengthen the promotion of epidemic prevention knowledge both internally and externally, and ensure all departments are working closely together to protect frontline employees, providing masks, protective suits, goggles and other supplies, ensuring employees to provide services to customers safely.

Quality Control

Quality control begins in the design and construction phase of the gas supply infrastructure. Our quality control team regularly makes inspection visits and conducts tests to ensure that construction work meets our required standards.

We also have strict quality control procedures for the sourcing of raw materials. Accordingly, we only purchase from our internally approved list of qualified suppliers, where such suppliers are required to have satisfied the relevant national standards.

To effectively monitor the quality of gas that we purchase, we regularly obtain gas composition reports from our gas suppliers. Such reports include details on the heat content and composition of impurities.

CUSTOMER SERVICE

We believe that high quality of customer service is the key to maintaining good and long-term relations with our customers, and is the bedrock for our sustainable business development.

In addition to the consistent use of our information program to provide rapid and efficient services to our customers, all of customers are covered by our call centers, which are responsible for handling enquiries and requests. Our national call center is composed of three regional call centers and ten directly managed call centers, located in Langfang, Qingdao, Luoyang, Yancheng, Dongguan, Quanzhou, Huzhou, Shijiazhuang, Yantai, Changzhou, Ningbo, Baoding and Changsha. We also provide online services and applications for our newly established projects.

Customers may also reach us via our customer service mobile applications or call centers to seek advice on addressing minor technical failures or report emergencies. An automatic pass-through mechanism with the hotline 110 was also established to provide one-stop services. Our call centers also acquired the International Customer Operations Performance Centre (COPC) recognition in 2012, making it the first call center operator in the energy sector in China to receive COPC recognition.

To provide greater convenience to our customers, some of our project companies have been cooperating with local banks, convenience stores and supermarkets in the collection of gas usage charges through their branch and outlet networks. We also rolled out an online self-service meter reading feature that saves customers' time and efforts by making everything online. Customers are allowed to self-read their gas meters and submit the readings online and without having to visit our offline point-of-sales, they can make gas purchases online and view their usage through the e-account. With our promotion of this feature especially after the outbreak of COVID-19, online gas purchases reached 81% of our total retail gas sales volume in 2021, which not only significantly improved the convenience of our customers but also increased our operating efficiencies and reduced our costs.

All of our group companies are required to visit customers for safety checks on their gas appliances more than once a year. These measures help to relieve customers' worries regarding potential safety problems, and thus increase their confidence in our services. In addition to regularly monitoring the quality of such services through our public service monitoring network and service and complaint hotlines, we periodically carry out customer surveys with gas users to seek customer feedback on the quality of our installation work and after-sales services.

RESEARCH AND DEVELOPMENT

Our in-house research and development team comprises members specializing in the fields of energy, mechanical and electronic engineering. Areas under research and development include:

- information technology systems to increase construction safety;
- equipment that automatically and instantly detects natural gas leakage;
- bunkering, vessel engine conversion and bunkering terminal construction;
- technologies in respect of low-carbon transformation and hydrogen applications; and
- optimization of distributed energy system and methods to increase energy utilization efficiency.

Furthermore, to closely track gas-related developments overseas, representatives from the research and development department regularly attend international gas conferences and have exchange programs with overseas gas companies.

INTELLECTUAL PROPERTY

We place significant emphasis on developing our brand image and rely on trademark registrations to protect all aspects of our brand image. As of the date of this Offering Memorandum, the Group had been granted by Xinao Group Co., Ltd. with the right to use 55 trademarks, which are registered in the PRC. Pursuant to the trademark licensing agreement entered into between us and Xinao Group Co., Ltd. on October 1, 2021, we are entitled to use the trademark “” on permitted products in permitted regions until September 30, 2024, as set out in the trademark licensing agreement. We also have registered a number of trademarks in Hong Kong and the PRC. We also developed and launched brand of “GRATLE” (formerly known as “GREAT”) for our gas appliances and we will continue to adopt appropriate measures and strategies to protect such valued intangible assets.

ENVIRONMENTAL MATTERS

We operate a natural gas pipeline distribution network and the principal business includes the sale of piped gas. Our major infrastructure facilities that are at risk for accidents such as gas explosions and natural gas leakage include our natural gas pipelines, CNG/LNG vehicle refueling stations and natural gas storage tanks. Natural gas pipelines are used to transmit natural gas to residential and C&I customers as well as to CNG/LNG vehicle refueling stations. CNG/LNG vehicle refueling stations are where natural gas is compressed/liquefied and refueled. Natural gas storage tanks store natural gas as a reserve to meet peak demand.

Serious damage to such facilities may harm the environment. Accordingly, we have set up a number of procedures and policies designed to prevent and manage any potential damage to the fullest extent possible. For example, we have a methane emission management system to address greenhouse gas emissions caused by methane leakage. We also introduced the use of laser monitoring system to detect methane leakage at certain of our city-gate station, upgrading the leakage detection system from passive monitoring to an online real-time monitoring, which greatly improves the level of safety and pipeline inspection efficiency. Since 2014, we have deployed technical strategies for gas reduction, emission reduction and boil-off gas recovery at filling stations. In addition, we are required to comply with a number of environmental rules and regulations. We have actively introduced the environmental management system ISO14001 in our Group’s operation to improve our environmental management. As of the end of 2021, 40 member companies have obtained the ISO14001 environmental management system certification.

To ensure that our emergency prevention and repair efforts to operate smoothly, we carry out at least one comprehensive emergency drill half a year.

In addition to our internally commissioned control, hazard prevention and emergency recovery procedures, we strive to comply with the relevant environmental protection regulations and have all licenses required to operate.

PROPERTY

We both own and lease properties for our operations. When we state that we own certain properties in China, we own the relevant long-term land use rights. In China, with very few exceptions, industrial land is owned by the state.

We hold the land use rights to the underlying parcel of land for our facilities located in our operational locations in the PRC. We occupy our owned properties for purposes of, among other uses, production, storage, and office use.

As of the date of this Offering Memorandum, we had not obtained the proper building ownership certificates for certain properties located in our operational locations in the PRC. See "*Risk Factors – Risks Relating to Our Business – We are in the process of applying land use right certificates and/or building ownership certificates for certain of our properties in China.*"

We currently lease 823 major properties in our operational locations in the PRC for office and other uses.

INSURANCE

We have obtained insurance for certain fixed assets (excluding the pipelines owned by us) that we consider to be subject to significant operating risks, and we have obtained specific insurance for underground pipelines with a net book value of approximately RMB11.8 billion located in seismic areas such as Langfang, Shijiazhuang, Huludao and Quanzhou. We have also obtained insurance for other fixed assets.

We have also taken out third party liability insurance policies covering (i) the loss of life or property of third parties arising out of any accident that may occur in our business operations (with maximum coverage being RMB50.0 million), and (ii) the injury or loss of life of staff arising out of the business operations (with maximum coverage being RMB500,000 per claim and capped at RMB50,000,000). This practice is consistent with what we believe to be the industry practice in China. Accordingly, there may be circumstances in which we will not be covered or compensated for certain losses, damages and liabilities, which may in turn adversely affect our financial position and results of operations.

EMPLOYEES

As of December 31, 2021, we had 35,676 employees, substantially all of which were based in China. In recent years, our workforce has been steadily expanded to support the Group's new projects and business development. In line with our "people-oriented" principle, we continue our efforts in talent development by establishing a talent structure covering different levels and enhancing the competency of our people.

We provide a wide range of professional training and development programs to our employees and remunerate our employees at the market level with benefits such as bonus, retirement benefit, share option scheme and share award scheme. On the other hand, we continue to nurture future leaders and strive to enhance their abilities and skills rapidly through special programs, on-the-job training and mentorship and project-based training to build the talent pool for the Group's healthy development. We also engage outside professionals and consultants to organize seminars and training courses to equip our employees with new knowledge in the industry. We also sponsor our employees to attend external training programs organized by local and overseas institutions to acquire advanced knowledge and skills.

We consider our relations with our employees to be good and we have not experienced any strikes or disruptions due to labor disputes.

COMPETITION

Due to the nature of the piped gas supply business, where substantial capital investment and extensive physical installation of gas pipeline infrastructure are required, it is not economically or practically feasible for multiple distribution companies to operate in one location. Therefore, the local government will normally grant exclusive rights to a selected distributor to operate in a location and may grant rights of first refusal to extend the franchise period. Once we have identified a potential operational location, we will negotiate with the local government to obtain an exclusive right to supply gas to that operational location, which might cover the whole or the most densely populated areas of such operational location. While attempting to secure such exclusive rights or rights of first refusal, we may face competition from other distribution companies, which include stated-owned companies, privately-owned companies and foreign-invested enterprises. Once we have successfully obtained an exclusive right, we face little or no competition from other piped gas distribution companies in that locality during the concession period for 15 to 30 years. Due to our extensive experience and sound track record of safe and reliable piped gas supply to end-users, we believe that we are well-positioned to obtain exclusive rights to supply gas to new operational locations and rights of first refusal to extend our franchise period. As at December 31, 2021, our project companies have obtained exclusive rights or rights of first refusal to supply gas to substantially all of their respective 252 operational locations.

After we secure an operational location, we face competition from existing providers of other fuel substitutes such as bottled LPG, coal and, to a lesser extent, electricity, as electricity for heating purpose is more expensive than gas and less popular for cooking purpose. We believe that with the PRC government's planned phasing out of the use of coal as a result of its environmental policies, and the comparative advantages of natural gas over coal and LPG as a safer, cleaner and more convenient form of fuel, competition from other fuel substitutes does not represent a serious threat to our business. From a cost perspective and on an energy adjusted per unit basis, natural gas is more economical than bottled LPG and electricity.

We expect to face intense competition in both our CNG and LNG vehicle refueling station businesses. Unlike the piped natural gas business, the local government in China typically does not grant exclusive rights or rights of first refusal to a selected company to operate in a location. Moreover, our current and potential competitors include companies that are part of much larger companies, including state-owned enterprises. These companies may have greater resources than we do, including longer operating history, larger customer base, stronger customer relationships, greater brand or name recognition and greater financial, technical, marketing, relationship and other resources. The growth of our CNG and LNG vehicle refueling station business also depends on the increased adoption of natural gas by vehicle owners. As such, we also face competition from distributors of other alternative fuels and technologies used in hybrid or electric vehicles. We believe our effective management of vehicle gas refueling stations and safety management help us remain competitive in the vehicle refueling station business and have resulted in significant loyalty to our gas operations across our operational locations.

We also expect to face intense competition in our integrated energy and value added businesses. Our current and potential competitors include companies that are part of much larger companies, including SOEs, affiliates of PRC national oil and gas companies and domestic and regional gas distributors. For example, in our integrated energy businesses, we also face competition from other big energy companies and power generation firms who engage in the production and sale of fuels, the wholesale distribution of finished oil and heavy oil products and the operation of retail gas stations. These energy companies may have greater resources than we do, including a longer operating history, a larger customer base, stronger government and customer relationships and greater financial, technical, marketing, relationship and other resources. These competitors may also have greater economies of scale, operating efficiencies and significant government support. Such competition could result in loss of market share and affect the growth of the business. If we are unable to remain competitive, we may not be able to acquire sufficient new and quality integrated energy projects for our transformation into an integrated energy service provider.

LEGAL PROCEEDINGS

Neither we nor any of our subsidiaries are involved in any litigation which would have a material adverse effect on our business or financial position and no material litigation or claim is known by us to be pending or threatening against us or any of our subsidiaries.

GOVERNMENT REGULATIONS

We operate in an industry that is generally regulated by a number of different PRC state ministries and departments, including without limitation, the NDRC, the National Energy Administration, or the NEA, the *Ministry of Housing and Urban-Rural Development* (formerly known as the *Ministry of Construction*), or the MOHURD, the General Administration of Quality Supervision, Inspection and Quarantine, or the GAQSIQ, and is subject to laws and regulations which govern different aspects of our operations in China, including without limitation, pricing of natural gas, operations of urban gas, project approvals and safety. In addition to industry-specific requirements, our operations are subject to general regulations in China, including regulations on foreign exchange, labor protection and taxation.

Natural Gas Industry Policies

On October 14, 2012, the NDRC promulgated Policies on Natural Gas Utilization (《天然氣利用政策》), which became effective on December 1, 2012. Under the policy, the users of natural gas are categorized into users of city-gas, industrial fuel, power generation by natural gas, chemical engineering using natural gas, and other users. Balancing factors such as its social, environmental and economic benefits, and the different profiles of its users, natural gas users are also divided into the following categories: prioritized, permitted, restricted and prohibited.

Gas Operation License

The Administrative Licensing Law (《行政許可法》) was adopted by the Standing Committee of the National People's Congress on August 27, 2003, amended and became effective on April 23, 2019, pursuant to which local governments are empowered to grant licenses to privately owned entities to engage in specified businesses. On June 29, 2004, the State Council issued the Decision of the State Council to Implement Administrative Licensing for Reserved Administrative Approved Items (《國務院對確需保留的行政審批項目設定行政許可的決定》), together with the Administrative Licensing Law, the Administrative Licensing Regulations. Pursuant to the Administrative Licensing Regulations, an enterprise which operates in the gas distribution business in China is required to obtain a gas operation license (《燃氣經營許可證》) from the local government in charge of construction.

On October 15, 2004, pursuant to the Administrative Licensing Regulations, the MOHURD issued the Provisions Regarding the Conditions for the Fifteen Administrative Approval Items Adopted by the State Council (《建設部關於納入國務院決定的十五項行政許可的條件的規定》), or the Condition Provisions, which was amended on January 26, 2011 and September 7, 2011. On October 19, 2010, the Regulations on the Administration of Urban Gas (《城鎮燃氣管理條例》) were promulgated by the State Council and became effective on March 1, 2011, which was further amended and became effective on February 6, 2016. The Regulations on the Administration of Urban Gas applies to urban gas development plans and emergency safeguards, gas operation and service, gas use, gas facilities protection, prevention and disposal of gas safety accidents and the relevant administrative activities. Pursuant to the Regulations on the Administration of Urban Gas, an enterprise which carries on gas operation in China must meet the following requirements to obtain a gas operation license from the local government at or above the county level in charge of gas administration:

(i) conform to the fuel gas development planning requirements;

(ii) have gas sources and gas facilities that meet national standards;

(iii) have fixed business premises, a safety management system and a sound management plan;

(iv) assign a principal responsible person from the enterprise, personnel for the administration of production safety and operation and personnel for maintenance and repair who have received professional training and passed relevant examinations; and

(v) other requirements provided by PRC laws, rules and regulations.

Concession Rights

On March 19, 2004, the MOHURD issued the Measures for the Administration on the Concession of Municipal Public Utilities (《市政公用事業特許經營管理辦法》), or the Concession Measures, effective on May 1, 2004, which was further amended and became effective on May 4, 2015, to promote concession systems in utility industries including the pipeline gas distribution industry. Pursuant to the Concession Measures, local governments will normally grant concession rights to operate piped gas distribution businesses in a specified area. Such specified area may be part or all of the city or county, depending on the terms of the concession rights granted. The PRC government authorities in charge of utilities at the city or county level are responsible for the implementation of the Concession Measures. Pursuant to the Concession Measures, the concession period normally will not exceed 30 years.

In September 2004, the MOHURD published a standard form of concession contract with respect to piped gas distribution for guidance. The form of concession contract has specific provisions mainly in respect of:

(i) granting, revocation and termination of the concession;

(ii) construction, maintenance and improvement of the gas distribution facilities;

(iii) gas distribution safety;

(iv) quality of the gas and standards of services;

(v) fees;

(vi) default liabilities; and

(vii) dispute resolution.

Pricing of Natural Gas

According to the Price Law of the People's Republic of China (《中華人民共和國價格法》), the PRC government may direct, guide or fix the prices of public utilities according to a pricing schedule prescribed by the central or the local governments. China's pricing regime for domestic natural gas comprises three components: wellhead price, transportation costs and end-user prices.

On November 18, 2015, the NDRC issued the Circular on Lowering the Gate Station Prices of Natural Gas Used for Non-residential Purpose and Further Accelerating the Market-oriented Price Reform (Fa Gai Jia Ge 2015 No. 2688), which became effective on November 20, 2015. Under the circular, the upper limit of gate station prices of natural gas used for non-residential purposes shall be lowered by RMB0.7 per cubic meter. However, the price for natural gas used for fertilizer remains unchanged. In addition, according to the circular, the pricing mechanism of natural gas used for non-residential purposes shall be transformed into a market-oriented pricing system. The seller and buyer may negotiate the price with a limit on upward adjustment of 20% from the benchmark price and no limit on downward adjustment. The NDRC implemented a new "Central Pricing Catalog" on May 1, 2020, where the city-gate natural gas price has been officially removed from the catalogue. Apart from the city-gate prices of domestic land-piped natural gas and imported piped gas commissioned prior to the end of 2014, which are still fixed by the Government, market prices now apply to gas from all other sources.

Provincial price control bureaus determine the transportation costs for provincial gas pipelines, including provincial long-distance transmission pipelines. On June 7, 2021, the NDRC issued the Notice on Printing and Distributing the Measures for the Administration of the Natural Gas Pipeline Transportation Prices (Interim) and the Measures for the Supervision and Review of the Pricing Cost of Natural Gas Pipeline Transportation (Interim) (NDRC Price Regulations [2021] No. 818)(《關於印發＜天然氣管道運

輸價格管理辦法(暫行)＞和＜天然氣管道運輸定價成本監審辦法(暫行)＞的通知》(發改價格規[2021] 818號)), which further adjusted the pricing mechanism for natural gas pipeline transportation to "permitted cost plus reasonable profit", and standardized the supervision and review of pricing cost of natural gas pipeline transportation. Local governments shall determine the end-user price.

The pipeline transportation tariff of our piped natural gas available for wholesale is determined by the provincial price control bureau, based on a price schedule released by the NDRC. We also take into account the types of end users of a wholesale customer when determining the sales price of our natural gas to the customer. We obtain approval from the relevant local pricing authorities for the retail price of our piped natural gas that we sell in a particular region, as well as any adjustment of the retail price. In the case of natural gas for residential use, the relevant local pricing authorities determine the end-user price and any price adjustment are subject to a hearing process that involves the affected residence. The price of CNG in China is also determined by local pricing authorities. Our natural gas sales contracts generally state that the stipulated selling price of natural gas is subject to adjustment according to any new government pricing policies.

Natural Gas Policy

On the provincial level, natural gas price linkage mechanism is adopted in some provinces. The main objective of this trial method is to regulate the administration of natural gas pricing in Hebei Province, and to protect the legal interest of operators and consumers. Among others, the key focuses are (a) the price of natural gas consists of costs, profits and tax payments. Costs represent manufacturing costs, administrative expenses, financial costs and selling expenses arising from natural gas operating enterprises. Profits represent reasonable gains which should be received by natural gas operating enterprises in the ordinary course of business, and the profit margin on net assets of the enterprise shall not exceed 7% of the determined level. Tax payments represent taxes payable by natural gas operating enterprises in accordance with national tax laws; (b) the pricing of natural gas relies on a combination of government fixed prices and government- guided prices, and is managed by classification according to its operating mode; and (c) to establish a price linkage mechanism between the upstream wholesale gas prices and gas prices to end-users. Before the price linkage mechanism becomes effective for residential customers, a hearing must be conducted to determine the initial price. Following implementation of the initial price, there is no need to hold a price hearing again, and the prices will be published by the local pricing authority to the public upon verification in accordance with established procedures.

Project Approval

Pursuant to the PRC Urban and Rural Planning Law (《中華人民共和國城鄉規劃法》) implemented on January 1, 2008, and amended on April 24, 2015 and further amended on April 23, 2019, and the PRC Construction Law (《中華人民共和國建築法》) implemented on March 1,1998, amended on April 22, 2011 and further amended on April 23, 2019, and the Administrative Regulation of Construction Work Quality (《建設工程質量管理條例》) implemented on January 30, 2000, amended on October 7, 2017 and further amended on April 23, 2019, a construction planning permit and a construction permit must be obtained in relation to the engagement in the planning and construction of facilities and pipelines.

Petroleum and Natural Gas Pipeline Protection

The PRC Petroleum and Natural Gas Pipeline Protection Law (《中華人民共和國石油天然氣管道保護法》) was promulgated on June 25, 2010 and implemented on October 1, 2010. The PRC Petroleum and Natural Gas Pipeline Protection Law regulates the protection of pipelines for transportation of petroleum and natural gas in China as well as their ancillary facilities. The Energy Department of the State Council regulates the national pipeline protection in China in accordance with the PRC Petroleum and Natural Gas Pipeline Protection Law and other relevant departments of the State Council are responsible for the related work on protection of pipelines within their respective functions. The energy departments of provinces, autonomous regions and municipalities and departments designated by the governments of the municipalities and counties regulate the protection of pipelines of the administrative areas according to the law, and the other relevant departments of the local governments above county level are responsible for the related work on protection of pipelines within their respective functions in accordance with relevant laws and administrative regulations.

Hazardous Chemical Operation License

The Regulations on the Safety Administration of Hazardous Chemicals (《危險化學品安全管理條例》) were promulgated by the State Council on January 26, 2002 and last amended on 7 December, 2013. Pursuant to the Regulations on the Safety Administration of Hazardous Chemicals, entities engaging in the road transportation of hazardous chemicals shall obtain the road transportation license for hazardous chemicals pursuant to the relevant laws and administrative regulations on road transport, and complete registration procedures with the industry and commerce department.

The Measures for the Administration of Hazardous Chemical Operation License (《危險化學品經營許可證管理辦法》) were promulgated by the State Administration of Work Safety on May 27, 2015 and became effective on July 1, 2015. The Measures for the Administration of Hazardous Chemical Operation License established a licensing system for the operation and sale of hazardous chemicals. Entities engaged in the operation and sale of hazardous chemicals must obtain a hazardous chemical operation license (危險化學品經營許可證) pursuant to the aforesaid measures after registration with the administrative bureaus for industry and commerce. No entity or individual may operate or sell hazardous chemicals without obtaining the hazardous chemical operation license and registering with the administrative bureau for industry and commerce.

Gas Cylinder Filling Permit

The Regulations on Safety Supervision of Special Equipment (《特種設備安全監察條例》) were promulgated by the State Council on March 11, 2003 and became effective as of June 1, 2003 (amended on January 24, 2009 and effective from May 1, 2009). The "special equipment" referenced in the regulations refers to boilers, pressure vehicles (including gas cylinders), pressure pipelines, elevators, lifting appliance, yard (factory) special motor vehicles, passenger ropeways, and large amusement devices, which impact the safety of human lives or involve high risk.

Pursuant to the Rules on Gas Cylinders Filling Permit (《氣瓶充裝許可規則》) promulgated by the GAQSIQ on June 21, 2006 and became effective on October 1, 2006, enterprises operating gas cylinders filling shall obtain a gas cylinders filling permit issued by the provincial quality supervision department.

Foreign Exchange

On July 4, 2014, SAFE issued the Circular on Relevant Issues Concerning Foreign Exchange Administration for PRC Residents to Engage in Offshore Investment and Financing and Round Trip Investment via Special Purpose Vehicles (《關於境內居民通過特殊目的公司境外投融資及返程投資外匯管理有關問題的通知》) ("**Circular 37**"). Circular 37 regulates that before contributing capital to a SPV with its legal assets or interests within or outside China, a domestic resident shall apply to the foreign exchange authority for undergoing the foreign exchange registration procedure for foreign investment. To make capital contribution with its domestic legal assets or interests, a domestic resident shall apply for registration with the foreign exchange authority at its place of registration or at the locality of the assets or interests it holds in a domestic enterprise. To make capital contribution with its overseas legal assets or interests, a domestic resident shall apply for registration with the foreign exchange authority at its place of registration or the place of its registered permanent residence. Furthermore, where there is any change in the basic information of registered SPV such as its domestic resident individual shareholder, name, or term of operation, or where a significant matter occurs such as a capital increase/decrease or equity transfer/replacement by a domestic resident individual, a merge, or a division, the foreign exchange modification registration procedure for foreign investment shall be undergone with the foreign exchange authority in a timely manner.

Labor Protection and Social Security

According to the Labor Law of the PRC (《中華人民共和國勞動法》), which took effect on January 1, 1995 amended and became effective on August 27, 2009, further amended and became effective on December 29, 2018, enterprises and institutions shall establish and perfect its system of work place safety and sanitation, strictly abide by State rules and standards on work place safety and sanitation, educate laborers of work place safety and sanitation, prevent accidents in the process of labor and reduce occupational hazards, and shall establish a system for professional training, extract and use funds for professional training according to state regulations, and provide laborers with professional training in a planned way and according to its specific conditions.

The Labor Contract Law of the PRC (《中華人民共和國勞動合同法》) effective as of January 1, 2008, amended on December 28, 2012 and became effective on July 1, 2013, emphasizes the conclusion of employment contracts in written form and imposes severe consequences for non-compliance. If the employer fails to conclude a written employment contract with an employee for one month to one year after the actual commencement of work, the employer must pay the employee double salary for the relevant months. If the employer fails to conclude a written employment contract with an employee for more than one year after the actual commencement of work, an unfixed-term of contract is deemed to have been concluded. Enterprises and institutions are forbidden to force the employees to work beyond the time limit and the employers shall pay employees overtime work in accordance with national regulations. In addition, wages shall not be lower than local standards on minimum wages and shall be paid to the laborers on a timely basis.

The PRC has established a social security system providing people with basic pension insurance, unemployment insurance, basic medical insurance, maternity insurance, and work-related injury insurance, and housing funding by promulgating the Social Security Law of the PRC (《中華人民共和國社會保險法》), the Provisional Regulations on the Collection and Payment of Social Insurance Premiums (《社會保險費征繳暫行條例》), Regulations on Work Injury Insurance (《工傷保險條例》), Regulations on Unemployment Insurance (《失業保險條例》), Decision on Establishing a Unified Basic Pension Insurance System for Enterprise Employees (《關於建立統一的企業職工基本養老保險制度的決定》), Regulations on Management of Housing Provident Fund (《住房公積金管理條例》) and many other regulations. Any employer who fails to pay its social insurance premiums or withhold the employee's portion may be ordered by the PRC Ministry of Human Resources and Social Security or the PRC Tax Bureau to make such payments within a stipulated period, and may be liable for a penalty.

Taxation

Enterprise Income Tax

Before January 1, 2008, the enterprise income tax of foreign-invested enterprises was governed by the Income Tax Law of the PRC of Foreign-invested Enterprises and Foreign Enterprises (《中華人民共和國外商投資企業和外國企業所得稅法》)(the "Income Tax Law of Foreign-invested Enterprises and Foreign Enterprises"), and a tax rate of 30% in respect of the taxable income was charged. The local income tax was computed on the basis of taxable income at the rate of 3%. On January 1, 2008, the Enterprise Income Tax Law of the PRC (《中華人民共和國企業所得稅法》) came into force and the Income Tax Law of Foreign-invested Enterprises and Foreign Enterprises were repealed concurrently. Income derived from the PRC by enterprises or other organizations shall be charged enterprise income tax at the rate of 25%. On December 26, 2007, the State Council issued Circular 39, pursuant to which, with effect from January 1, 2008, enterprises that previously enjoyed the regular tax exemptions, reduction and preferential treatments, such as "two years of exemption and three year of 50% reduction" of enterprise income tax and "five years of exemption and five years of 50% reduction" of enterprise income tax would continue to enjoy the preferential treatment according to the preferential measures and term prescribed in the original tax laws, administrative regulations and related documents until the expiration of the original terms. The term of preferential treatment for enterprises that did not enjoy preferential treatment due to lack of profit commenced in 2008.

Value Added Tax

The value added tax of foreign-invested enterprises was governed by the Provisional Regulations on Value Added Tax of the PRC (《中華人民共和國增值稅暫行條例》), which came into force with effect from January 1, 1994, and was amended on November 10, 2008, February 6, 2016, and further amended and became effective on November 19, 2017. Under the provisional regulations, valued added tax is payable on the sale and import of goods, the provision of processing, repair and labor replacement services and the leasing of tangible assets in China. The valued added tax is generally levied at 13%, however, tax rates less than 13% is applicable to the sales of certain categories of necessities and the provision of certain services.

MANAGEMENT

The following table sets forth certain information with respect to our directors as at the date of this Offering Memorandum:

Name	Age	Position
Mr. Wang Yusuo.	58	Chairman of the Board of Directors and Executive Director
Mr. Zheng Hongtao	47	Vice Chairman of the Board of Directors and Executive Director
Ms. Wu Xiaojing.	53	President and Executive Director
Mr. Wang Dongzhi	53	Executive Director
Mr. Wang Zizheng	33	Non-Executive Director
Mr. Jin Yongsheng	58	Non-Executive Director
Mr. Zhang Yuying.	49	Non-Executive Director
Mr. Ma Zhixiang.	69	Independent Non-Executive Director
Mr. Yuen Po Kwong	52	Independent Non-Executive Director
Mr. Law Yee Kwan, Quinn. .	69	Independent Non-Executive Director
Ms. Yien Yu Yu, Catherine .	51	Independent Non-Executive Director

EXECUTIVE DIRECTORS

Mr. Wang Yusuo, aged 58, is the founder of the Group, the Chairman and the Executive Director of the Company, and is the Chairman of the Nomination Committee of the Company. He is responsible for overseeing the Group's overall strategic planning as well as leading and overseeing the functioning of the Board. He has over 30 years of experience in the investment and management of the energy business in the PRC. He has deep and professional insights on the trend, digitalization and strategic development of the energy industry. He holds a Ph.D. degree in Management from Tianjin University of Finance and Economics. He is the father of Mr. Wang Zizheng, the Non-executive Director of the Company. He is a director and a controlling shareholder of the LCNG, the controlling shareholder of the Company. He is the chairman of ENN-NG (formerly known as ENN Ecological Holdings Co., Ltd., stock code: 600803.SH) and a director of ENC Data Technology Co., Ltd (formerly known as Beibu Gulf Tourism Corporation Limited, stock code: 603869.SH), all of which are listed on the Shanghai Stock Exchange, as well as an Independent Director of DiDi Global Inc. (stock code: DIDI.US), a company listed on New York Stock Exchange.

Mr. Zheng Hongtao, aged 47, is the Executive Director and the Vice Chairman of the Company. He is also the Chairman of the Risk Management Committee and a member of the Environmental, Social and Governance Committee of the Company. He assists the Chairman of the Company in overseeing the Group's overall strategic planning and overseeing the functioning of the Board. He obtained a doctor's degree in engineering from Tsinghua University in 2004, majoring in power engineering and engineering thermophysics. He is the pioneer for China's international spot LNG trading and has extensive experience in energy planning, international LNG resources procurement and trading, LNG shipping, domestic natural gas sales and related asset mergers and acquisitions. He is currently a director and the president of ENN-NG (formerly known as ENN Ecological Holdings Co., Ltd., stock code: 600803.SH), the shares of which are listed on the Shanghai Stock Exchange.

Ms. Wu Xiaojing, aged 53, is the Executive Director and the President of the Company, and a member of the Risk Management Committee and the Environmental, Social and Governance Committee of the Company. She assists the Vice Chairman of the Company with the execution and achievement of strategies and smart operation of the Group, especially with the strategic execution of the integrated energy business. She obtained an Executive Master's Degree in business administration from the Peking University in 2011. Prior to joining the Group in 2004, she served in the Southern China branch of

Beckman Coulter, Inc. and was responsible for the business development in the region. After joining the Group, she served as the head of several municipal and provincial level subsidiaries of the Group. She has extensive experience in the business operation and market development for energy companies.

Mr. Wang Dongzhi, aged 53, is the Executive Director of the Company, and a member of the Risk Management Committee and Environmental, Social and Governance Committee. He is responsible for the corporate governance as well as designing and monitoring of the implementation of internal control strategies of the Group. He graduated in 1991 with a Bachelor Degree in Engineering Management from the Beijing Chemical University. He obtained a Bachelor's Degree in Economics in 1996, a Master's Degree in Business Management from the Tianjin University in 2003 and the Executive Master of Business Administration from China Europe International Business School (CEIBS) in 2016. He received the qualifications of Certified Accountant in the PRC in 2000. Prior to joining the Group in 2000, he was in charge of the finance department in a Sino-foreign joint venture company. He has extensive experience in financial management. He is currently a director and/or works as a senior management in LCNG and its subsidiaries, including the chief financial officer of ENN-NG (formerly known as ENN Ecological Holdings Co., Ltd., stock code: 600803.SH), a company whose shares are listed on the Shanghai Stock Exchange. He is also an independent director of Abterra Ltd. (a company listed on the Singapore Stock Exchange, stock code: ABTR.SI).

NON-EXECUTIVE DIRECTORS

Mr. Wang Zizheng, aged 33, is the Non-executive Director of the Company, and the Chairman of the Environmental, Social and Governance Committee. He has joined the Group in 2014 and served as the Executive Chairman of the Company during May 11, 2018 to March 16, 2020, responsible for assisting the Chairman and Vice Chairman of the Board in overseeing the Group's overall strategic planning and functioning of the Board. He graduated from Tongji University with a Bachelor's Degree in Urban Planning. He has extensive experience in the investment, merger and acquisition and operation management of overseas LNG refueling stations. He is a director of LCNG, a controlling shareholder of the Company, and a director of ENN-NG (formerly known as ENN Ecological Holdings Co., Ltd., stock code: 600803.SH), a company listed on the Shanghai Stock Exchange. He is the son of Mr. Wang Yusuo.

Mr. Jin Yongsheng, aged 58, is the Non-executive Director of the Company and a member of the Nomination Committee. He graduated from Tianjin University of Finance and Economics in 1986, majoring in finance, and has obtained an Executive Master's Degree in business administration from the Peking University in 2005. He is qualified to practice law in China. He was an Executive Director of the Company from 2000 to 2006, responsible for the management of the Group's administration, legal affairs and investor relations. He was then re-designated to be a Non-executive Director due to work re-arrangement from 2006 to 2017. He is currently a director of LCNG, the controlling shareholder of the Company and the non-executive director of Shanghai Dazhong Public Utilities (Group) Co., Ltd., a company listed on the main board of the Hong Kong Stock Exchange (stock code: 1635.HK).

Mr. Zhang Yuying, aged 49, is the Non-executive Director of the Company and a member of the Risk Management Committee. He was appointed as the Executive Director and President of the Company in 2019. He graduated from Renmin University of China in 2003 with a Master's Degree in Business Administration. Prior to joining the Group, he worked in Kaifeng Electromechanical Group and Henan Tongli Electrical Appliances Group. After joining the Group, he held various important positions in business planning and strategic performance management of the Group. He has extensive experience in corporate market insight, strategic research and planning and operational excellence.

INDEPENDENT NON-EXECUTIVE DIRECTORS

Mr. Ma Zhixiang, aged 69, was appointed as the Independent Non-executive Director of the Company on March 24, 2014. He is currently a member of the Audit Committee, the Nomination Committee, the Remuneration Committee, the Risk Management Committee and the Environmental, Social and Governance Committee. He held senior management positions in China Petroleum Pipeline Bureau and PetroChina Company Limited and resigned from these positions in March 2012. He graduated from School of Mechanics of University of Petroleum (East China) with a Doctor's Degree in Engineering in Storage and Transportation. He has over 40 years of extensive experience in corporate management practices and experience in the petroleum and natural gas industry.

Mr. Yuen Po Kwong, aged 52, was appointed as the Independent Non-executive Director of the Company on March 24, 2014. He is currently the Chairman of the Remuneration Committee and a member of the Audit Committee, the Nomination Committee and the Risk Management Committee. He is currently a Partner of Fangda Partners specializing in dispute resolution and contentious regulatory compliance. He graduated from Oxford University in England with a Master's Degree in Chemistry and from Cornell University with a Master's Degree in Synthetic Organic Chemistry. He then attended College of Law in Guildford, England and obtained his Diploma in Law (with Distinction) and Diploma in Legal Studies. Before studying law in England, he was a teaching fellow at Cornell University. Prior to joining Fangda Partners to establish its Hong Kong office in 2012. He was a partner of one of the "Magic Circle Firms," specializing in resolving China related disputes. He has extensive experience in regulatory and corporate compliance.

Mr. Law Yee Kwan, Quinn, *JP*, aged 69, was appointed as the Independent Non-executive Director of the Company on May 30, 2014. He is currently the Chairman of the Audit Committee and a member of the Nomination Committee, the Remuneration Committee and the Risk Management Committee. He is an honorary fellow of Hong Kong University of Science and Technology (the "**HKUST**"), and he presently serves as a court member at the HKUST and a governing board member of HKUST (Guangzhou). He began his professional career at an international accounting firm and thereafter had held senior management positions with diverse corporate and operational responsibilities both in the private and public sector. The Directors believe that Mr. Law has accumulated extensive experience in corporate governance, internal control and risk management. He is a fellow member of The Hong Kong Institute of Certified Public Accountants and the Association of Chartered Certified Accountants. He held directorship in several listed companies both in Hong Kong and overseas in the past. He is currently the independent non-executive director of HKBN Limited (stock code: 1310.HK) and BOC Hong Kong (Holdings) Limited (stock code: 2388.HK), both of which are companies whose shares are listed on the main board of the Hong Kong Stock Exchange. In addition, he is currently performing duties as an independent non-executive director of Bank of Tianjin Co Ltd, a company whose shares are listed on the Hong Kong Stock Exchange (stock code: 1578.HK), pending automatic retirement upon approval of the appointment of the bank's new independent non-executive directors by the relevant PRC authority, after which he will commence to serve as a supervisor of the bank.

Ms. Yien Yu Yu, Catherine, aged 51, was appointed as the Independent Non- executive Director of the Company on November 30, 2018. She is currently a member of the Audit Committee, the Nomination Committee, the Remuneration Committee and the Risk Management Committee of the Company. She has over 25 years of experience in the areas of corporate finance, capital markets and mergers and acquisitions. She also accumulated over 20 years of experiences in energy industry as a result of her works. She was a member and later the Deputy Chairman of the Listing Committee of the Stock Exchange from July 10, 2015 to July 9, 2021. She is currently a Managing Director of Rothschild & Co Hong Kong Limited and a member to the Advisory Committee of the Securities and Futures Commission. She is also an Independent Non-executive Director of CIMC Enric Holdings Limited, a company listed on the main board of Hong Kong Stock Exchange (stock code: 3899.HK). Ms. Yien was an Independent Non-executive Director of the Company from September 2004 to May 2016. Ms. Yien is a holder of the Chartered Financial Analyst designation and is currently a fellow member of the Hong

Kong Securities and Investment Institute and The Hong Kong Institute of Directors. She graduated from the Imperial College of Science, Technology and Medicine of University of London in England with a Joint Honours Degree in Mathematics with Management (BSc Hons).

SENIOR EXECUTIVES

Our senior executive team includes Wang Yusuo, Zheng Hongtao, Wu Xiaojing and Wang Dongzhi. See "– *Executive Directors*" for the description of their experience. In addition, our senior executive team also includes Zhang Jin, Liu Jianfeng, Xiong Liang, Huang Zhenping, Su Li, Mu Nini and Leung Mui Yin.

The table below sets forth certain information regarding our senior executives, excluding Executive Directors:

Name	Age	Position
Ms. Zhang Jin.	48	Chief Human Resources Officer
Mr. Liu Jianfeng.	45	Chief Financial Officer
Mr. Xiong Liang.	50	Executive Vice President
Mr. Huang Zhenping	42	Chief Digital Officer
Ms. Su Li.	49	Senior Vice President
Ms. Mu Nini.	44	Joint Financial Controller
Ms. Leung Mui Yin	39	Company Secretary

Ms. Zhang Jin, aged 48, is the Chief Human Resources Officer of the Company. She is responsible for the human resources management and general administration work, etc. She graduated from Renmin University of China with a Bachelor's Degree in Economics and a Master's Degree in Management. Prior to joining the Group in 2016, she served as the Chief Administrative Officer of Shanda Games, the Senior Vice President of Shanda Network Group, the Vice President of Human Resources of Shanda Group and the Vice President of Human Resources of Lenovo Group. She has extensive experience in corporate management. She is currently a director of ENN-NG (formerly known as ENN Ecological Holdings Co., Ltd., stock code: 600803.SH) and a director of ENC Data Technology Co., Ltd (formerly known as Beibu Gulf Tourism Corporation Limited, stock code: 603869.SH), each of which is a company whose shares are listed on the Shanghai Stock Exchange.

Mr. Liu Jianfeng, aged 45, is currently the Chief Financial Officer of the Company. He is responsible for finance, legal affairs, financial management and mergers and acquisitions of the Company. He is a member of the steering committee of the Methane Guiding Principles, and he promoted the Company to adopt and implement international standards of methane emission reduction, and lead other companies in the industry to jointly promote methane management. He received a Bachelor's Degree in Economics from the Central University of Finance and Economics and a Master's Degree in Law from China University of Political Science and Law from 1995 to 2003. He then received an MBA and a Master's Degree in Law from Boston College from 2012 to 2014. He is a member of the CPA Australia. Prior to joining the Group, he held key financial management positions in several companies in the oil and gas industry and participated in a number of large-scale multinational M&A transactions. Mr. Liu also served in leading law firms in the PRC, and is a qualified PRC lawyer and corporate legal consultant. He has over 20 years' experience in financial management, asset management, onshore and offshore mergers and acquisitions and investment.

Mr. Xiong Liang, aged 50, is the Executive Vice President of the Company. He is responsible for quality, occupational safety and environmental protection of the Group. He obtained a Bachelor's Degree in Oil Engineering and a Master's Degree in Petroleum and Natural Gas Engineering from Southwest Petroleum University in 1994 and 2009 respectively, and then obtained a doctorate degree in Safety Science and Engineering from China University of Geosciences (Wuhan) in 2020. Prior to joining the Group in 2018, he served in CNOOC Tianjin Branch, Chevron Joint Venture, Iran North Pars LNG

Project and CNOOC Safety and Environmental Protection Company, and he was employed as the safety emergency expert of Ministry of Emergency Management of the People's Republic of China and State-owned Assets Supervision and Administration Commission of the State Council. Mr. Xiong has over 25 years of experience in the management of energy quality, occupational safety and environmental protection.

Mr. Huang Zhenping, aged 42, is the Chief Digital Officer of the Company, and he is responsible for setting the strategic direction for digital transformation of the Group. He obtained a Master's Degree in Engineering from Wuhan University in 2011. Prior joining the Group in 2020, he served as the Controller in Suning.com, the President of Internet in Zhengbang Group, the Vice President in Xianyi Holding Co., Limited and the President in xebest.com. Mr. Huang has about 20 years of extensive experience in the fields of innovative internet business, architecture and operations of platforms, modern supply chain management, Internet of Things and enterprise digital transformation.

Ms. Su Li, aged 49, is the Senior Vice President of the Company. She is responsible for the marketing and sales of Zhejiang and Shanghai provincial companies. She graduated from Shanghai Jiao Tong University in 2015 and obtained an Executive Master's Degree in Business Administration. After joining the Group in 2002, she held deputy general manager and general manager positions of various subsidiaries. Based on her outstanding business development performance, she was promoted as the regional general manager and was responsible for the sales and marketing in Zhejiang Province, as well as the business expansion of industrial parks projects. She has extensive experience in business operation and market development for energy companies.

Ms. Mu Nini, aged 44, is the Financial Controller of the Company, assisting the Chief Financial Officer in the Group's daily financial management, corporate internal control, taxation and treasury management. Ms. Mu graduated from Qingdao Technological University in 2001 and received the Executive Master of Business Administration from China Europe International Business School (CEIBS) in 2017. She holds the qualifications of Senior Accountant and China Certified Management Accountant in the PRC. Before joining the Group in 2011, she served as the accounting and financial manager of Qingdao Haier Group and the financial manager of Jiangsu Shenma Electric Co., Ltd. Ms. Mu has extensive experience in finance, corporate internal control, taxation and treasury management.

COMPANY SECRETARY

Ms. Leung Mui Yin, age 39, is the Company Secretary of the Company. She is a member of The Hong Kong Chartered Governance Institute (formerly known as "The Hong Kong Institute of Chartered Secretaries") and The Chartered Governance Institute in the United Kingdom. She is also a member of The Hong Kong Institute of Certified Public Accountants. She joined the Group in 2011, and successively held various positions in finance function and as the deputy company secretary of the Company. She holds a Bachelor's degree in Accountancy and has over ten years of experience in relation to accounting and financial reporting, finance, corporate governance and company secretarial services.

DIRECTORS' REMUNERATION

The Directors' emoluments are subject to the recommendations of the Remuneration Committee and the approval of our Board of Directors (the "**Board**"). The emoluments are determined by the Board with reference to Directors' duties, responsibilities and performance and the results of our Company.

During the years ended December 31, 2019, 2020 and 2021, the aggregate amount of remuneration paid and/or payable by us to our Directors was RMB35.4 million, RMB32.1 million and RMB42.1 million, respectively.

BOARD COMMITTEES

Audit Committee

The major responsibilities of the Audit Committee include making recommendation to the Board on the appointment, re-appointment and removal of the external auditor, approving the remuneration and terms of engagement of the external auditor, and addressing any questions of its resignation or dismissal; reviewing and monitoring the external auditor's independence and objectivity and the effectiveness of the audit process in accordance with applicable standards; developing and implementing policy on engaging the external auditor to supply non-audit services; reviewing the external auditors' management letter and the management's response thereto; monitoring the integrity of the annual reports and accounts and interim reports of the Company and reviewing significant financial reporting judgements contained therein; and reviewing the effectiveness of the Group's risk management and internal control systems.

In discharging its duties, the Audit Committee is provided with sufficient resources and is authorized by the Board to obtain outside legal or other independent professional advice at our expense on any matters within its terms of reference which have been published on our websites (http://www.ennenergy.com).

The Audit Committee consists of four members, all of whom are Independent Non-executive Directors. Mr. Law Yee Kwan, Quinn is the Chairman and the three other members are Mr. Ma Zhixiang, Mr. Yuen Po Kwong and Ms. Yien Yu Yu, Catherine. The committee meets the external auditor and senior management of the Company regularly. During 2021, the Audit Committee held six meetings to review the consolidated financial statements of the Group for the year ended December 31, 2020 and for the six months ended June 30, 2021, and the significant financial reporting judgements contained therein, and the continuing connected transactions of the Group for the year ended December 31, 2020 under the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "**Listing Rules**") and the condensed consolidated financial statements for the Group for the period ended June 30, 2021; discuss with the management and external auditor the issues that may have significant impact on the financial statements, including but not limited to gas safety management, debt and cash flow management and asset impairment; discuss with the external auditor the impact of any changes in accounting policies as well as the nature and scope of annual audit and interim review before the commencement of the audit work, and their reporting responsibilities; review the external auditor's independence, objectivity and the effectiveness of the audit process in accordance with applicable standards; make recommendations to the Board on the appointment and reappointment of external auditor, and approve the remuneration and terms of engagement of the external auditor; listen to the work report of the head of internal audit department, and review the effectiveness of the Group' s risk management and internal control systems bi-yearly, and monitor the improvement (if any); and assess whether there were adequate resources, staff qualifications and experience, training programs and budget of the Company's accounting and financial reporting functions provided by the Management.

Remuneration Committee

The Remuneration Committee undertakes to, among other matters, make recommendations to the Board about the framework or board policy and structure for the remuneration of the Chief Executive Officer, Chairman, Executive Directors and senior management of our Company with the objective of ensuring that such persons are provided with appropriate incentives to encourage enhanced performance and to reward individual contributions to the success of our Company. The Remuneration Committee also determines, within the terms of the policy adopted by the Board and in consultation with the Chairman and Chief Executive Officer as appropriate, the individual specific remuneration package of each Executive Director and member of senior management, including benefits in kind, pension rights, bonuses, incentive payments, share options and compensation payments, including any compensation payable for loss or termination of their office or appointment.

No Director or member of senior management shall be involved in any decision as to their own remuneration. The remuneration of a Non-executive Director who is a member of the Remuneration Committee shall be a matter for other members of the Remuneration Committee. The Remuneration Committee's terms of reference have been posted on our website (http://www.ennenergy.com).

The Remuneration Committee currently consists of four members, all of which are Independent Non-Executive Directors. Mr. Yuen Po Kwong, an Independent Non-executive Director, is the Chairman of the Remuneration Committee. The Committee includes three other Independent Non-executive members who are Mr. Ma Zhixiang, Mr. Law Yee Kwan, Quinn and Ms. Yien Yu Yu, Catherine. In 2021, the Remuneration Committee has (among others) reviewed the policy and structure of remuneration for all Directors and senior management of the Company; considered and approved the remuneration of the Management of the Company, and made recommendations to the Board on the establishment of a formal and transparent procedure for developing remuneration policy; made recommendations to the Board on the remuneration of the Executive Directors and senior management of the Company for year 2021; made recommendations to the Board on the remuneration of new directors and new Company Secretary of the Company; reviewed the fees of the Non-executive Directors (including Independent Non-executive Directors) of the Company; and approved the terms of services and remuneration packages of directors and the company secretary appointed during the year, and made recommendations to the Board.

Nomination Committee

The responsibilities of the Nomination Committee include reviewing the structure, size, diversity and composition of the Board and making recommendations on changes to the Board to complement the Company's corporate strategy; identifying and selecting suitably qualified individuals to become members of the Board or making recommendations to the Board on the selection of individuals nominated for directorships; assessing the independence of Independent Non-executive Directors; and making recommendations to the Board on the appointment or re-appointment of Directors and succession planning for Directors, especially the Chairman and the Chief Executive Officer.

When the Nomination Committee considers it necessary or desirable to appoint a new member to the Board (whether to fill a casual vacancy or otherwise), each member of the Board may nominate suitable individuals as candidates of members of the Board for the decision of the Board. The Nomination Committee's terms of reference have been posted on our website (http://www.ennenergy.com).

The Nomination Committee currently consists of six members, the majority of whom are Independent Non-Executive Directors. Mr. Wang Yusuo, an Executive Director, is the Chairman of the Nomination Committee. The Committee includes a Non-executive Director, Mr. Jin Yongsheng and four Independent Non-executive Directors, Mr. Ma Zhixiang, Mr. Yuen Po Kwong, Mr. Law Yee Kwan, Quinn and Ms. Yien Yu Yu, Catherine. Two Nomination Committee meeting was held in 2021 to review the structure, size and composition (including the skills, knowledge and experience) of the Board, as well as the diversity of Board members, and make recommendations on any proposed changes to the Board to complement the Company's corporate strategy; to consider the candidates nominated by the member of the Board and made recommendations to the Board after evaluation; to assess the independence of Independent Non-executive Directors; and to make recommendation to the Board on retirement plan of the Directors in annual general meeting according to the requirements of the articles of associations of the Company.

DIRECTORS' INTERESTS

As of December 31, 2021, the interests and short positions of each Director and chief executive of the Company in the shares, underlying shares and debentures of the Company and its associated corporations (within the meaning of Part XV of the Securities and Futures Ordinance ("**SFO**")) as recorded in the register required to be kept under section 352 of Part XV of the SFO, or as otherwise notified to the Company and the Stock Exchange pursuant to the Model Code for Securities Transactions by Directors of Listed Issuers as contained in Appendix 10 to the Listing Rules, were as follows:

Name of Director	Capacity	Personal interests	Corporate interests	Interest in share options	Interest in awarded shares	Total interests	Approximate percentage of the Company's total issued shares
Wang Yusuo ("Mr. Wang") . .	Beneficial owner and interest of controlled corporation	–	369,175,534 (Note)	320,000	–	369,495,534	32.69%
Zheng Hongtao.	Beneficial owner	1,000	–	–	330,000	331,000	0.03%
Wu Xiaojing	Beneficial owner	–	–	262,500	–	262,500	0.02%
Wang Dongzhi	Beneficial owner	–	–	270,000	–	270,000	0.02%
Wang Zizheng	Beneficial owner	–	–	320,000	–	320,000	0.03%
Zhang Yuying	Beneficial owner	–	–	133,925	80,000	213,925	0.02%
Ma Zhixiang	Beneficial owner	–	–	60,000	–	60,000	0.01%
Yuen Po Kwong	Beneficial owner	–	–	60,000	–	60,000	0.01%
Law Yee Kwan, Quinn	Beneficial owner	–	–	44,000	–	44,000	0.00%
Yien Yu Yu, Catherine	Beneficial owner	66,000	–	60,000	–	126,000	0.01%

Note:

Such shares are beneficially owned by Mr. Wang and Ms. Zhao Baoju ("Ms. Zhao"), the spouse of Mr. Wang through their controlled corporations, including ENN Yingchuang Technology Co., Ltd. ("EYCT"), LCNG, EIH, EGII, ENN-NG and Xinneng HK.

Associated Corporations

Company name	Name of Director	Capacity	Number of shares	Subscribed share capital (RMB)	Percentage of share capital
EYCT*	Mr. Wang	Beneficial owner (Note 1)	–	58.60 million	100%
LCNG*	Mr. Wang	Beneficial owner and interest of controlled corporation (Note 1)	–	123 million	100%
EIH*	Mr. Wang	Interest of controlled corporation	8,000,000,000	–	100%
EGII.	Mr. Wang	Interest of controlled corporation	1,000	–	100%
ENN-NG	Mr. Wang	Beneficial owner and interest of controlled corporation	1,966,053,704	–	75.62%
Xinneng HK.	Mr. Wang	Interest of controlled corporation	2,132,377,984	–	75.62%
Beijing Xinyi Aite Art Development Company Limited*.	Mr. Wang	Beneficial owner and interest of controlled corporation	–	10 million	100%
Xinyi Theater (Langfang) Culture Development Company Limited* .	Mr. Wang	Beneficial owner and interest of controlled corporation	–	10 million	100%
ENN Group Co., Ltd.*	Mr. Wang	Beneficial owner and interest of controlled corporation	4,987,777,000	–	99.76%
Yicheng Yijia Internet Technology Company Limited*.	Wang Zizheng	Beneficial owner	–	80 million	20%
Xin'ao Data IT Company Limited*.	Wang Zizheng	Beneficial owner	–	40 million	20%
ENN-NG	Zheng Hongtao	Beneficial owner (Note 2)	1,000,000	–	0.04%
ENN-NG	Zhang Yuying	Beneficial owner (Note 2)	500,000	–	0.02%
ENN-NG	Wang Dongzhi	Beneficial owner (Note 2)	800,000	–	0.03%
ENN-NG	Wu Xiaojing	Beneficial owner (Note 2)	400,000	–	0.01%

* *For identification purpose only*

Notes:

(1) Such shares are beneficially owned by Mr. Wang and Ms. Zhao.

(2) Such interests refer to the restricted ordinary shares of ENN-NG granted and to be issued to them pursuant to the restricted share award scheme adopted by the company on March 26, 2021. These restricted ordinary shares are subject to the restrictions on sale of the scheme and shall be lifted in batches according to the relevant terms after meeting the conditions for lifting the restrictions. Details of the scheme are set out in the announcements of ENN-NG (stock code: 600803.SH) published on the Shanghai Stock Exchange on January 21, 2021, February 9, 2021 and March 27, 2021 respectively.

DIRECTORS' RIGHT TO ACQUIRE SHARES

Share Option Schemes

The Company has adopted the "2012 Scheme" of the share option schemes pursuant to an ordinary resolution passed at an annual general meeting of the Company held on June 26, 2012.

The purpose of the share option scheme is to provide incentives for participants to perform their best in achieving our goals and allow them to enjoy the results of our Company attained through their efforts and contribution. Pursuant to the share option scheme, our Directors may, at their absolute discretion, invite any employee or Executive Director or any member of our Group, or any employee, partner or director of any business consultant, joint venture partner, financial advisor or legal advisor of and to any member of our Group, to take up options at HK$1 on each grant to subscribe for shares at an exercise price equal to at least the highest of: (a) the closing price of the shares on the Hong Kong Stock Exchange on the date of grant; (b) the average closing price of the shares on the Hong Kong Stock Exchange for the five trading days immediately preceding the date of grant; and (c) the nominal value of a share.

The maximum number of shares in respect of which options may be granted under the share option scheme may not exceed 30% of the issued share capital of our Company from time to time. Unless approved by shareholders of our Company, the total number of shares issued and to be issued upon exercise of the options granted to each participant (including both exercised and outstanding options) in any 12-month period must not exceed 1% of the shares of our Company in issue. Where any further grant of options to a participant would result in the shares issued and to be issued upon exercise of all options granted and to be granted to such person (including exercised, cancelled and outstanding options) in the 12-month period up to and including the date of such further grant representing in aggregate over 1% of the shares in issue, such further grant must be separately approved by shareholders of our Company in a general meeting with such participant and his associates abstaining from voting.

Pursuant to our share option schemes, we have granted options to subscribe for our ordinary shares in favor of certain Directors, the details of which are the follows:

Name of Director	Date of grant	Exercise period (Note 1)	Exercise price (HK$)	Number of shares subject to outstanding options as at January 1, 2021	Exercised during the year (Note 2)	Lapsed during the year (Note 2)	Reclassified during the year (Note 2)	Number of shares subject to outstanding options as at December 31, 2021
Wang Yusuo	09.12.2015	01.04.2017-08.12.2025	40.34	145,000	(145,000)	–	–	–
	09.12.2015	01.04.2018-08.12.2025	40.34	145,000	(145,000)	–	–	–
	09.12.2015	01.04.2019-08.12.2025	40.34	145,000	(145,000)	–	–	–
	09.12.2015	01.04.2020-08.12.2025	40.34	145,000	(145,000)	–	–	–
	28.03.2019	01.04.2021-27.03.2029	76.36	160,000	(160,000)	–	–	–
	28.03.2019	01.04.2022-27.03.2029	76.36	160,000	–	–	–	160,000
	28.03.2019	01.04.2023-27.03.2029	76.36	160,000	–	–	–	160,000
Wu Xiaojing (Note 3&4)	09.12.2015	01.04.2020-08.12.2025	40.34	–	–	–	42,500	42,500
	28.03.2019	01.04.2021-27.03.2029	76.36	–	–	–	73,400	73,400
	28.03.2019	01.04.2022-27.03.2029	76.36	–	–	–	73,300	73,300
	28.03.2019	01.04.2023-27.03.2029	76.36	–	–	–	73,300	73,300

Name of Director	Date of grant	Exercise period(Note 1)	Exercise price (HK$)	Number of shares subject to outstanding options as at January 1, 2021	Exercised during the year (Note 2)	Lapsed during the year (Note 2)	Reclassified during the year(Note 2)	Number of shares subject to outstanding options as at December 31, 2021
Wang Dongzhi (Note 3).	28.03.2019	01.04.2021-27.03.2029	76.36	106,600	(50,000)	–	–	56,600
	28.03.2019	01.04.2022-27.03.2029	76.36	106,700	–	–	–	106,700
	28.03.2019	01.04.2023-27.03.2029	76.36	106,700	–	–	–	106,700
Wang Zizheng (Note 3).	09.12.2015	01.04.2017-08.12.2025	40.34	15,000	–	–	–	15,000
	09.12.2015	01.04.2018-08.12.2025	40.34	15,000	–	–	–	15,000
	09.12.2015	01.04.2019-08.12.2025	40.34	15,000	–	–	–	15,000
	09.12.2015	01.04.2020-08.12.2025	40.34	15,000	–	–	–	15,000
	28.03.2019	01.04.2021-27.03.2029	76.36	120,000	–	(100,000)	–	20,000
	28.03.2019	01.04.2022-27.03.2029	76.36	120,000	–	–	–	120,000
	28.03.2019	01.04.2023-27.03.2029	76.36	120,000	–	–	–	120,000
Zhang Yuying (Note 3).	09.12.2015	01.04.2020-08.12.2025	40.34	525	–	–	–	525
	28.03.2019	01.04.2021-27.03.2029	76.36	66,600	(66,600)	–	–	–
	28.03.2019	01.04.2022-27.03.2029	76.36	66,700	–	–	–	66,700
	28.03.2019	01.04.2023-27.03.2029	76.36	66,700	–	–	–	66,700
Ma Zhixiang.	28.03.2019	01.04.2021-27.03.2029	76.36	20,000	–	–	–	20,000
	28.03.2019	01.04.2022-27.03.2029	76.36	20,000	–	–	–	20,000
	28.03.2019	01.04.2023-27.03.2029	76.36	20,000	–	–	–	20,000
Yuen Po Kwong.	28.03.2019	01.04.2021-27.03.2029	76.36	20,000	–	–	–	20,000
	28.03.2019	01.04.2022-27.03.2029	76.36	20,000	–	–	–	20,000
	28.03.2019	01.04.2023-27.03.2029	76.36	20,000	–	–	–	20,000
Law Yee Kwan, Quinn	28.03.2019	01.04.2021-27.03.2029	76.36	20,000	(16,000)	–	–	4,000
	28.03.2019	01.04.2022-27.03.2029	76.36	20,000	–	–	–	20,000
	28.03.2019	01.04.2023-27.03.2029	76.36	20,000	–	–	–	20,000
Yien Yu Yu, Catherine	28.03.2019	01.04.2020-27.03.2029	76.36	15,000	–	–	–	15,000
	28.03.2019	01.04.2021-27.03.2029	76.36	15,000	–	–	–	15,000
	28.03.2019	01.04.2022-27.03.2029	76.36	15,000	–	–	–	15,000
	28.03.2019	01.04.2023-27.03.2029	76.36	15,000	–	–	–	15,000
Total				2,240,525	(872,600)	(100,000)	262,500	1,530,425

Notes:

(1) The vesting period of the share options is from the date of grant until the commencement of the exercise period.

(2) "Year" refers to the period from January 1, 2021 to December 31, 2021.

(3) The vesting of share options is subject to the fulfilment of performance target.

(4) Ms. Wu Xiaojing had been appointed as the Executive Director of the Company on December 20, 2021, the 262,500 share options held by her were reclassified from share options held by employees to share options held by directors.

Share Award Scheme

On November 30, 2018, the Company adopted the Share Award Scheme under which the shares of the Company (the "**Awarded Shares**") may be granted to selected employees (including, without limitation, any Executive Directors and Independent Non-executive Directors) of any members of the Group (the "**Selected Employees**") pursuant to the terms of the Share Award Scheme and the trust deed of the Share Award Scheme. The Share Award Scheme is mainly used as a supplement to the share option scheme. The Share Award Scheme became effective on the adoption date and, unless otherwise terminated or amended, will remain in force for 10 years from the date, i.e. till November 29, 2028.

The aggregate number of Award Shares permitted to be granted under the Share Award Scheme is limited to 5% of the issued share capital of the Company from time to time. The maximum number of Awarded Share which may be awarded to each Selected Employee shall not in aggregate over 1% of the issued share capital of the Company from time to time.

When a Selected Employee has satisfied all vesting conditions, which might include service and/or performance conditions, specified by the Board at the time of making the award and become entitled to the shares of the Company forming the subject of the award, the trustee shall transfer the relevant Award Shares to that employee at once.

The interest of each director and chief executive in the Awarded Shares of the Company as at December 31, 2021 were as follows:

Grantee	Financial Year to which the performance target	Awards Price (HK$)	Outstanding as at January 1, 2021	Granted during the year (Note 1)	Vested during the year (Note 1)	Lapsed during the year (Note 1)	Outstanding as at December 31, 2021
Zheng Hongtao (Note 2)	2020	76.36	–	120,000	(30,000)	–	90,000
	2021	76.36	–	120,000	–	–	120,000
	2022	76.36	–	120,000	–	–	120,000
Zhang Yuying (Note 2)	2020	76.36	–	40,000	(40,000)	–	–
	2021	76.36	–	40,000	–	–	40,000
	2022	76.36	–	40,000	–	–	40,000
Total			–	480,000	(70,000)	–	410,000

Notes:

(1) "Year" refers to the period from January 1, 2021 to December 31, 2021.

(2) The vesting of share options is subject to the fulfilment of performance target.

PRINCIPAL AND SUBSTANTIAL SHAREHOLDERS

As of December 31, 2021, the interests and short positions of every person, other than our directors, in the shares and underlying shares of our Company as recorded in the register required to be kept under section 336 of Part XV of the SFO were as follows:

Name of shareholder	Capacity	Corporate interests	Interests in shares pursuant to share options	Total aggregate interests in shares and underlying shares (Note 6)	Approximate percentage of the Company's total issued share capital
Mr. Wang	Beneficial owner and interest of controlled corporation	369,175,534 (Notes 1, 2, 3, 4 & 5)	320,000 (Note 5)	369,495,534 (L)	32.69%
Ms. Zhao	Interest of controlled corporation and interest of spouse	369,175,534 (Notes 1, 2, 3, 4 & 5)	320,000 (Note 5)	369,495,534 (L)	32.69%
EYCT*	Interest of controlled corporation	369,175,534 (Notes 1, 2, 3 & 4)	–	369,175,534 (L)	32.67%
LCNG*	Interest of controlled corporation	369,175,534 (Notes 1, 2 & 3)	–	369,175,534 (L)	32.67%
EIH*	Interest of controlled corporation	369,175,534 (Notes 1 & 2)	–	369,175,534 (L)	32.67%
EGII	Interest of controlled corporation	369,175,534 (Note 1)	–	369,175,534 (L)	32.67%
ENN-NG	Interest of controlled corporation	369,175,534 (Note 1)	–	369,175,534 (L)	32.67%
Xinneng HK	Beneficial owner	369,175,534 (Note 1)	–	369,175,534 (L)	32.67%
The Capital Group Companies, Inc.	Beneficial owner	168,264,635	–	168,264,635 (L)	14.89%
JPMorgan Chase & Co.	Interest of controlled corporation, investment manager, person having a security interest in shares, trustee and approved lending agent	72,566,970	–	72,566,970 (L) (including 2,551,716 (S) 44,463,284 (P))	6.42%
BlackRock, Inc.	Interest of controlled corporation	60,285,615	–	60,285,615 (L) (including 709,800 (S))	5.33%

* *For identification purpose only*

Notes:

(1) EGII holds 48.16% interests of ENN-NG, therefore it holds 32.67% of the issued share capital of the Company through Xinneng HK, a wholly-owned subsidiary of ENN-NG. EGII is beneficially owned as to 50% by Mr. Wang and 50% by Ms. Zhao, the spouse of Mr. Wang.

(2) On November 30, 2018, Mr. Wang and Ms. Zhao entered into an equity entrustment agreement with EIH, pursuant to which each of Mr. Wang and Ms. Zhao entrusted EIH to manage their respective shareholding of 50% in EGII till December 31, 2040. Pursuant to the agreement, EGII is controlled by EIH. Accordingly, EIH is deemed to be interested in the shares in which EGII is interested in (1) above. In addition, EIH directly and indirectly holds 21.72% interests of ENN-NG.

(3) EIH is a wholly-owned subsidiary of LCNG, LCNG hence is deemed to be interested in the shares in which EIH is interested in (1) and (2) above.

(4) LCNG is 100% beneficially owned by Mr. Wang, Ms. Zhao and EYCT (beneficially owned as to 50% by Mr. Wang and 50% by Ms. Zhao) hence they are deemed to be interested in the shares in which LCNG is interested in (1), (2) and (3) above. In addition, Mr. Wang directly holds 0.07% interests of ENN-NG.

(5) As Mr. Wang's spouse, Ms. Zhao is deemed as holding Mr. Wang's interests in shares.

(6) (L) represents Long Position; (S) represents Short Position; (P) represents Lending Pool.

RELATED PARTY TRANSACTIONS

We enter into transactions with certain of our subsidiaries, investee companies and other related parties in the ordinary course of business. It is our policy to conduct these transactions on normal commercial terms and on an arm's-length basis.

As a company listed on the Hong Kong Stock Exchange, we are subject to requirements under Chapter 14A of the Listing Rules, which require certain "connected transactions" with "connected persons" be approved by our shareholders. Each of our related party transactions with companies controlled by Mr. Wang disclosed hereunder that constitutes a connected transaction within the meaning of the Listing Rules requiring shareholder approval has been so approved, or is otherwise exempted from compliance under Chapter 14A of the Listing Rules.

Apart from the related party balances and equity transactions with related parties as of and for the year ended December 31, 2019, 2020 and 2021 as stated in our audited consolidated financial statements, the following table sets forth our material transactions with our related parties for the periods indicated:

	Year ended December 31,			
	2019	**2020**	**2021**	
	RMB million	*RMB million*	*RMB million*	*USD million*
Nature of transaction:				
Associates:				
Sales of gas to	576	928	2,391	375
Sales of materials to	284	310	132	21
Purchase of gas from	282	384	986	155
Purchase of equipment from	3	3	2	1
Loan interest received from	24	14	9	1
Provision of gas transportation services to	1	1	2	1
Provision of gas transportation services from	28	55	48	8
Deposit interest paid to	2	2	2	1
Provision of supporting services to	8	7	18	3
Provision of supporting services from	–	1	–	–
Provision of construction and installation services to	32	5	149	23
Loan interest paid to	–	–	4	1
Provision of training service to	–	2	2	1
Purchase of equity interest from	52	–	–	–
Joint ventures:				
Sales of gas to	1,546	2,537	3,634	570
Sales of materials to	281	274	512	80
Purchase of gas from	3,961	3,419	4,230	664
Provision of gas transportation services to	388	373	439	69
Loan interest received from	42	12	20	3
Loan interest paid to	4	3	4	1
Provision of supporting services to	21	42	35	6
Purchase of equipment from	23	5	4	1
Deposit interest paid to	13	2	1	1
Provision of construction services by	23	25	8	1
Provision of supporting services by	2	5	–	–
Lease of vehicles to	2	3	2	1
Provision of technology service by	7	6	–	–
Provision of construction and installation services to	–	12	276	43
Provision of gas transportation services from	–	19	41	6
Provision of training service to	–	3	4	1
Lease of premises to	–	–	1	1
Provision of energy efficiency technology services to	2	–	–	–

	Year ended December 31,			
	2019	2020	2021	
	RMB million	*RMB million*	*RMB million*	*USD million*
Companies controlled by Mr. Wang:				
Transactions exempt from shareholders' approval under Chapter 14A of the Listing Rules:				
Purchase of equipment from	52	128	153	24
Provision of construction services by	1,263	974	1,161	182
Provision of information technology services by	139	195	296	46
Purchase of natural gas from	1,313	136	2,019	317
Provision of LNG terminal usage services by	131	644	728	114
Provision of logistic service to	–	–	28	4
Purchase of equity interest from	100	–	–	–
Transactions fully exempt from shareholders' approval, annual review and all disclosure requirements under Chapter 14A of the Listing Rules:				
Sales of gas, gasoline and diesel to	13	64	24	4
Sale of materials to	43	59	50	8
Provision of construction and installation services to	7	14	30	5
Provision of property management services by	17	16	16	3
Provision of property management services to	1	4	2	1
Lease of premises to	4	8	4	1
Lease of premises from	7	3	5	1
Provision of supporting services by	51	54	58	9
Provision of supporting services to	54	40	67	11
Purchase of outsourcing services by	55	63	38	6
Provision of electronic business services by	4	9	17	3
Provision of technology services to	52	63	69	11
Provision of energy efficiency technology services to	6	12	24	4
Loan interest received from	–	3	8	1
Provision of training service to	–	22	19	3
Disposal of equity interest to	–	–	5	1
Provision of logistic service to	–	–	68	11
Provision of research and development services to	10	–	–	–
Compensation of key management personnel of the Company:				
Short-term employee benefits	22,145	19,952	18,479	2,898
Post-employment benefits	348	256	378	59
Share-based payments	12,935	11,902	23,263	3,649
Total	35,428	32,110	42,120	6,606

Continuing Connected Transactions

Wang Family Company is a company controlled (entitled to exercise, or control the exercise of 30% or more of the voting power at any general meeting of the relevant company) by Mr. Wang, the Chairman, an Executive Director and a controlling shareholder of the Company, and/or his associates (including Ms. Zhao, a controlling shareholder of the Company and the spouse of Mr. Wang), thereby being connected persons of the Group. "**Wang Family Companies**" refers to the Wang Family Company and its subsidiaries and associates (as the case may be).

The following is a brief description of our major continuing connected transactions in 2019, 2020 and 2021:

Master Equipment Purchasing and Modification Services Agreement

On November 30, 2018, we entered into a Master Equipment Purchasing and Modification Services Agreement with EIH. This agreement commenced on January 1, 2019 and expired on December 31, 2021, whereby the Wang Family Companies agreed to provide us with equipment as well as equipment modification and enhancement services. The annual cap and the transaction sum for the year ended December 31, 2019 were RMB180 million and RMB52 million, respectively. The annual cap and the transaction sum for the year ended December 31, 2020 were RMB216 million and RMB128 million, respectively. The annual cap and the transaction sum for the year ended December 31, 2021 were RMB259 million and RMB153 million, respectively. Since this agreement expired on December 31, 2021, we entered into a renewed Master Equipment Purchasing and Modification Services Agreement with LCNG on November 17, 2021.

Master Construction Services Agreement

On November 30, 2018, we entered into a Master Construction Services Agreement with EIH. This agreement commenced on January 1, 2019 and expired on December 31, 2021, whereby the Wang Family Companies agreed to provide us with engineering design and construction services. The annual cap and the transaction sum for the year ended December 31, 2019 were RMB1,442 million and RMB1,263 million, respectively. The annual cap and the transaction sum for the year ended December 31, 2020 were RMB1,669 million and RMB974 million, respectively. The annual cap and the transaction sum for the year ended December 31, 2021 were RMB1,828 million and RMB1,161 million, respectively. Since this agreement expired on December 31, 2021, we entered into a renewed Master Construction Services Agreement with ENN-NG on November 17, 2021.

Master Information Technology Services Agreement

On November 30, 2018, we entered into a Master Information Technology Services Agreement with EIH. This agreement commenced on January 1, 2019 and expired on December 31, 2021, whereby the Wang Family Companies agreed to provide us with information technology services. The annual cap and the transaction sum for the year ended December 31, 2019 were RMB304 million and RMB139 million, respectively. The annual cap and the transaction sum for the year ended December 31, 2020 were RMB318 million and RMB195 million, respectively. The annual cap and the transaction sum for the year ended December 31, 2021 were RMB357 million and RMB296 million, respectively. Since this agreement expired on December 31, 2021, we entered into a renewed Master Information Technology Services Agreement with LCNG on November 17, 2021.

Master LNG Purchasing Agreement

On September 28, 2018, we entered into a Master LNG Purchasing Agreement with LCNG. The agreement commenced on October 1, 2018 and expired on December 31, 2020, whereby the Wang Family Companies agreed to provide us with LNG supply. The annual cap and the transaction sum for the year ended December 31, 2019 were RMB1,665 million and RMB1,313 million, respectively. The annual cap and the transaction sum for the year ended December 31, 2020 were RMB1,665 million and RMB136 million, respectively.

Master Natural Gas Purchasing Agreement

Under the independent operation of PipeChina, the availability and inter-connection of infrastructures will be enhanced and the "incoming in liquefied form and outgoing in gaseous form" of LNG would become the new standard mode, therefore transactions could not only be limited to purchasing LNG. Moreover, there was a reorganization at the Company's controlling shareholders level in September 2020. On November 30, 2020, we entered into a Master Natural Gas Purchasing Agreement with ENN-NG instead of renewing the Master LNG Purchasing Agreement. The new agreement commenced on January 1, 2021 and is due to expire on December 31, 2023, whereby the Wang Family Companies agreed to provide us with natural gas supply. The annual cap and the transaction sum for the year ended December 31, 2021 were RMB2,200 million and RMB2,019 million, respectively.

Master LNG Terminal Usage Services Agreement

On September 28, 2018, we entered into a Master LNG Terminal Usage Services Agreement with LCNG. The agreement commenced on October 1, 2018 and is due to expire on December 31, 2028, whereby the Wang Family Companies agreed to provide us with LNG terminal usage services to enable us to receive imported LNG through LNG receiving terminals in Zhoushan. The annual cap and the transaction sum for the year ended December 31, 2019 were RMB685 million and RMB131 million, respectively. The annual cap and the transaction sum for the year ended December 31, 2020 were RMB714 million and RMB644 million, respectively. The annual cap and the transaction sum for the year ended December 31, 2021 were RMB924 million and RMB728 million, respectively.

Master Logistic Services Agreement

On November 17, 2021, we entered into a Master Logistic Services Agreement with ENN-NG, whereby we agreed to provide logistic services to ENN-NG. The agreement commenced on November 17, 2021 and is due to expire on December 31, 2023. The annual cap and the transaction sum for the year ended December 31, 2021 were RMB62 million and RMB28 million, respectively.

DESCRIPTION OF OTHER MATERIAL INDEBTEDNESS

To fund our existing projects and to finance our working capital requirements, we have in the past issued certain debt securities as well as borrowed money from various banks. As of December 31, 2021, our total borrowings, including the 2017 Bonds, the 2019 Corporate Bonds (as defined below) and the 2020 Green Notes, amounted to RMB19,890 million. We set forth below a summary of the material terms and conditions of these loans and other indebtedness.

The 2017 Bonds

On July 24, 2017, we entered into a trust deed (the "**2017 Trust Deed**") pursuant to which we issued an aggregate principal amount of US$600,000,000 senior bonds due 2022. As of December 31, 2021, we had a total amount of US$565,336,000 principal amount of 2017 Bonds outstanding. Our 2017 Bonds are listed on the Hong Kong Stock Exchange.

Interest

The 2017 Bonds bear interest at a rate of 3.25 per cent. per annum. Interest is payable semi-annually in arrear.

Covenants

Subject to certain conditions and exceptions, the 2017 Bonds contains certain covenants, restricting us and each of the related restricted subsidiaries from, among other things:

- creating liens; and
- merging or consolidating with another company.

Events of Default

The 2017 Trust Deed contains certain customary events of default, including default in the payment of principal or of any premium on the 2017 Bonds when such payments become due and payable, default in payment of interest which continues for 14 days, and other events of default substantially similar to the Events of Default under the Indenture. If an event of default occurs and is continuing, the trustee under the 2017 Trust Deed at its sole discretion may, and if so requested in writing by the holders of at least 25% of the outstanding 2017 Bonds or if so directed by an extraordinary resolution shall (provided that in any such case the trustee under the 2017 Trust Deed shall first have been indemnified and/or secured and/or prefunded to its satisfaction) declare the principal of, premium, if any, and accrued and unpaid interest, if any, on the 2017 Bonds to be immediately due and payable.

Change of Control

Upon the occurrence of certain events of change of control, we will make an offer to repurchase the outstanding 2017 Bonds at a purchase price equal to 101% of their principal amount plus any accrued and unpaid interest, if any, to the repurchase date.

Maturity and Redemption

The maturity date of the 2017 Bonds is July 24, 2022. At any time prior to the maturity date, we may redeem the 2017 Bonds, in whole but not in part, at a make whole price as of, and any accrued and unpaid interest, if any, to (but excluding) the redemption date.

Additionally, if under the 2017 Trust Deed we have or would become obligated to pay certain additional amounts as a result of certain changes in specified tax law, we may redeem the 2017 Bonds in whole, but not in part, at a redemption price equal to 100% of the principal amount of the 2017 Bonds, plus any interest accrued to the date fixed for redemption, subject to certain exceptions.

The 2019 Corporate Bonds

One of our wholly owned subsidiaries, Xinao (China) issued three tranches of corporate bonds in 2019 (together, the "**2019 Corporate Bonds**").

On January 22, 2019, Xinao (China) issued corporate bonds with a face value of RMB500,000,000. These corporate bonds are unsecured, carry an interest rate of 4.19 per cent. per annum and are payable on January 22, 2022. We have fully repaid this tranche of corporate bonds as of January 22, 2022.

On March 8, 2019, Xinao (China) issued corporate bonds with a face value of RMB1,000,000,000. These corporate bonds are unsecured, carry an interest rate of 4.20 per cent. per annum and are payable on March 8, 2022. We have fully repaid this tranche of corporate bonds as of March 8, 2022.

On November 11, 2019, Xinao (China) issued corporate bonds with a face value of RMB600,000,000. These corporate bonds are unsecured, carry an interest rate of 3.98 per cent. per annum and are payable on November 12, 2022.

The 2020 Green Notes

On September 17, 2020, we entered into an indenture (the "**2020 Indenture**") pursuant to which we issued aggregate principal amount of US$750,000,000 green notes due on September 17, 2030. As of December 31, 2021, we had a total amount of US$750 million principal amount of 2020 Green Notes outstanding. The Green Notes are listed on the Hong Kong Stock Exchange.

Interest

The 2020 Green Notes bear interest at a rate of 2.625 per cent. per annum. Interest is payable semi-annually in arrear.

Covenants

Subject to certain conditions and exceptions, the 2020 Green Notes contains certain covenants, restricting us and each of the related restricted subsidiaries from, among other things:

- creating any encumbrance; and
- entering into mergers, acquisitions or reorganizations.

Events of Default

The 2020 Indenture contain certain customary events of default, including, among others, (a) default in the payment of (i) principal or premium (if any) on the 2020 Green Notes, or (ii) interest on the 2020 Green Notes, continues for 14 days, (b) failure by the Company to comply, for 30 days after written notice of such default by the trustee, with certain of its other obligations in the 2020 Green Notes and the 2020 Indenture; (c)(i) any failure to pay upon final maturity when due or, as the case may be, within any originally applicable grace period, the principal of any indebtedness of the Company or any of its subsidiaries; (ii) any other present or future indebtedness of the Company or any of its subsidiaries for or in respect of moneys borrowed or raised becomes due and payable prior to its stated maturity by reason of any event of default (howsoever described) or (iii) any failure to pay any amount payable by the Company or any of its subsidiaries under any guarantee or indemnity in respect of any indebtedness of any other person thereof, when such amount is due; provided that, no such event set forth in (i), (ii) or (iii) of this paragraph (c) shall constitute an event of default unless the aggregate outstanding indebtedness to which all such events relate exceeds US$70,000,000; (d) a distress, attachment, execution, seizure before judgment or other legal process being levied, enforced or sued out on or against any part of the property, assets or revenues of the Company aggregating in excess of US$70,000,000, which is not discharged or stayed within 30 days; or (e) certain events of insolvency and winding-up of the Company or its principal subsidiaries.

If an event of default (other than an event of default described in clause (e) above) with respect to the 2020 Green Notes shall occur and be continuing, either the trustee or the holders of at least 25% in aggregate principal amount of the 2020 Green Notes then outstanding by written notice as provided in the 2020 Indenture may declare the principal amount of the 2020 Green Notes and any accrued and unpaid interest thereon to be due and payable immediately. If an event of default in clause (e) above with respect to the 2020 Green Notes shall occur, the unpaid principal amount of all the 2020 Green Notes and any accrued and unpaid interest thereon will automatically, and without any action by the trustee or any holder of the 2020 Green Notes, become immediately due and payable.

Change of Control

Upon the occurrence of certain events of change of control, we will make an offer to repurchase the outstanding 2020 Green Notes at a purchase price equal to 101% of their principal amount plus any accrued and unpaid interest, if any, to the repurchase date.

Maturity and Redemption

The maturity date of the 2020 Green Notes is September 17, 2030. At any time prior to the maturity date, we may redeem the 2020 Green Notes, in whole but not in part, (a) in the case of an optional redemption date before June 17, 2030 (the date that is three months prior to the maturity date for the 2020 Green Notes) at the greater of (1) 100% of the principal amount of the applicable 2020 Green Notes to be redeemed and (2) the sum of the present values of the remaining scheduled payments of principal and interest on the applicable 2020 Green Notes to be redeemed (not including interest accrued and unpaid to the date of redemption), discounted to the date of redemption on a semi-annual basis (assuming a 360-day year consisting of 12 months of 30 days each and, in the case of an incomplete month, the actual number of days elapsed) at the adjusted treasury rate plus 50 basis points, plus accrued and unpaid interest on the applicable 2020 Green Notes to be redeemed, if any, to (but not including) the optional redemption date; or (b) in the case of an optional redemption date on or after June 17, 2030 (the date that is three months prior to the maturity date for the 2020 Green Notes), 100% of the principal amount of the 2020 Green Notes to be redeemed, plus accrued and unpaid interest, if any, to, but not including, the optional redemption date.

Additionally, if under the 2020 Indenture we have or would become obligated to pay certain additional amounts as a result of certain changes in specified tax law, we may redeem the 2020 Green Notes in whole, but not in part, on giving not less than 30 nor more than 60 days' notice to the holders of the 2020 Green Notes and the trustee, at the principal amount of the 2020 Green Notes, plus interest accrued to the date fixed for redemption and additional amounts.

Bank and Other Loans (Fixed and Floating Rate)

We have entered into loan agreements with various banks and other institutions. As of December 31, 2021, the aggregate outstanding amount under these loans totaled RMB9,468 million (US$1,486 million), RMB6,150 million (US$965 million) of which was due within one year and RMB3,318 million (US$521 million) of which was due after one year.

The principal amounts outstanding under the project loans generally bear interest at: (i) fixed rates ranging from 0.64% to 4.80% or (ii) floating rates calculated by reference to the relevant bank's benchmark interest rate per annum. Floating interest rates generally are subject to review by the lending banks annually. Interest payments are payable either quarterly, semi-annually or annually and must be made on each payment date as provided in the particular loan agreement.

PRC Bank and Other Loans (Fixed and Floating Rate)

Certain of our PRC subsidiaries have entered into loan agreements with various PRC banks and other institutions. These loans are project loans to finance the construction of our projects and have terms ranging from 5 months to 15 years. As of December 31, 2021, the aggregate outstanding amount under these loans totaled RMB5,796 million (US$910 million), RMB2,478 million (US$389 million) of which was due within one year and RMB3,318 million (US$521 million) of which was due after one year. Our project loans are typically secured by land use rights, properties and rights to receive gas connection and gas supply fee income as well guaranteed by certain of our other PRC subsidiaries. The Notes will be structurally subordinated to these loans and any other indebtedness incurred by our PRC subsidiaries.

Interest

The principal amounts outstanding under the project loans generally bear interest at: (i) fixed rates ranging from 1.85% to 4.80% or (ii) floating rates calculated by reference to the relevant bank's benchmark interest rate per annum. Floating interest rates generally are subject to review by the lending banks annually. Interest payments are payable either quarterly, semi-annually or annually and must be made on each payment date as provided in the particular loan agreement. As of December 31, 2021, the weighted average interest rate on the aggregate outstanding amount of our debts was 2.92% per annum.

Covenants

Under these project loans, many of our subsidiary borrowers have agreed, among other things, not to take the following actions without first obtaining the relevant lenders' prior consent:

- create encumbrances on any part of their property or assets or deal with their assets in a way that may adversely affect their ability to repay their loans;

- grant guarantees to any third parties that may adversely affect their ability to repay their loans;

- make any major changes to their corporate structures, such as entering into joint ventures, mergers and acquisitions and reorganizations; and

- alter the nature or scope of their business operations in any material respect.

Events of Default

The loans contain certain customary events of default, including insolvency and breaches of the terms of the loan agreements. The banks are entitled to terminate their respective agreements and/or demand immediate repayment of the loans and any accrued interest upon the occurrence of an event of default.

Guarantee and Security

Certain of our PRC subsidiaries have entered into guarantee agreements with the PRC banks in connection with some of the project loans pursuant to which these subsidiaries have guaranteed all liabilities of the subsidiary borrowers under these project loans. Further, as of December 31, 2021, RMB400 million (US$62.8 million) of the loans were secured by land use rights, properties, rights to receive gas connection and gas supply fee income held by the subsidiary borrowers.

DESCRIPTION OF THE NOTES

The Notes will be issued pursuant to an indenture to be dated as of May 17, 2022 (the "**Indenture**") among the Company and HSBC Bank USA, National Association as trustee (the "**Trustee**"), paying agent, transfer agent and registrar. A copy of this Offering Memorandum, the Notes and the Indenture will be available for inspection at the issuer services office of the Trustee. The holders of the Notes will be bound by, and be deemed to have notice of, all the provisions of the Indenture.

The following summaries of certain provisions of the Notes and the Indenture are subject to, and are qualified in their entirety by reference to, the detailed provisions of the Notes and the Indenture. Terms and expressions used in this section and not otherwise defined shall have the meanings given to such terms in the Notes and the Indenture. This section does not restate those agreements in their entirety. Whenever particular sections or defined terms of the Indenture not otherwise defined herein are referred to, such sections or defined terms are incorporated herein by reference.

General

The Notes will be issued in an initial aggregate principal amount of US$550,000,000 and will mature on May 17, 2027, unless the Notes are redeemed earlier pursuant to the terms of the Indenture.

The Notes will bear interest at the rate of 4.625% per annum. Interest on the Notes will accrue from May 17, 2022 or from and including the most recent Interest Payment Date (as defined below) to which interest has been paid or provided for, to and excluding the next Interest Payment Date or the maturity date of the Notes, and will be payable semi-annually in arrears on May 17 and November 17 of each year (each, an "**Interest Payment Date**"), commencing on November 17, 2022, to the persons in whose names the Notes are registered at the close of business on May 2 and November 2 (whether or not a Business Day), respectively (each an "**Interest Record Date**") immediately preceding an Interest Payment Date. Interest shall be calculated on the basis of a 360-day year consisting of twelve 30-day months and, in the case of an incomplete month, the actual number of days elapsed.

In any case where the due date of payment of the principal of or interest on the Notes or the date fixed for redemption of the Notes is not a Business Day (as defined below), then payment of principal or interest shall be made on the next succeeding Business Day, with the same force and effect as if made on the due date of payment or the date fixed for redemption, as the case may be, and no interest shall accrue for the period from and after such date. "Business Day" means a day in The City of New York, Hong Kong and the applicable place of payment other than a Saturday, Sunday or a day on which banking institutions are authorized or obligated by law or executive order to remain closed.

The Notes will not be entitled to the benefit of any sinking fund. The Notes shall be denominated in minimum principal amounts of US$200,000 and in integral multiples of US$1,000 in excess thereof.

The Notes will be the direct, unconditional, unsubordinated and unsecured obligations of the Company, and rank *pari passu* with all other unsecured and unsubordinated obligations of the Company (other than obligations preferred by applicable law) and senior in priority of payment and in all other respects to all other indebtedness of the Company that is designated as subordinate or junior in right of payment to the Notes.

The principal of, interest on, and all other amounts payable under, the Notes will be payable, and the Notes may be exchanged or transferred, at the office or agency of the Company, which initially will be the issuer services office of the paying agent currently located at 452 Fifth Avenue, New York, NY, 10018, USA, or at such other location or locations as the Company, in consultation with the Trustee, may designate.

The principal of and interest on the Notes will be made by wire transfer or otherwise in immediately available funds and payable in U.S. dollars or in such other coin or currency of the United States of America as of the time of payment is legal tender for the payment of public and private debts.

Payment of the principal of and interest on the Notes held through The Depository Trust Company ("**DTC**") will be credited to the respective accounts of the holders of the Notes with DTC or its participants, including Euroclear Bank SA/NV ("**Euroclear**") and Clearstream Banking, S.A. ("**Clearstream**"). See "– *Notes; Delivery and Form.*"

Further Issues

The Notes will be issued in an initial aggregate principal amount of US$550,000,000. The Company may, however, from time to time, without the consent of the holders of the Notes, issue pursuant to the Indenture, additional notes having the same terms and conditions under the Indenture as the previously outstanding Notes in all respects, except for issue date, issue price, amount of the first payment of interest on them (or the date thereof, as the case may be), the timing for the NDRC Post-issue Filing, and to the extent necessary, certain temporary securities law transfer restrictions. Additional notes issued may be consolidated with and form a single series with the previously outstanding Notes; *provided*, *however*, that such additional notes may have the same CUSIP, ISIN, Common Code or other identifying number as the outstanding Notes only if such additional notes are fungible with such Notes for U.S. federal income tax purposes.

Additional Amounts

All payments of principal, premium and interest in respect of the Notes will be made free and clear of, and without withholding or deduction for, or on account of, any present or future taxes, duties, assessments or governmental charges of whatever nature ("**Taxes**") imposed, levied, collected, withheld or assessed by or on behalf of the Cayman Islands, the PRC or any other jurisdiction in which the Company (or any successor to the Company) is organized or tax resident, in each case including any political subdivision, territory or possession thereof, any authority therein having power to tax or any area subject to its jurisdiction (each, a "**Relevant Jurisdiction**"), or any jurisdiction from or through which any payment is made (together with Relevant Jurisdictions, each, a "**Relevant Taxing Jurisdiction**") unless such Taxes are required by law to be withheld or deducted. If any deduction or withholding for any present or future Taxes of the applicable Relevant Taxing Jurisdiction shall at any time be so required, the Company shall pay such additional amounts ("**Additional Amounts**") as will result (after deduction of such Taxes, including Taxes payable in respect of such Additional Amounts) in receipt by each holder of any Note of such amounts as would have been received by such holder with respect to such Note, as applicable, had no such withholding or deduction been required; *provided*, *however*, that no Additional Amounts shall be payable in respect of any Note:

(i) to a holder (or to a third party on behalf of a holder) who is liable to such Taxes in respect of such Note by reason of his having some connection with the Relevant Taxing Jurisdiction other than the mere holding of the Note;

(ii) which is surrendered (where required to be surrendered) more than 30 calendar days after the Relevant Date, except to the extent that the holder of it would have been entitled to such Additional Amounts on surrender of such Note for payment on the last day of such period of 30 calendar days. "Relevant Date" means whichever is the later of (a) the date on which such payment first becomes due and (b) if the full amount payable has not been received by the Trustee or paying agent on or prior to such due date, the date on which, the full amount having been so received, notice to that effect shall have been given to the holders of the Notes;

(iii) to a holder (or to a third party on behalf of a holder) who would have been able to avoid such withholding or deduction by duly presenting the Note (where presentation is required) to another paying agent;

(iv) with respect to any Taxes that would not have been imposed but for the failure of the holder or beneficial owner to comply with a timely request of the Company addressed to the holder to provide certification or information concerning the nationality, residence or identity of the holder or beneficial owner of the Note, if due and timely compliance is required as a precondition to relief or exemption from the tax, duty assessment or governmental charge under the laws (not including treaties) of the Relevant Taxing Jurisdiction;

(v) with respect to any estate, inheritance, gift, sale, transfer, personal property or similar tax, assessment or other similar governmental charge;

(vi) with respect to any such Taxes payable otherwise than by deduction or withholding from payments under or with respect to any Note; or

(vii) with respect to any combination of taxes, duties, assessments or other governmental charges referred to in the preceding items (i) through (vi) above.

Notwithstanding any other provision of the Indenture, any amounts to be paid on the Notes by or on behalf of the Company will be paid net of any deduction or withholding imposed or required pursuant to an agreement described in Section 1471(b) of the U.S. Internal Revenue Code of 1986, as amended (the "**Code**"), or otherwise imposed pursuant to Sections 1471 through 1474 of the Code (or any current or future regulations thereunder or official interpretations thereof) or an intergovernmental agreement between the United States and another jurisdiction facilitating the implementation thereof (or any fiscal or regulatory legislation, rules or practices implementing such an intergovernmental agreement) (any such withholding or deduction, a "**FATCA Withholding**"). Neither the Company nor any other person will be required to pay any Additional Amounts in respect of FATCA Withholding.

Additional Amounts will not be paid with respect to any payment of the principal of or any premium or interest on the Notes to any holder of a Note who is a fiduciary or partnership or other than the sole beneficial owner of such payment to the extent that payment would be required by the laws of the Relevant Taxing Jurisdiction to be included in the income of a beneficiary or settlor with respect to the fiduciary, a member of that partnership or a beneficial owner who would not have been entitled to the Additional Amounts had that beneficiary, settlor, member or beneficial owner been the holder.

Whenever there is mentioned, in any context, the payment of principal, premium or interest in respect of any Note, such mention shall be deemed to include the payment of Additional Amounts provided for in the Indenture to the extent that, in such context, Additional Amounts are, were or would be payable in respect thereof pursuant to the Indenture.

The Company will use reasonable efforts to obtain certified copies of tax receipts evidencing the payment of any Taxes so withheld or deducted from the taxing authorities of the Relevant Jurisdiction imposing such Taxes, and if certified copies are not available, the Company will use reasonable efforts to obtain other evidence satisfactory to the Trustee. The Trustee shall make such certified copies or other evidence available to the holders of the Notes upon reasonable request to the Trustee.

Redemption

Unless earlier redeemed in the limited circumstances set forth below under "– Optional Redemption" and "– Optional Tax Redemption," the Notes will mature on May 17, 2027, at a price equal to 100% of the principal amount thereof and the Notes will not be otherwise redeemable at the option of the Company.

Optional Redemption

The Company may, at any time and from time to time redeem the Notes on any date (the "**Optional Redemption Date**"), in whole or in part, on not less than 30 nor more than 60 days' prior notice. The applicable Notes will be redeemable at (a) in the case of an Optional Redemption Date prior to April 17, 2027 (the date that is one month prior to the Maturity Date for the Notes), the greater of (1) 100% of the principal amount of the applicable Notes to be redeemed and (2) the sum of the present values of the remaining scheduled payments of principal and interest on the applicable Notes to be redeemed (not including interest accrued and unpaid to the date of redemption), discounted to the date of redemption on a semi-annual basis (assuming a 360-day year consisting of 12 months of 30 days each and, in the case of an incomplete month, the actual number of days elapsed) at the Adjusted Treasury Rate plus 30 basis points, plus, in either case, accrued and unpaid interest on the applicable Notes to be redeemed, if any, to (but not including) the Optional Redemption Date; or (b) in the case of an Optional Redemption Date on or after April 17, 2027 (the date that is one month prior to the Maturity Date for the Notes), 100% of the principal amount of the Notes to be redeemed, plus accrued and unpaid interest, if any, to, but not including, the Optional Redemption Date.

"*Adjusted Treasury Rate*" means, with respect to the Optional Redemption Date, the rate per annum equal to the semi-annual equivalent yield in maturity of the Comparable Treasury Issue, assuming a price for the Comparable Treasury Issue (expressed as a percentage of its principal amount) equal to the Comparable Treasury Price for such redemption date.

"*Comparable Treasury Issue*" means the U.S. Treasury security having a maturity comparable to the remaining term of the Notes to be redeemed that would be utilized, at the time of selection and in accordance with customary financial practice, in pricing new issues of corporate debt securities of comparable maturity to the remaining term of the Notes to be redeemed.

"*Comparable Treasury Price*" means, with respect to the Optional Redemption Date:

(i) the average of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) on the third New York Business Day preceding the Optional Redemption Date, as set forth in the most recently published statistical release designated "H.15(519)" or any successor publication which is published weekly by the Board of Governors of the Federal Reserve System and which establishes yields on actively traded United States Treasury securities adjusted to constant maturity under the caption "Treasury Constant Maturities," or any successor webpage, or, failing which, on Bloomberg pages PX1, PX2 and PX3, which establishes a yield for actively traded United States Treasury securities adjusted to constant maturity under the caption "Treasury Constant Maturities", with a maturity comparable to the Comparable Treasury Issue, (if no maturity falls within one month before or after such time period, yields for the two published maturities most closely corresponding to such time period shall be determined and the Adjusted Treasury Rate shall be interpolated or extrapolated from such yields on a straight-line basis, rounding to the nearest month); or as such aforesaid yield is displayed on the Reuters screen FRBCMT page (or such other page which may replace that page on that service or a successor service); or

(ii) if such release (or any successor release) is not published or does not contain such prices on such business day, (a) the average of the Reference Treasury Dealer Quotations for such Optional Redemption Date, after excluding the highest and lowest of such Reference Treasury Dealer Quotations, or (b) if fewer than three such Reference Treasury Dealer Quotations are available, the average of all such quotations.

"*New York Business Day*" means any day (other than a Saturday or Sunday) on which banking institutions are open for general business in The City of New York, New York.

"*Quotation Agent*" means an independent investment bank selected and appointed by the Company and notified in writing to the Trustee and the paying agent.

"*Reference Treasury Dealer*" means each of any three investment banks of recognized standing that is a primary U.S. Government securities dealer in New York City, selected by the Company in good faith.

"*Reference Treasury Dealer Quotations*" means, with respect to each Reference Treasury Dealer and the Optional Redemption Date, the average as determined by the Quotation Agent, of the bid and asked prices for the Comparable Treasury Issue (expressed in each case as a percentage of its principal amount) quoted in writing to such Quotation Agent by such Reference Treasury Dealer at 5:00 p.m. (New York time) on the third New York Business Day preceding such date of redemption.

Optional Tax Redemption

The Notes may be redeemed, at the option of the Company, in whole but not in part, upon notice as described below, at a redemption price equal to 100% of the principal amount thereof, together with accrued and unpaid interest to the date fixed for redemption and Additional Amounts, if any, if, as a result of any change in or amendment to the laws of a Relevant Jurisdiction or any regulations or rulings promulgated thereunder, or any change in the official interpretation or official application of such laws, regulations or rulings, which change or amendment (i) in the case of the Company is announced and becomes effective after the date of this Offering Memorandum and (ii) in the case of any successor to the Company that is organized or tax resident in a jurisdiction that is not a Relevant Jurisdiction as of the original issue date of the Notes is announced and becomes effective on or after the date such successor assumes the Company's obligations, under the Notes and the Indenture, the Company is or would be obligated to pay Additional Amounts with respect to the Notes as described above under "– *Additional Amounts*" if such obligation cannot be avoided by the Company taking reasonable measures available to it.

Notice of redemption of the Notes as provided above shall be given not less than 30 nor more than 60 calendar days prior to the date fixed for redemption, *provided* that no such notice of redemption shall be given earlier than 90 days prior to the earliest date on which the Company would be obligated to pay such Additional Amounts as payment in respect of the Notes then due. Notice having been given, the Notes shall become due and payable on the date fixed for redemption and will be paid at the redemption price, together with accrued interest to the date fixed for redemption and any Additional Amounts, at the place or places of payment and in the manner specified in the notice. From and after the date fixed for redemption, if moneys sufficient for the redemption of such Notes shall have been made available as provided in the Indenture for redemption on the date fixed for redemption, the Notes shall cease to bear interest, and the only right of the holders of the Notes shall be to receive payment of the redemption price, interest accrued to the date fixed for redemption and Additional Amounts, if any.

Prior to the giving of any notice of redemption, the Company shall deliver to the Trustee an opinion of external legal counsel of recognized standing in the Relevant Jurisdiction and an officers' certificate attesting to such change in tax law and obligation to pay Additional Amounts.

Redemption upon a Change of Control

Upon a Change of Control (as defined below), the holder of each Note will have the right, at such holder's option, to require the Company to redeem all, or some only (subject to the provision below) of such holder's Notes at a price in cash equal to 101% of the principal amount of the Notes to be repurchased, plus accrued and unpaid interest on the principal amount of the Notes being repurchased to but excluding the date of repurchase. Within 14 calendar days following the first day on which it becomes aware of the Change of Control, the Company shall give written notice to holders of the Notes and the Trustee specifying the procedure for exercise by holders of the Notes of their rights to require redemption of the Notes.

To exercise such right, the holder of the relevant Note must deposit at the specified office of the paying agent or any other paying agent a duly completed and signed notice of redemption, in the form for the time being current, obtainable from the specified office of the paying agent or any other paying agent (a "**Put Exercise Notice**"), together with the certificate evidencing the Notes to be redeemed, by not later than 30 days following a Change of Control, or, if later, 30 days following the date upon which notice thereof is given to the holders of the Notes by the Company in accordance with "– *Notices*". The "Put Date" shall be the fourteenth day after the expiry of such period of 30 days as referred to above.

Once a Put Exercise Notice is delivered, it shall be irrevocable and the Company shall redeem the Notes that are the subject of such notice delivered; *provided* that, such holder shall have no right to require the Company to redeem such Notes to the extent that it would result in such holder holding an aggregate principal amount of Notes of less than US$200,000 immediately following the Put Date.

The Company will comply, to the extent applicable, with the requirements of applicable securities laws or regulations in connection with the repurchase of the Notes pursuant to this covenant.

"*Affiliate*" of any specified Person means any other Person, directly or indirectly, controlling or controlled by or under direct or indirect common control with such specified Person. For the purposes of this definition, "control", when used with respect to any Person, means the power to direct the management and policies of such Person, directly or indirectly, whether through the ownership of voting securities, by contract or otherwise; and the terms "controlling" and "controlled" have meanings correlative to the foregoing; provided that under "*– Redemption upon a Change of Control*", beneficial ownership of 10% or more of the Voting Stock of a Person shall be deemed to be control.

"*Capital Stock*" means any and all shares, interests (including joint venture interests), equity participations or other equivalents (however designated) of capital stock of a corporation or any and all equivalent ownership interests in a Person (other than a corporation).

"*Change of Control*" means the occurrence, at any time, of any of the following:

(i) the Permitted Holders are the beneficial owners of less than 20% of the total voting power of the Voting Stock of the Company; or

(ii) any person or persons acting together is or becomes the beneficial owner, directly or indirectly, of total voting power of the Voting Stock of the Company greater than such total voting power held beneficially by the Permitted Holders; or

(iii) individuals who at the issue date of the Notes constituted the board of directors of the Company (together with any new directors whose election or appointment by such board of directors or whose nomination for election by the shareholders of the Company was approved by a vote of not less than half of the directors then still in office who were either directors at the issue date of the Notes or whose election or nomination for election was previously so approved) cease for any reason to constitute a majority of the board of directors of the Company then in office; or

(iv) the merger, amalgamation or consolidation of the Company with or into another Person (other than one or more Permitted Holders) or the merger or amalgamation of another Person (other than one or more Permitted Holders) with or into the Company, or the sale, lease, transfer, conveyance or other disposition (other than by way of merger or consolidation), in one or a series of related transactions, of all or substantially all of the assets of the Company and its Subsidiaries taken as a whole, to any person other than Permitted Holders or wholly owned Subsidiaries of the Company; or

(v) the approval by the shareholders of the Company of a plan or proposal for the liquidation or dissolution of the Company.

"*Permitted Holders*" means Mr. Wang Yusuo and Ms. Zhao Baoju and any Affiliate of any of them.

"*Subsidiary*" of any Person means (a) any company or other business entity of which that Person owns or controls (either directly or through one or more other Subsidiaries) more than 50% of the issued share capital or other ownership interest having ordinary voting power to elect directors, managers or trustees of such company or other business entity or (b) any company or other business entity which at any time has its accounts consolidated with those of that Person or which, under the law, regulations or generally accepted accounting principles of the jurisdiction of incorporation of such person from time to time or the Cayman Islands or Hong Kong, should have its accounts consolidated with those of that Person.

"*Voting Stock*" of a corporation means all classes of Capital Stock of such corporation then outstanding and normally entitled to vote in the election of directors.

Certain Covenants

Limitation on Liens

For so long as any Note remains outstanding, the Company shall not, and shall procure that none of its Principal Subsidiaries will, create or permit to subsist or arise any Lien upon the whole or any part of their respective present or future assets or revenues (including any uncalled capital) to secure any Relevant Indebtedness or to secure any guarantee or indemnity in respect of any Relevant Indebtedness except for Liens existing with respect to any Person or the property or assets of such Person acquired by the Company or any of its Principal Subsidiaries, at the time of such acquisition and not incurred in contemplation thereof, which liens or restrictions are not applicable to any Person or the property or assets of any Person other than such Person or the property or assets of such Person so acquired, and any extensions, refinancings, renewals or replacements thereof without, in any such case, making effective provision whereby the Notes will be secured at least equally and rateably with such Relevant Indebtedness (or any guarantee or indemnity in respect of such Relevant Indebtedness).

Consolidation, Merger and Sale of Assets

For so long as any Note remains outstanding, the Company shall not consolidate with, merge or amalgamate into or convey or transfer all or substantially all its property or assets to any Person (the consummation of any such event, a "**Merger**"), unless:

(i) the corporation formed by such Merger or the Person that acquired such properties and assets, if not the Company, shall expressly assume, by a supplemental indenture, all obligations of the Company, under the Indenture and the performance of every covenant and agreement applicable to it contained therein;

(ii) immediately after giving effect to any such Merger, no Event of Default, and no event which, after notice or lapse of time or both, may become an Event of Default shall have occurred or be continuing or would result therefrom; and

(iii) the successor (if not the Company) expressly agrees in a supplemental indenture that its jurisdiction of organization or tax residence (if not the Cayman Islands) will be added to the list of Relevant Jurisdictions.

Such Merger shall not be effective until the Company has delivered to the Trustee an officer's certificate stating that all requirements relating to such Merger have been complied with and that such Merger is authorized and permitted under the Indenture. The Trustee shall be entitled to rely on and shall be protected and shall incur no liability to any holder for or in respect of any action taken, omitted or suffered in reliance upon such officer's certificate.

For purposes of this covenant, the conveyance or transfer of all or substantially all of the property or assets of one or more Subsidiaries of the Company, which property or assets, if held by the Company instead of such Subsidiaries, would constitute all or substantially all of the property or assets of the Company on a consolidated basis, shall be deemed to be the transfer of all or substantially all of the property or assets of the Company.

Reports, Statements as to Compliance, and Notices of Default

For so long as any Note remains outstanding, the Company shall file with the Trustee:

(i) as soon as they are available, but in any event within 120 calendar days after the end of the fiscal year of the Company (currently being December 31 of each year and the Company shall notify the Trustee in writing within 10 calendar days if there is any change to such fiscal year), copies of its financial statements in English (on a consolidated basis) in respect of such financial year (including a statement of income, balance sheet and cash flow statement) audited by a member firm of an internationally recognized firm of independent accountants; and

(ii) as soon as they are available, but in any event within 90 calendar days after the end of the first semi-annual fiscal period of the Company, copies of its unaudited financial statements in English (on a consolidated basis) in respect of such semi-annual period (including a statement of income, balance sheet and cash flow statement) prepared on a basis consistent with the audited financial statements of the Company and reviewed by a member firm of an internationally recognized firm of independent accountants;

provided that if at any time the shares of the Company are listed for trading on a recognized stock exchange, the Company shall file with the Trustee, as soon as they are available but in any event not more than 10 calendar days after any financial or other reports of the Company are filed with any recognized exchange on which the Company's shares are at any time listed for trading, true and correct copies of any financial or other report filed with such exchange in lieu of the reports identified in clauses (i) and (ii) above, if such financial or other report is in English.

For so long as any Note remains outstanding, the Company shall file with the Trustee, as soon as possible and in any event within 10 calendar days after the Company becomes aware of the occurrence thereof, written notice of the occurrence of any event or condition which constitutes, or which, after notice or lapse of time or both, would become, an Event of Default and an officer's certificate of the Company setting forth the details thereof and the action the Company is taking or proposes to take with respect thereto.

The Company will agree in the Indenture that, so long as the Notes remain outstanding and are "restricted securities" within the meaning of Rule 144(a)(3) under the Securities Act, the Company, during any period in which it is not subject to and in compliance with Section 13 or 15(d) of the Exchange Act or it is not exempt from such reporting requirements pursuant to and in compliance with Rule 12g3-2(b) under the Exchange Act, will furnish, upon the request of any holder of a Note or of a beneficial interest in a Note, such information as is specified in paragraph (d)(4) of Rule 144A, to such holder or beneficial owner or to a prospective purchaser of a Note or a beneficial interest in a Note who is a qualified institutional buyer within the meaning of Rule 144A, in order to permit compliance by the holder or beneficial owner with Rule 144A in connection with the resale of the Note or beneficial interest in the Note in reliance on Rule 144A.

NDRC Post-issue Filing

The Company shall file or cause to be filed with the NDRC, within 10 Registration Business Days after the settlement date, the requisite information and documents in accordance with the Circular on Promoting the Reform of the Administrative System on the Issuance by Enterprises of Foreign Debt Filings and Registrations (國家發展改革委關於推進企業發行外債備案登記制管理改革的通知(發改外資[2015]2044號)) issued by the NDRC and effective as of 14 September 2015 and any implementation rules as issued by the NDRC from time to time (the "**NDRC Post-issue Filing**").

(i) The Company shall within 10 Registration Business Days after submission of the NDRC Post-issue Filing, provide the Trustee with (a) a certificate in English substantially in the form set out in the Indenture signed by an Authorized Officer of the Company confirming the submission of the NDRC Post-issue Filing; and (b) a copy of the NDRC Post-issue Filing setting out the particulars of filing, certified as a true and complete copy of the original by an Authorized Officer of the Company (the items specified in (a) and (b) together, the "**Filing Documents**"). In addition, the

Company shall, within 10 Registration Business Days after the documents comprising the Filing Documents are delivered to the Trustee, give notice to the holders of the Notes confirming the submission of the NDRC Post-issue Filing.

(ii) The Trustee shall have no obligation or duty to monitor or ensure the submission of the NDRC Post-issue Filing on or before the deadline referred to above or to verify the accuracy, validity and/or genuineness of any certificate, confirmation, or other documents in relation to or in connection with the NDRC Post-issue Filing, and shall not be liable to holders of the Notes or any other person for not doing so.

Other Covenants

In addition, the Indenture will (subject to exceptions, qualifications and materiality thresholds, where appropriate) contain covenants regarding the Company's payment of taxes and other claims and the maintenance of an agent for service of process in the Borough of Manhattan, The City of New York.

Events of Default

Each of the following shall constitute an "Event of Default" under the Indenture for the Notes:

(i) the Company fails to pay (a) principal, or premium (if any) on any Note or (b) interest on any Note and the default continues for a period of 14 days;

(ii) the Company does not perform or comply with any one or more of its other obligations in the Notes and the Indenture (other than those referred to the paragraph immediately above), which default is either incapable of remedy or, if remediable, is not remedied within 30 days after written notice of such default shall have been given to the Company by the Trustee;

(iii) any failure to pay upon final maturity when due or, as the case may be, within any originally applicable grace period, (a) the principal of any Indebtedness of the Company or any of its Subsidiaries, (b) any other present or future Indebtedness of the Company or any of its Subsidiaries for or in respect of moneys borrowed or raised becomes due and payable prior to its stated maturity by reason of any event of default (howsoever described) or (c) any failure to pay any amount payable by the Company or any of its Subsidiaries under any guarantee or indemnity in respect of any Indebtedness of any other Person thereof, when such amount is due; provided that, no such event set forth in (a), (b) or (c) shall constitute an Event of Default unless the aggregate outstanding Indebtedness to which all such events relate exceeds US$70,000,000 (on the basis of the middle spot rate for the relevant currency against the US dollar as quoted by any leading bank selected by the Company on the day on which this paragraph operates);

(iv) a distress, attachment, execution, seizure before judgment or other legal process is levied, enforced or sued out on or against any part of the property, assets or revenues of the Company aggregating in excess of US$70,000,000 (on the basis of the middle spot rate for the relevant currency against the US dollar as quoted by any leading bank selected by the Company on the day on which this paragraph operates) and is not discharged or stayed within 30 days;

(v) the Company or any of its Principal Subsidiaries is (or is, or could be, deemed by law or a court to be) insolvent or bankrupt or unable to pay its debts, stops, suspends or threatens to stop or suspend, payment of all or a material part of its debts, proposes or makes any agreement for the deferral, rescheduling or other readjustment of all of its debts (or of a material part which it will or might otherwise be unable to pay when due), proposes or makes a general assignment or an arrangement or composition with or for the benefit of the relevant creditors in respect of any of such debts or a moratorium is agreed or declared in respect of or affecting all or a material part of the debts of the Company or any of its Principal Subsidiaries or an administrator or liquidator of the Company, or any of its Principal Subsidiaries or the whole or a material part of the assets and revenue of the Company or any of its Principal Subsidiaries is appointed;

(vi) an order is made or an effective resolution passed for the liquidation, winding-up or dissolution, judicial management or administration of the Company or any of its Principal Subsidiaries (other than a voluntary winding-up on a solvent basis), or the Company or any of its Principal Subsidiaries ceases or threatens to cease to carry on all or substantially all of its business or operations, except in each case for the purpose of and followed by a reconstruction, amalgamation, reorganization, merger or consolidation whereby the assets or undertakings of such Principal Subsidiary are vested in or otherwise transferred to the Company or any of its Principal Subsidiaries;

(vii) any event occurs which under the laws of any relevant jurisdiction has an analogous effect to any of the events referred to in any of (iv) to (vi) above (all inclusive);

(viii) any action, condition or thing (including the obtaining or effecting of any necessary consent, approval, authorization, exemption, filing, license, order, recording or registration) at any time required to be taken, fulfilled or done in order (a) to enable the Company lawfully to enter into, exercise its rights and perform and comply with its obligations under the Notes and the Indenture, (b) to ensure that those obligations are legally binding and enforceable and (c) to make the Notes and the Indenture admissible in evidence in the courts of New York is not taken, fulfilled or done; or

(ix) it is or will become unlawful for the Company to perform or comply with any one or more of its obligations under any of the Notes and the Indenture.

If an Event of Default (other than an Event of Default described in clause (v) or (vi) or (vii) when it relates to (v) or (vi) above) with respect to the Notes shall occur and be continuing, either the Trustee or the holders of at least 25% in aggregate principal amount of the Notes then outstanding by notice as provided in the Indenture may declare the principal amount of the Notes and any accrued and unpaid interest thereon to be due and payable immediately. If an Event of Default in clause (v) or (vi) or (vii) when it relates to (v) or (vi) above with respect to the Notes shall occur, the unpaid principal amount of all the Notes and any accrued and unpaid interest thereon will automatically, and without any action by the Trustee or any holder of the Notes, become immediately due and payable. After any such acceleration but before a judgment or decree based on acceleration has been obtained, the holders of at least a majority in aggregate principal amount of the Notes then outstanding may, under certain circumstances, rescind and annul such acceleration if all Events of Default, other than the nonpayment of accelerated principal, have been cured or waived as provided in the Indenture.

Subject to the provisions of the Indenture relating to the duties of the Trustee, in case an Event of Default shall occur and be continuing, the Trustee will be under no obligation to exercise any of its rights or powers under the Indenture at the direction of any of the holders of the Notes unless such holders shall have offered to the Trustee security and/or indemnity satisfactory to the Trustee. Subject to certain provisions, including without limitation those requiring security and/or indemnification of the Trustee, the holders of not less than a majority in aggregate principal amount of the Notes then outstanding will have the right to direct the time, method and place of conducting any proceeding for any remedy available to the Trustee or exercising any trust or power conferred on the Trustee with respect to the Notes. However, the Trustee may refuse to follow any direction that conflicts with applicable law or with the Indenture or exposes the Trustee to personal liability or cause it to expend or risk its own funds or otherwise incur any financial liability in following such direction or that that the Trustee determines in good faith may be unduly prejudicial to the rights of holders not joining in the giving of such direction, provided that the Trustee may take any other action it deems proper that is not inconsistent with any such direction received from holders. No holder of any Notes will have any right to institute any proceeding, judicial or otherwise, with respect to the Indenture or the Notes, or for the appointment of a receiver or a trustee, or for any other remedy thereunder, unless (i) such holder has previously given written notice to the Trustee of a continuing Event of Default with respect to the Notes, (ii) the holders of at least 25% in aggregate principal amount of the Notes then outstanding have made written request, and such holder or holders have offered to the Trustee indemnity and/or security satisfactory to the Trustee, to institute proceedings as trustee and (iii) the Trustee has failed to institute such proceeding, and has not received from the holders of a majority in aggregate principal amount of the Notes then outstanding a direction inconsistent with such request, within 60 days after such notice, request or offer in accordance with the Indenture. However, such limitations do not apply to a suit instituted by a holder of a Note for the enforcement of the right to receive payment of the principal of or interest on such Note on or after the applicable due date specified in such Note.

The Trustee need not do anything to ascertain whether any Event of Default has occurred or is continuing and will not be responsible to holders or any other person for any loss arising from any failure by it to do so, and the Trustee may assume that no such event has occurred and that the Company is performing all their respective obligations under the Indenture and the related Notes unless the Trustee has received written notice of the occurrence of such event or facts establishing that the Company is not performing all of its obligations under the Indenture or the Notes.

"*incur*" means issue, create, assume, guarantee, incur or otherwise become liable for; and the terms "incurred" and "incurrence" have meanings correlative to the foregoing.

"*Indebtedness*" means, for purposes of this covenant only, with respect to any Person on any date of determination (without duplication), any outstanding indebtedness for or in respect of money borrowed (including bonds, debentures, notes or other similar instruments, whether or not listed); provided that Indebtedness shall not include any Indebtedness denominated in Renminbi that has a final maturity of less than one year from its date of incurrence or issuance.

Payments for Consent

Neither the Company nor any of its Subsidiaries will, directly or indirectly, pay or cause to be paid any consideration, whether by way of interest, fee or otherwise, to any holder of any Notes for or as an inducement to any consent, waiver or amendment of any of the terms or provisions of the Indenture or the Notes unless such consideration is offered to be paid or agreed to be paid to all holders of the Notes that consent, waive or agree to amend in the time frame set forth in the solicitation documents relating to such consent, waiver or agreement.

Modification and Waiver

The Indenture will contain provisions permitting the Company and the Trustee, without the consent of the holders of the Notes, to execute supplemental indenture for certain enumerated purposes, including any amendment solely to conform the Indenture to this Offering Memorandum (as amended and supplemented) and, with the consent of the holders of not less than a majority in aggregate principal amount of the Notes then outstanding under the Indenture, to execute supplemental indenture for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of the Indenture or of waiving or modifying in any manner the rights of the holders of the Notes under the Indenture, provided, however, that no such supplemental indenture, amendment or waiver may, without the consent of the holder of each Note then outstanding affected thereby, among other things:

(i) change the stated maturity of the Notes;

(ii) reduce the principal amount of or payments of interest on any such Note;

(iii) change any obligation of the Company to pay Additional Amounts;

(iv) change the currency or place of payment of the principal of or interest on any such Note;

(v) impair the right to institute suit for the enforcement of any payment due on or with respect to any such Note;

(vi) reduce the above stated percentage in aggregate principal amount of the outstanding Notes required for any such supplemental indenture, amendment or waiver;

(vii) reduce the percentage in aggregate principal amount of the outstanding Notes required for waiver of compliance with certain provisions of the Indenture or for waiver of certain defaults;

(viii) reduce the premium payable, if any, upon the redemption or repurchase of any outstanding Note or change the time at which any of the outstanding Notes may be redeemed or required to be repurchased as set forth above under "– Optional Redemption";

(ix) modify certain provisions in the Indenture with respect to modification and waiver.

The holders of not less than a majority in aggregate principal amount of the Notes then outstanding may, on behalf of holders of all the Notes, waive compliance by the Company with certain restrictive provisions of the Indenture. The holders of not less than a majority in aggregate principal amount of the Notes then outstanding may on behalf of all holders of the Notes waive any existing or past default or Event of Default under the Indenture for the Notes, except a continuing default or Event of Default in the payment of the principal of, or interest on, (or Additional Amounts payable in respect of) any Note then outstanding or in respect of a covenant or provision which under such Indenture cannot be modified or amended without the consent of the holder of each Note then outstanding affected thereby. Any such waivers or modifications will be conclusive and binding on all holders of the Notes, whether or not they have given consent to such waivers or modifications, and on all future holders of the Notes, whether or not notation of such waivers or modifications is made upon the Notes. Any instrument given by or on behalf of any holder of a Note in connection with any consent to any such waiver or modification will be irrevocable once given and will be conclusive and binding on all subsequent holders of such Note.

The consent of the holders of the Notes is not necessary to approve the particular form of any proposed amendment. It is sufficient if such consent approves the substance of the proposed amendment.

After an amendment described in the preceding paragraph becomes effective, the Company will deliver to the holders of the Notes and the Trustee a notice briefly describing such amendment. However, the failure to give such notice to all holders of the Notes, or any defect therein, will not impair or affect the validity of the amendment.

Defeasance and Discharge

The Indenture provides that, upon the conditions set forth therein, the Company (i) may be discharged from all of its obligations with respect to Notes (except for certain obligations to exchange or register the transfer of the Notes, to replace stolen, lost or mutilated Notes, to maintain paying agencies and to hold moneys for payment in trust and to pay Additional Amounts), or (ii) need not comply with certain restrictive covenants of the Notes (including those described under "– *Certain Covenants*") and the events under paragraphs (ii), (iii) and (iv) under "– *Events of Default*" shall not constitute an Event of Default under the Indenture, in each case upon the deposit in trust with the Trustee for the benefit of the holders of such Notes of money in U.S. dollars or U.S. Government Obligations (as defined below), or both, which, through the payment of principal and interest thereon in accordance with their terms, will provide money in an amount sufficient to pay the principal of and interest on the Notes (and any Additional Amounts in respect thereof) in accordance with the terms of the Indenture and the Notes. Such defeasance or discharge pursuant to clauses (i) and (ii) above may occur only if, among other things, the Company have delivered to the Trustee an opinion of independent legal counsel of recognized standing licensed to practice law in the United States to the effect that beneficial owners of such Notes will not recognize income, gain or loss for U.S. federal income tax purposes as a result of such deposit, defeasance or discharge and will be subject to U.S. federal income tax on the same amounts, in the same manner and at the same times as would have been the case if such deposit, defeasance or discharge had not occurred, which opinion of counsel in the case of defeasance described in (i) above must be based on a ruling received by the Company from the U.S. Internal Revenue Service or a published ruling of the U.S. Internal Revenue Service or other change in applicable U.S. federal income tax law after the original issue date of the Notes.

"*U.S. Government Obligations*" means direct obligations (or certificates representing an ownership interest in such obligations) of the United States of America (including any agency or instrumentality thereof) for the payment of which the full faith and credit of the United States of America is pledged and which are not callable at the issuer's option.

Prescription

Any moneys deposited with or paid to the Trustee or any paying agent of the Notes, or then held by the Company, in trust, for the payment of the principal of or interest on (or any Additional Amount payable in respect of) any Note and not applied but remaining unclaimed for two years after the date upon which such principal or interest shall have become due and payable, shall, upon the written request of the Company be repaid to the Company by the Trustee or such paying agent or (if then held by the Company) be discharged from such trust, unless otherwise required by mandatory provisions of applicable escheat or abandoned or unclaimed property law, and the holder of such Note shall, unless otherwise required by mandatory provisions of applicable escheat or abandoned or unclaimed property laws, thereafter look only to the Company for any payment which such holder may be entitled to collect, and all liability of the Trustee or any paying agent of the Notes with respect to such moneys shall thereupon cease.

Under New York law, any legal action upon the Notes must be commenced within six years after the payment thereof is due. Thereafter, the Notes will generally become unenforceable.

Concerning the Trustee

HSBC Bank USA, National Association will be the Trustee under the Indenture. The corporate trust and issuer services office of HSBC Bank USA, National Association is currently located at 452 Fifth Avenue, New York, NY, 10018, USA. The Company will appoint HSBC Bank USA, National Association as paying agent, transfer agent and registrar, located at 452 Fifth Avenue, New York, NY, 10018, USA.

The Indenture provides that the Trustee, except during the continuance of an Event of Default, undertakes to perform such duties and only such duties as are specifically set forth in the Indenture. If an Event of Default has occurred and is continuing, the Trustee will use the same degree of care and skill in its exercise of the rights and powers vested in it by the Indenture as a prudent person would exercise under the circumstances in the conduct of such person's own affairs. The Indenture also provide that the Trustee and any paying or other agent of the Company, in its individual or any other capacity, may become the owner or pledgee of the Notes with the same rights it would have if it were not the Trustee or such agent and may otherwise deal with the Company and receive, collect, hold and retain collections from the Company with the same rights it would have if it were not the Trustee or such agent. All moneys received by the Trustee shall, until used or applied as provided in the Indenture, be held in trust thereunder for the purposes for which they were received and need not be segregated from other funds except to the extent required by law.

The Trustee will be under no obligation to exercise any rights or powers conferred under the Indenture for the benefit of the holders unless such holders have offered to the Trustee indemnity and/or security satisfactory to the Trustee against any loss, liability or expense. In the exercise of its duties, the Trustee shall not be responsible for the calculation or computation of any amount payable under the Notes or the verification of any such calculations or computations or any verification of the accuracy or completeness of any certification, opinion or other documents submitted to it by the Company.

Indemnification for Judgment Currency Fluctuations

To the fullest extent permitted by law, the obligations of the Company to any holder of the Notes under the Indenture or the Notes, as the case may be, shall, notwithstanding any judgment in a currency (the "**Judgment Currency**") other than U.S. dollars (the "**Agreement Currency**"), be discharged only to the extent that on the day following receipt by such holder or the Trustee, as the case may be, of any amount in the Judgment Currency, such holder or the Trustee, as the case may be, may in accordance with normal banking procedures purchase the Agreement Currency with the Judgment Currency. If the amount of the Agreement Currency so purchased is less than the amount originally to be paid to such holder or the Trustee, as the case may be, in the Agreement Currency the Company agrees, as a separate obligation and notwithstanding such judgment, to pay the difference and if the amount of the Agreement Currency so purchased exceeds the amount originally to be paid to such holder or the Trustee, such holder or the Trustee, as the case may be, agrees to pay to or for the account of the Company such excess; provided that such holder or the Trustee, as the case may be, shall not have any obligation to pay any such excess as long as a default by the Company in its obligations under the Indenture or the Notes has occurred and is continuing, in which case such excess may be applied by such holder or the Trustee, as the case may be, to such obligations.

Governing Law and Consent to Jurisdiction

The Notes and the Indenture will be governed by and will be construed in accordance with the laws of the State of New York.

The Company will irrevocably submit to the non-exclusive jurisdiction of any New York State or United States Federal court located in the Borough of Manhattan, The City of New York, New York (each a "**New York Court**") in any suit, action or proceeding arising out of or relating to the Indenture, the Notes or any transaction contemplated thereby, and will irrevocably waive, to the fullest extent permitted by applicable law, any objection to the venue of any such suit, action or proceeding in any such New York Court and any claim of an inconvenient forum.

The Company has appointed Law Debenture Corporate Services Inc., 801 2nd Avenue, Suite 403, New York, NY 10017, as agent for service of process with respect of any such suit, action or proceeding.

Waiver of Immunity

To the extent that the Company has or hereafter may acquire any immunity (sovereign or otherwise) from any legal action, suit or proceeding, from jurisdiction of any court or from set-off or any legal process (including any immunity from non-exclusive jurisdiction or from service of process or from any execution to satisfy a final judgment or from attachment or in aid of such execution or otherwise) with respect to itself or any of its assets or properties, the Company irrevocably waives, to the fullest extent permitted under applicable law, any such right of immunity or claim thereto which may now or hereafter exist, and agrees not to assert any such right or claim in any action or proceeding against it arising out of or based on the Notes or the Indenture.

Notices

Notices to holders of the Notes will be mailed to them (or the first named of joint holders) by first class mail (or, if first class mail is unavailable, by airmail) at their respective addresses in the register and will be deemed to have been given on the fourth Business Day after the date of mailing. So long as and to the extent that the Notes are represented by global notes and such global notes are held by DTC, notices to owners of beneficial interests in the global notes may be given by delivery of the relevant notice to DTC for communication by it to entitled account holders.

Notes; Delivery and Form

The statements set forth herein include summaries of certain rules and operating procedures of DTC, Euroclear and Clearstream which will affect transfers of interests in the global notes.

The Notes sold in offshore transactions in reliance on Regulation S under the Securities Act will be initially in the form of one or more Regulation S global notes, fully registered without interest coupons, which will be deposited with HSBC Bank USA, National Association, as custodian for DTC (in such capacity, the "Custodian") and registered in the name of Cede & Co., as nominee of DTC, for the accounts of Euroclear and Clearstream, as participants in DTC.

The Notes sold to qualified institutional buyers ("QIBs") in reliance on Rule 144A under the Securities Act will be issued initially in the form of one or more Rule 144A global notes, fully registered without interest coupons, which will be deposited with the Custodian for DTC and registered in the name of Cede & Co., as nominee of DTC.

The Notes will be issued in minimum denominations of US$200,000 and in integral multiples of US$1,000 in excess of that amount.

The Notes (including beneficial interests in the global notes) will be subject to certain restrictions on transfer set forth therein and in the Indenture and will bear a legend regarding such restrictions as set forth under "Transfer Restrictions." Under certain circumstances, transfers may be made only upon receipt by the Trustee of a written certification in the form(s) provided in the Indenture.

Beneficial interests in a Rule 144A global note may be transferred to a person who takes delivery in the form of an interest in a Rule 144A global note without any written certification from the transferor or the transferee. Beneficial interests in a Rule 144A global note may be transferred to a person who takes delivery in the form of an interest in a Regulation S global note only upon receipt by the Trustee of written certifications (in the form(s) provided in the Indenture) from the transferor to the effect that such transfer is being made to a non-U.S. person outside the United States or pursuant to Rule 144 under the Securities Act (if available).

Any beneficial interest in one of the global notes that is transferred to an entity who takes delivery in the form of an interest in the other global note will, upon transfer, cease to be an interest in such global note and become an interest in the other global note and, accordingly, will thereafter be subject to all transfer restrictions, if any, and other procedures applicable to beneficial interests in such other global note for as long as it remains such an interest.

Investors may hold their interests in the global notes directly through DTC, Clearstream or Euroclear, as the case may be, if they are participants in such systems, or indirectly through organizations which are participants in such systems. Clearstream and Euroclear will hold interests in the Regulation S global notes on behalf of their participants through customers' securities accounts in their respective names on the books of their respective depositaries, which are participants in DTC.

Transfers between participants in DTC (the "**Participants**") will be effected in the ordinary way in accordance with DTC rules. Transfers between participants in Clearstream and Euroclear ("**Clearstream Participants**" and "**Euroclear Participants**," respectively) will be effected in the ordinary way in accordance with their respective rules and operating procedures.

Persons who are not Participants may beneficially own interests in the global notes held by DTC only through Participants or Indirect Participants (as defined below) (including Euroclear and Clearstream). So long as Cede & Co., as the nominee of DTC, is the registered owner of the global notes, Cede & Co., for all purposes will be considered the sole holder of such Notes.

Payment of interest on and principal of the global notes will be made to Cede & Co., the nominee for DTC, as the registered owner of the global notes by wire transfer of immediately available funds. Neither the Company nor the Trustee will have any responsibility or liability for any aspect of the records relating to or payments made on account of beneficial ownership interests in the global notes or for maintaining, supervising or reviewing any records relating to such beneficial ownership interest.

The Company has been informed by DTC that, upon receipt of any payment of interest on or the redemption price of the global notes, DTC will credit Participants' accounts with payments in amounts proportionate to their respective beneficial interests in the global notes as shown on the records of DTC. Payments of interest on and principal of the Notes held through Clearstream or Euroclear will be credited to the cash accounts of Clearstream Participants or Euroclear Participants, as the case may be, in accordance with the relevant system's rules and procedures. Payments by Participants to owners of beneficial interests in the global notes held through such Participants will be the responsibility of such Participants, as is the case with securities held by broker-dealers, either directly or through nominees, for the accounts of customers and registered in "street name."

Because DTC can only act on behalf of Participants, who in turn act on behalf of Indirect Participants and certain banks, the ability of a person having a beneficial interest in the global notes to pledge such interest to persons or entities that do not participate in the DTC system, or to otherwise take actions in respect of such interest, may be affected by the lack of a physical certificate.

So long as the Notes are represented by global notes and such global notes are held on behalf of DTC or any other clearing system, such clearing system or its nominee will be considered the sole holder of the Notes represented by the applicable global notes for all purposes under the Indenture, including, without limitation, obtaining consents and waivers thereunder, and neither the Company nor the Trustee shall be affected by any notice to the contrary. Neither the Trustee nor the Company shall have any responsibility or obligation with respect to the accuracy of any records maintained by any clearing system or any Participant of such clearing system. The clearing systems will take actions on behalf of their Participants (and any such Participants will take actions on behalf of any Indirect Participants) in accordance with their standard procedures. To the extent that any clearing system acts upon the direction of the holders of the beneficial interests in the applicable global note and such beneficial holders give conflicting instructions, the applicable clearing system may take conflicting actions in accordance with such instructions.

DTC has advised the Company that it will take any action permitted to be taken by a holder of the Notes (including, without limitation, the presentation of the Notes for exchange) only at the direction of one or more Participants and only in respect of the principal amount of the Notes represented by the global note as to which such Participant or Participants has or have given such direction.

Clearstream or Euroclear, as the case may be, will take any action permitted to be taken by a holder of the Notes (including, without limitation, the presentation of the Notes for exchange) on behalf of a Clearstream Participant or a Euroclear Participant only in accordance with its relevant rules and procedures and subject to its ability to effect such actions through DTC.

DTC has advised the Company as follows:

DTC is a limited purpose trust company organized under the laws of the State of New York, a member of the Federal Reserve System, a "clearing corporation" within the meaning of the Uniform Commercial Code and a "Clearing Agency" registered pursuant to the provisions of Section 17A of the Exchange Act. DTC was created to hold securities for its Participants and facilitate the clearance and settlement of securities transactions between Participants through electronic book-entry changes in accounts of its Participants, thereby eliminating the need for the physical movement of certificates. Participants include securities brokers and dealers, banks, trust companies and clearing corporations and may include certain other organizations. Indirect access to the DTC system is available to others such as banks, brokers, dealers and trust companies that clear through or maintain a custodial relationship with a Participant, either directly or indirectly ("**Indirect Participants**").

Although DTC, Clearstream and Euroclear have agreed to the foregoing procedures in order to facilitate transfers of interests in the global notes among participants of DTC, Clearstream and Euroclear, they are under no obligation to perform or continue to perform such procedures, and such procedures may be discontinued at any time. Neither the Company nor the Trustee will have any responsibility for the performance by DTC, Clearstream and Euroclear, or their respective Participants or Indirect Participants, of their respective obligations under the rules and procedures governing their operations.

Individual Notes

Individual notes in certificated, fully registered form will be transferred to all beneficial owners in exchange for their beneficial interests in a global note if (i) DTC is at any time unwilling or unable to continue as depositary and a successor depositary is not appointed by the Company within 90 calendar days, (ii) the Company, in its sole discretion, shall so request or (iii) an Event of Default (as described above) has occurred and is continuing and a holder of a Note requests so and delivers a written notice to the Trustee to issue such individual notes.

Subject to the transfer restrictions set forth on the individual notes in certificated form, the holder of such individual notes in certificated form may transfer or exchange such Notes by surrendering them at the corporate trust office of the Trustee. Prior to any proposed transfer of individual notes in certificated form (other than pursuant to an effective registration statement), the holder may be required to provide certifications and other documentation relating to the manner of such transfer and submit such certifications and other documentation to the Trustee as described under "– *Notes; Delivery and Form*" above. Upon the transfer, exchange or replacement of individual notes in certificated form not bearing the legend referred to under "Transfer Restrictions," the Trustee will deliver individual notes in certificated form that do not bear the legend. Upon the transfer, exchange or replacement of individual notes in certificated form bearing the legend, or upon specific request for removal of the legend on an individual note in certificated form, the Trustee will deliver only individual notes in certificated form that bear such legend or shall refuse to remove such legend, as the case may be, unless there is delivered to the Company such satisfactory evidence, which may include an opinion of counsel, as may reasonably be required by the Company that neither the legend nor the restrictions on transfer set forth therein are required to ensure compliance with the provisions of the Securities Act.

Certain Definitions

Set forth below are definitions of certain of the terms used herein. Additional terms are defined elsewhere above or in the Indenture.

"*Indebtedness*" of any Person means, at any date, without duplication, (i) any outstanding indebtedness for or in respect of money borrowed (including bonds, debentures, notes or other similar instruments, whether or not listed) that is evidenced by any agreement or instrument, excluding trade payables, (ii) all noncontingent obligations of such Person to reimburse any bank or other Person in respect of amounts paid under a letter of credit or similar instrument, and (iii) all Indebtedness of others guaranteed by such Person.

"*Lien*" means any mortgage, pledge, security interest, lien, hypothecation or other security arrangement or charge of any kind securing any obligation of any Person.

"*NDRC*" means the National Development and Reform Commission of the PRC or its local counterparts.

"*Person*" means any individual, corporation, partnership, joint venture, association, joint stock company, trust, unincorporated organization, government or any agency or political subdivision thereof or any other entity.

"*PRC*" means the People's Republic of China, which shall for the purpose of these covenants only, exclude the Hong Kong Special Administrative Region, the Macau Special Administrative Region and Taiwan.

"*Principal Subsidiary*" at any time shall mean one of the Company's Subsidiaries

(a) as to which one or more of the following conditions is/are satisfied:

(i) its gross revenue or (in the case of a Subsidiary of the Company which itself has Subsidiaries) consolidated gross revenue attributable to the Company is at least 5% of the consolidated gross revenue of the Company; or

(ii) its net profit or (in the case of a Subsidiary of the Company which itself has Subsidiaries) consolidated net profit attributable to the Company (in each case before taxation) is at least 5% of the consolidated net profit of the Company (before taxation); or

(iii) its gross assets or (in the case of a Subsidiary of the Company which itself has Subsidiaries) consolidated gross assets attributable to the Company (in each case after deducting minority interests in Subsidiaries) are at least 5% of the consolidated gross assets of the Company (after deducting minority interests in Subsidiaries),

in each case, as calculated by reference to the then latest audited financial statements (consolidated or, as the case may be, unconsolidated) of the Subsidiary of the Company and the then latest audited consolidated financial statements of the Company, *provided* that: (1) in the case of a Subsidiary of the Company acquired after the end of the financial period to which the then latest relevant audited financial statements relate, the reference to the then latest audited financial statements for the purposes of the calculation above shall, until audited financial statements for the financial period in which the acquisition is made are published, be deemed to be a reference to the financial statements adjusted to consolidate the latest audited financial statements of the Subsidiary in the financial statements; (2) if, in the case of a Subsidiary of the Company which itself has one or more Subsidiaries, no consolidated financial statements are prepared and audited, its consolidated gross revenue, net profit and gross assets shall be determined on the basis of *pro forma* consolidated financial statements of the relevant Subsidiary and its Subsidiaries prepared for this purpose; or (3) if the financial statements of a Subsidiary of the Company (not being a Subsidiary referred to in (1) above) are not consolidated with those of the Company then the determination of whether or not the Subsidiary is a Principal Subsidiary shall, if the Company requires, be based on a *pro forma* consolidation of its financial statements (consolidated, if appropriate) with the consolidated financial statements of the Company and its Subsidiaries;

(b) to which is transferred all or substantially all of the assets of the Subsidiary of the Company which immediately prior to the transfer was a Principal Subsidiary, *provided that*, the Principal Subsidiary which so transfers its assets shall forthwith upon such transfer cease to be a Principal Subsidiary and the Subsidiary to which the assets are so transferred shall cease to be a Principal Subsidiary at the date on which the first consolidated audited financial statements of the Company prepared as of a date later than such transfer are issued unless such Subsidiary would continue to be a Principal Subsidiary on the basis of such accounts by virtue of paragraph above (a) of this definition.

A certificate signed by an Authorized Officer of the Company as to whether or not a Subsidiary is a Principal Subsidiary shall be conclusive and binding on all parties in the absence of manifest error. Any such certificate shall be accompanied by a report by an internationally recognized firm of accountants addressed to the directors of the Company as to proper extraction and basis of the figures used by the Company in determining the Principal Subsidiaries of the Company and mathematical accuracy of the calculation.

"*Registration Business Day*" means a day, other than a Saturday, Sunday or public holiday, on which commercial banks are generally open for business in Beijing.

"*Relevant Indebtedness*" of any Person means any indebtedness incurred outside the PRC that is in the form of or represented by debentures, loan stock, bonds, notes, bearer participation certificates or other similar securities or instruments or by bills of exchange drawn or accepted for the purpose of raising money which are, or are issued with the intention on the part of the issuer thereof that they should be, quoted, listed, ordinarily dealt in or traded on any stock exchange or over the counter or on any other securities market (whether or not initially distributed by way of private placement) but shall not include indebtedness under any secured transferable loan facility (which term shall for these purposes mean any agreement for or in respect of indebtedness for borrowed money entered into with one or more banks and/or financial institutions whereunder rights and (if any) obligations may be assigned and/or transferred).

TAXATION

The following summary of certain Cayman Islands, Hong Kong, PRC and U.S. federal income tax consequences of the purchase, ownership and disposition of Notes is based upon applicable laws, regulations, rulings and decisions as of the date of this Offering Memorandum, all of which are subject to change (possibly with retroactive effect). This discussion does not purport to be a comprehensive description of all the tax considerations that may be relevant to a decision to purchase, own or dispose of the Notes and does not purport to deal with consequences applicable to all categories of investors, some of which may be subject to special rules. Persons considering the purchase of Notes should consult their own tax advisors concerning the tax consequences of the purchase, ownership and disposition of Notes, including such possible consequences under the laws of their country of citizenship, residence or domicile.

CAYMAN ISLANDS

The following is a discussion of certain Cayman Islands income tax consequences of an investment in the Notes. The discussion is a general summary of present law, which is subject to prospective and retroactive change. It is not intended as tax advice, does not consider any investor's particular circumstances, and does not consider tax consequences other than those arising under Cayman Islands law.

Under the existing Cayman Islands laws, payments of interest and principal on the Notes will not be subject to taxation in the Cayman Islands and no withholding will be required on the payment of interest and principal to any holder of the Notes, nor will gains derived from the disposal of the Notes be subject to Cayman Islands income or corporation tax. The Cayman Islands currently has no income, corporation or capital gains tax and no estate duty, inheritance tax or gift tax.

No stamp duty is payable in respect of the issue of the Notes. An instrument of transfer in respect of a Bond is stampable if executed in or brought into the Cayman Islands.

The Company is incorporated under the laws of the Cayman Islands as an exempted company with limited liability and, as such, has obtained an undertaking from the Acting Governor in Council of the Cayman Islands Government as to tax concessions under the Tax Concessions Law (1999 Revision). In accordance with the provision of section 6 of The Tax Concessions Act (As Revised), the Financial Secretary undertakes with the Company:

- that no law which is hereafter enacted in the Cayman Islands imposing any tax to be levied on profits, income, gains or appreciations shall apply to the Company or its operations; and

- in addition, that no tax to be levied on profits, income, gains or appreciations or which is in the nature of estate duty or inheritance tax shall be payable, (i) on or in respect of the shares debentures or other obligations of the Company, or (ii) by way of the withholding in whole or part of any relevant payment as defined in Tax Concessions Act.

- These concessions shall be for a period of 20 years from March 23, 2022.

HONG KONG

Withholding Tax

No withholding tax is payable in Hong Kong in respect of payments of principal or interest on the Notes or in respect of any capital gains arising from the sale of the Notes.

Profits Tax

Hong Kong profits tax is chargeable on every person carrying on a trade, profession or business in Hong Kong in respect of profits arising in or derived from Hong Kong from such trade, profession or business (excluding profits arising from the sale of capital assets).

Interest on the Notes may be deemed to be profits arising in or derived from Hong Kong from a trade, profession or business carried on in Hong Kong in the following circumstances:

(i) interest on the Notes is derived from Hong Kong and is received by or accrues to a corporation carrying on a trade, profession or business in Hong Kong;

(ii) interest on the Notes is derived from Hong Kong and is received by or accrues to a person, other than a corporation, carrying on a trade, profession or business in Hong Kong and is in respect of the funds of that trade, profession or business;

(iii) interest on the Notes is received by or accrues to a financial institution (as defined in the Inland Revenue Ordinance (Cap. 112) of Hong Kong (the "**IRO**")) and arises through or from the carrying on by the financial institution of its business in Hong Kong; or

(iv) interest on the Notes is received by or accrues to a corporation, other than a financial institution, and arises through or from the carrying on in Hong Kong by the corporation of its intra-group financing business (within the meaning of section 16(3) of the IRO).

Sums received by or accrued to a financial institution by way of gains or profits arising through or from the carrying on by the financial institution of its business in Hong Kong from the sale, disposal and redemption of Notes will be subject to Hong Kong profits tax. Sums received by or accrued to a corporation, other than a financial institution, by way of gains or profits arising through or from the carrying on in Hong Kong by the corporation of its intra-group financing business (within the meaning of section 16(3) of the IRO) from the sale, disposal or redemption of Notes will be subject to Hong Kong profits tax.

Sums derived from the sale, disposal or redemption of the Notes will be subject to Hong Kong profits tax where received by or accrued to a person, other than a financial institution, who carries on a trade, profession or business in Hong Kong and the sum has a Hong Kong source unless otherwise exempted. The source of such sums will generally be determined by having regard to the manner in which the Notes are acquired and disposed of.

In certain circumstances, Hong Kong profits tax exemptions (such as concessionary tax rates) may be available. Investors are advised to consult their own tax advisers to ascertain the applicability of any exemptions to their individual position.

Stamp Duty

No Hong Kong stamp duty will be chargeable upon the issue or transfer of the Notes.

PRC

Under the EIT Law, an enterprise established outside of China with "de facto management body" located within China will be considered a PRC "resident enterprise" for PRC tax purposes and consequently will be treated in a manner similar to a Chinese enterprise for enterprise income tax purposes. The implementing rules of the EIT Law define "de facto management body" as a management body that exercises "substantial and overall management and control over the production and operations, personnel, accounting, and properties" of the enterprise. In April 2009, the State Administration of Taxation specified certain criteria for the determination of the "de facto management bodies" for foreign enterprises that are controlled by PRC enterprises. However, no definition of "de facto management body" has been provided for enterprises established offshore by individuals or foreign enterprises such as the Company. Although it is unclear under the PRC tax law whether the Company will be deemed as having a PRC "de facto management body" located in China for PRC tax purposes, to date the Company has not received any notice from any PRC tax authority treating it as a PRC "resident enterprise" for PRC tax purposes.

Taxation on Interest Payment/Capital Gains

The EIT Law imposes a tax at the rate of 10% on interest payments and capital gains realized by an enterprise holder of Notes that is a "non-resident enterprise" which does not have an establishment or place of business in China or, where despite the existence of an establishment or place of business in China, the relevant interest or gain is not effectively connected with such establishment or place of business in China, to the extent such interest or capital gains are sourced within China. The IIT Law imposes a tax at the rate of 20% on interest payments and capital gains realized by a foreign individual who is neither domiciled nor resident in China, to the extent such interest or capital gains are sourced within China. Pursuant to these provisions of the EIT Law and the IIT Law, although the matter is unclear, if we are considered a PRC resident enterprise, interest payments and capital gains realized by non-resident enterprise holders and non-resident individual holders of the Notes may be treated as income derived from sources within China and be subject to the PRC tax described above (which, in the case of interest or redemption premium, may be withheld at source). Relevant PRC tax liability may be reduced under applicable tax treaties. However, it is unclear whether, if we were considered a PRC "resident enterprise", holders of our Notes could in practice obtain the benefit of income tax treaties or agreements entered into between China and other countries or areas, for example due to administrative difficulties or lack of qualification.

On March 23, 2016, the Ministry of Finance and the State Administration of Taxation of the PRC issued Circular 36, which introduced a new VAT from May 1, 2016. Under Circular 36, VAT is applicable where entities or individuals provide or receive certain services within China. The services potentially subject to VAT include the provision of financial services such as the provision of loans. Circular 36 further clarifies that "loans" refers to the activity of lending capital for another's use and receiving the interest income thereon. Based on the definition of "loans" under Circular 36, holders of the Notes may be treated as providing financial services in the form of loans to the Company for VAT purposes. In the event the Company is deemed to be a PRC resident enterprise by the PRC tax authorities, the holders of the Notes may be regarded as providing financial services within China and consequently, the Company may be obligated to withhold VAT at a rate of six per cent, plus related local levies, for payments of interest and certain other amounts on the Notes paid by the Company to Noteholders that are non-resident enterprises or individuals. VAT is unlikely to be applicable to any transfer of Notes between entities or individuals located outside China and therefore unlikely to be applicable to gains realized upon such transfers of Notes, but there is uncertainty as to the applicability of VAT if either the seller or buyer of Notes is located inside China. Circular 36 together with other laws and regulations pertaining to VAT are relatively new and the interpretation and enforcement of such laws and regulations involve uncertainties.

Stamp duty

No PRC stamp tax will be chargeable upon the issue or transfer (for so long as the register of holders of the Notes is maintained outside China and the issuance and the sale of the Notes is made outside China) of a Bond.

Certain U.S. Federal Income Tax Considerations

The following is a summary of certain U.S. federal income tax consequences of the acquisition, ownership and disposition of Notes by a U.S. Holder (as defined below). This summary deals only with initial purchasers of Notes at the issue price in the initial offering that are U.S. Holders and that will hold the Notes as capital assets. The discussion does not cover all aspects of U.S. federal income taxation that may be relevant to, or the actual tax effect that any of the matters described herein will have on, the acquisition, ownership or disposition of Notes by particular investors (including consequences under the alternative minimum tax or net investment income tax), and does not address state, local, non-U.S. or other tax laws (such as estate or gift tax laws). This summary also does not discuss all of the tax considerations that may be relevant to certain types of investors subject to special treatment under the U.S. federal income tax laws (such as financial institutions, insurance companies, traders in securities that elects to use a mark-to-market method of accounting for securities holdings, individual retirement accounts and other tax-deferred accounts, tax-exempt organizations, dealers in securities or currencies, investors that will hold the Notes as part of straddles, hedging transactions or conversion transactions for U.S. federal income tax purposes, persons that purchase or sell the Notes as part of a wash sale for tax purposes, persons that have ceased to be U.S. citizens or lawful permanent residents of the United States, investors holding the Notes in connection with a trade or business conducted outside of the United States, U.S. citizens or lawful permanent residents living abroad or investors whose functional currency is not the U.S. dollar).

As used herein, the term "U.S. Holder" means a beneficial owner of Notes that is, for U.S. federal income tax purposes, (i) an individual citizen or resident of the United States, (ii) a corporation created or organized under the laws of the United States, any state thereof or the District of Columbia, (iii) an estate the income of which is subject to U.S. federal income tax without regard to its source or (iv) a trust if a court within the United States is able to exercise primary supervision over the administration of the trust and one or more U.S. persons have the authority to control all substantial decisions of the trust, or the trust has validly elected to be treated as a domestic trust for U.S. federal income tax purposes.

The U.S. federal income tax treatment of a partner in an entity or arrangement treated as a partnership for U.S. federal income tax purposes that holds Notes will depend on the status of the partner and the activities of the partnership. Prospective purchasers that are entities or arrangements treated as partnerships for U.S. federal income tax purposes should consult their tax advisers concerning the U.S. federal income tax consequences to them and their partners of the acquisition, ownership and disposition of Notes by the partnership.

This summary is based on the tax laws of the United States, including the Internal Revenue Code of 1986, as amended, its legislative history, existing and proposed regulations thereunder, published rulings and court decisions, as well as on the income tax treaty between the United States and the People's Republic of China (the "**Treaty**"), all as of the date hereof and all subject to change at any time, possibly with retroactive effect.

THE SUMMARY OF U.S. FEDERAL INCOME TAX CONSEQUENCES SET OUT BELOW IS FOR GENERAL INFORMATION ONLY. ALL PROSPECTIVE PURCHASERS SHOULD CONSULT THEIR TAX ADVISERS AS TO THE PARTICULAR TAX CONSEQUENCES TO THEM OF ACQUIRING, OWNING, AND DISPOSING OF THE NOTES, INCLUDING THEIR ELIGIBILITY FOR THE BENEFITS OF THE TREATY, THE APPLICABILITY AND EFFECT OF STATE, LOCAL, NON-U.S. AND OTHER TAX LAWS AND POSSIBLE CHANGES IN TAX LAW.

Characterization of the Notes

In certain circumstances, the Company may be obligated to repurchase the Notes for amount in excess of the stated principal amount of the Notes, or to make payments in excess of the stated interest. See "*Description of the Notes – Redemption – Redemption upon a Change of Control*" and "*Description of the Notes – Additional Amounts.*" The Company believes and intends to take the position that this contingency should not cause the Notes to be treated as contingent payment debt instruments ("**CPDIs**") for U.S. federal income tax purposes. If the Internal Revenue Service ("**IRS**") successfully challenged this position, and the Notes were treated as CPDIs, a U.S. Holder could be required to accrue interest income at a rate higher than the stated interest rate on the Notes and to treat as ordinary income, rather than capital gain, any gain recognized on a sale, exchange or redemption of the Notes. U.S. Holders are urged to consult their own tax advisers regarding the potential application to the Notes of the CPDI rules and the consequences thereof. The remainder of this discussion assumes that the Notes will not be treated as CPDIs.

Payments of Interest

General

Interest on a Note will be taxable to a U.S. Holder as ordinary income at the time it is received or accrued, depending on such U.S. Holder's method of accounting for U.S. federal income tax purposes. Interest paid by the Company on the Notes constitutes income from sources outside the United States.

Effect of PRC Withholding Taxes

As discussed in "Taxation – PRC," payments of interest on the Notes to non-PRC investors may become subject to PRC withholding taxes. For U.S. federal income tax purposes, U.S. Holders would be treated as having received the amount of PRC taxes withheld by the Company with respect to a Note (including taxes withheld with respect to Additional Amounts), and as then having paid over the withheld taxes to the PRC taxing authorities. As a result of this rule, the amount of interest income included in gross income for U.S. federal income tax purposes by a U.S. Holder with respect to a payment of interest may be greater than the amount of cash actually received (or receivable) by the U.S. Holder from the Company with respect to the payment.

Subject to certain limitations, a U.S. Holder will likely be entitled to a credit against its U.S. federal income tax liability, or a deduction in computing its U.S. federal taxable income, for PRC income taxes withheld by the Company. However, under recently finalized Treasury regulations, it is possible that PRC withholding taxes on payments of interest may not be creditable unless the U.S. Holder is eligible for and elects to apply the benefits of the Treaty. Interest generally will constitute "passive category income" for purposes of the foreign tax credit. The rules governing foreign tax credits are complex. Prospective purchasers should consult their tax advisers concerning the foreign tax credit implications of PRC withholding taxes (including restrictions on creditability or deductibility of any PRC income tax withheld in excess of an applicable Treaty rate). Any PRC VAT will not be creditable against a U.S. Holder's income tax liability.

Sale and Retirement of the Notes

A U.S. Holder generally will recognize gain or loss on the sale or retirement of a Note equal to the difference between the amounts realized on the sale or retirement and the U.S. Holder's adjusted tax basis of the Note. A U.S. Holder's adjusted tax basis in a Note generally will be its U.S. dollar cost. The amount realized does not include the amount attributable to accrued but unpaid interest, which will be taxable as interest income to the extent not previously included in income.

Gain or loss recognized by a U.S. Holder on the sale or retirement of a Note will be capital gain or loss and will be long-term capital gain or loss if the Note was held by the U.S. Holder for more than one year.

Gain or loss realized by a U.S. Holder on the sale or retirement of a Note generally will be U.S. source. However, if any PRC tax is imposed on a sale or retirement of a Note as discussed in "Taxation – PRC" and a U.S. Holder is eligible for the benefits of the Treaty, any gain or loss (or portion thereof) from such sale or retirement might be treated as non-U.S. source gain or loss for foreign tax credit purposes. Under recently finalized Treasury regulations, U.S. Holders that are not entitled to claim the benefits of the Treaty, or that do not elect to apply them, will generally be precluded from claiming a foreign tax credit in respect of PRC income taxes imposed on gains on a sale or disposition of the Notes. The rules governing foreign tax credits and the deductibility of foreign taxes are complex. Prospective purchasers should consult their tax advisers as to the foreign tax credit or deductibility implications of the sale or retirement of Notes.

Backup Withholding and Information Reporting

Payments of principal and interest on, and the proceeds of sale or other disposition (including exchange) of, Notes by a U.S. paying agent or other U.S. intermediary will be reported to the IRS and to the U.S. Holder as may be required under applicable regulations. Backup withholding may apply to these payments if the U.S. Holder fails to provide an accurate taxpayer identification number or certification of exempt status or fails to report all interest and dividends required to be shown on its U.S. federal income tax returns comply with applicable certification requirements. Certain U.S. Holders are not subject to backup withholding. The amount of any backup withholding from a payment to a U.S. Holder will be allowed as a credit against the U.S. Holder's U.S. federal income tax liability and may entitle the U.S. Holder to a refund, provided that the required information is timely furnished to the IRS. U.S. Holders should consult their tax advisers about these rules and any other reporting obligations that may apply to the ownership or disposition of Notes, including requirements related to the holding of certain "specified foreign financial assets."

PLAN OF DISTRIBUTION

Subject to the terms and conditions set forth in a purchase agreement relating to the Notes among the Company, The Hongkong and Shanghai Banking Corporation Limited, Morgan Stanley & Co. International plc, Citigroup Global Markets Inc., Deutsche Bank AG, Singapore Branch, Mizuho Securities Asia Limited, Australia and New Zealand Banking Group Limited, BNP Paribas, MUFG Securities Asia Limited, Natixis and Standard Chartered Bank as the Initial Purchasers named below, the Company has agreed to sell to the Initial Purchasers, and each of the Initial Purchasers has agreed, severally and not jointly, to purchase from the Company, the principal amount of the Notes set forth opposite its name below.

Initial Purchaser	Principal Amount of the Notes
The Hongkong and Shanghai Banking Corporation Limited	US$55,000,000
Morgan Stanley & Co. International plc	US$55,000,000
Citigroup Global Markets Inc.	US$55,000,000
Deutsche Bank AG, Singapore Branch	US$55,000,000
Mizuho Securities Asia Limited	US$55,000,000
Australia and New Zealand Banking Group Limited	US$55,000,000
BNP Paribas	US$55,000,000
MUFG Securities Asia Limited	US$55,000,000
Natixis	US$55,000,000
Standard Chartered Bank	US$55,000,000
Total	US$550,000,000

Subject to the terms and conditions set forth in the purchase agreement, the Initial Purchasers have agreed, severally and not jointly, to purchase all of the Notes sold under the purchase agreement. The purchase agreement also provides that the obligations of the Initial Purchasers to purchase the Notes are subject to, among other things, the receipt by the Initial Purchasers of documentation related to the issuance and sale of the Notes, officers' certificates and legal opinions and satisfaction of other conditions.

The Company has agreed to indemnify the Initial Purchasers against certain liabilities, including liabilities under the Securities Act, or to contribute to payments the Initial Purchasers may be required to make in respect of those liabilities.

The Initial Purchasers propose initially to offer the Notes at the offering price set forth on the cover page of this Offering Memorandum. After the initial offering, the offering price or any other term of the offering may be changed.

Notes Are Not Being Registered

The Notes have not been registered under the Securities Act or any state securities laws. The Initial Purchasers propose to offer the Notes for resale in transactions not requiring registration under the Securities Act or applicable state securities laws, including sales in reliance on the exemption provided by Rule 144A and Regulation S under the Securities Act. The Initial Purchasers will not offer or sell the Notes within the United States except to persons they reasonably believe to be Qualified Institutional Buyers (as defined in Rule 144A under the Securities Act) and to non-U.S. persons outside the United States within the meaning of Regulation S. Each of the Initial Purchasers has acknowledged and agreed that, except as permitted by the preceding sentence, it will not offer or sell Notes as part of its distribution at any time within the United States or to, or for the account or benefit of, U.S. persons (as defined in Regulation S under the Securities Act). In addition, until 40 days after the commencement of this offering, an offer or sale of the Notes within the United States by a dealer that is not participating in this offering may violate the registration requirements of the Securities Act if that offer or sale is made otherwise than in accordance with Rule 144A. Each purchaser of the Notes will be deemed to have made acknowledgments, representations and agreements as described under "*Transfer Restrictions.*"

New Issue of the Notes

The Notes are a new issue of securities with no established trading market. An application will be made to the SEHK for the listing of, and permission to deal in, the Notes by way of debt issues to Professional Investors only. We cannot assure you that the Notes will be or remain listed.

The Company has been advised by the Initial Purchasers that they presently intend to make a market in the Notes after completion of the offering. However, they are under no obligation to do so and may discontinue any market-making activities at any time without any notice. The Company cannot assure you that a liquid trading market will develop for the Notes, that you will be able to sell your Notes at a particular time or that the price that you receive when you sell your Notes will be favorable. If an active trading market for the Notes does not develop, the market price and liquidity of the Notes may be adversely affected. If the Notes are traded, they may trade at a discount from their initial offering price, depending on prevailing interest rates, the market for similar securities, the Company's operating performance and financial condition, general economic conditions and other factors.

Settlement

The Company expects that delivery of the Notes will be made to investors on or about the closing date specified on the cover page of this Offering Memorandum, which will be the fourth business day following the date of this Offering Memorandum (such settlement being referred to as "T+4"). Under Rule 15c6-1 under the Exchange Act, trades in the secondary market generally are required to settle in two business days, unless the parties to any such trade expressly agree otherwise. Accordingly, purchasers who wish to trade the Notes on the date of pricing or the next succeeding business day will be required, by virtue of the fact that the Notes initially will settle on or about T+4, to specify an alternate settlement cycle at the time of any such trade to prevent a failed settlement. Purchasers of the Notes who wish to trade the Notes prior to their date of delivery hereunder should consult their advisors.

No Sales of Similar Securities

The Company has agreed that none of the Company, any members of the Group or any person acting on its or their behalf shall, for a period between the date of the purchase agreement and the date which is 30 days after the closing date (both dates inclusive), without the prior written consent of the Initial Purchasers, (a) issue, offer, sell, contract to sell, pledge or otherwise dispose of or grant options, issue warrants or offer rights entitling persons to subscribe or purchase any interest in any securities of the same class as the Notes or any securities exchangeable for or which carry rights to subscribe or purchase the Notes or securities of the same class as the Notes, or other instruments representing interests in the Notes or other securities of the same class as them outside of the PRC, (b) enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition (whether by actual disposition or effective economic disposition due to cash settlement or otherwise) directly or indirectly of any debt securities issued by the Company or any of its subsidiaries outside of the PRC, or (c) announce or otherwise make public an intention to do any of the foregoing (other than the Notes).

Short Positions and Stabilizing Transactions

In connection with the offering, any one of the Initial Purchasers appointed and acting in such capacity as the Stabilization Manager, may purchase and sell the Notes in the open market. These transactions may include short sales, purchases on the open market to cover positions created by short sales and stabilizing purchases. Short sales involve the sale by the Stabilization Manager of a greater principal amount of the Notes than they are required to purchase in the offering. The Stabilization Manager must close out any short position by purchasing the Notes in the open market. A short position is more likely to be created if the Initial Purchasers are concerned that there may be downward pressure on the price of the Notes in the open market after pricing that could adversely affect investors who purchase in the offering. Stabilizing transactions involve bids to purchase the Notes so long as the stabilizing bids do not exceed a specified maximum.

Similar to other purchase transactions, the Stabilization Managers' purchases to cover the syndicate short sales and stabilizing purchasers may have the effect of raising or maintaining the market price of the Notes or preventing or retarding a decline in the market price of the Notes. As a result, the price of the Notes may be higher than the price that might otherwise exist in the open market.

None of the Company or any of the Initial Purchasers makes any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the Notes. In addition, none of the Company or any of the Initial Purchasers makes any representation that the Initial Purchasers will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice at any time. No assurance can be given as to the liquidity of, or the trading market for, the Notes.

Other Relationships

The Initial Purchasers and their respective affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, principal investment, hedging, financing and brokerage activities. In the ordinary course of their business activities, the Initial Purchasers and their affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers. Such investments and securities activities may involve securities and/or instruments of ours or our affiliates. The Initial Purchasers and their affiliates may also make investment recommendations and/or publish or express independent research views with respect to such securities or financial instruments and may hold, or recommend to clients that they acquire long and/or short positions in such securities and instruments.

The Initial Purchasers or certain of their affiliates may purchase Notes and be allocated Notes for asset management and/or proprietary purposes but not with a view to distribution.

The Initial Purchasers and their affiliates have in the past engaged, and may in the future engage, in transactions with and perform services, including commercial banking and financial advisory and investment banking services, for the Company and their respective affiliates in the ordinary course of business, for which they received or will receive customary fees and expenses. The Company and their respective affiliates may enter into hedging or other derivative transactions as part of their risk management strategy with one or more of the Initial Purchasers, which may include transactions relating to its obligations under the Notes. The Company's obligations under these transactions may be secured by cash or other collateral.

In connection with the offering of the Notes, each Initial Purchaser and/or its affiliate(s) may act as an investor for its own account and may take up Notes in the offering and in that capacity may retain, purchase or sell for its own account such securities and any securities of the Company or related investments and may offer or sell such securities or other investments otherwise than in connection with the offering. Accordingly, references herein to the Notes being offered should be read as including any offering of the Notes to the Initial Purchasers and/or their affiliates acting in such capacity. Such persons do not intend to disclose the extent of any such investment or transactions otherwise than in accordance with any legal or regulatory obligation to do so.

If a jurisdiction requires that the offering be made by a licensed broker or dealer and the Initial Purchaser or any affiliate of the Initial Purchaser is a licensed broker or dealer in that jurisdiction, the offering shall be deemed to be made by that Initial Purchaser or its affiliate on behalf of the Company in such jurisdiction.

Certain of the Initial Purchasers and/or their affiliates may receive a portion of the net proceeds of this offering to the extent such proceeds are used to repay borrowings from such bank or institution in the ordinary course of business.

Notice to Prospective Investors in the United States

The Notes have not been and will not be registered under the Securities Act, and may not be offered or sold within the United States or to, or for the account or benefit of, U.S. persons except in certain transactions exempt from the registration requirements of the Securities Act.

The Notes are being offered and sold to non-U.S. persons outside of the United States in reliance on Regulation S. The Purchase Agreement provides that the Initial Purchasers may arrange for the offer and resale of the Notes within the United States only to Qualified Institutional Buyers in reliance on Rule 144A.

In addition, until 40 days after the commencement of the offering of the Notes, an offer or sale of the Notes within the United States by a dealer that is not participating in the offering may violate the registration requirements of the Securities Act if such offer or sale is made otherwise than in accordance with Rule 144A.

To the extent the Initial Purchasers intend to make any offers or sales of the Notes in the United States, or to nationals or residents of the United States, they will do so only through one or more registered broker dealers in compliance with applicable securities laws and regulations, as well as with applicable laws of various states.

PRIIPs/Prohibition of Sales to EEA Retail Investors

Each of the Initial Purchasers, severally and not jointly, has represented and agreed that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any Notes to any retail investor in the European Economic Area. For the purposes of this provision:

(a) the expression "retail investor" means a person who is one (or more) of the following:

  (i) a. retail client as defined in point (11) of Article 4(1) of Directive 2014/65/EU (as amended, "**MiFID II**"); or

  (ii) a customer within the meaning of Directive (EU) 2016/97 (as amended or superseded, the "**Insurance Distribution Directive**"), where that customer would not qualify as a professional client as defined in point (10) of Article 4(1) of MiFID II.

(b) the expression "**offer**" includes the communication in any form and by any means of sufficient information on the terms of the offer and the Notes to be offered as to enable an investor to decide to purchase or subscribe for the Notes.

UK PRIIPs/Prohibition of Sales to UK Retail Investors

Each Initial Purchaser has represented and agreed that it has not offered, sold or otherwise made available and will not offer, sell or otherwise make available any Notes to any retail investor in the UK.

For the purposes of this provision, the expression "retail investor" means a person who is one (or more) of the following:

(a) a retail client, as defined in point (8) of Article 2 of Regulation (EU) No 2017/565 as it forms part of domestic law by virtue of the European Union (Withdrawal) Act 2018, as amended by the European Union (Withdrawal Agreement) Act 2020 ("EUWA"); or

(b) a customer within the meaning of the provisions of the FSMA and any rules or regulations made under the FSMA to implement Directive (EU) 2016/97 (as amended or superseded, the "Insurance Distribution Directive"), where that customer would not qualify as a professional client, as defined in point (8) of Article 2(1) of Regulation (EU) No 600/2014 as it forms part of domestic law by virtue of the EUWA.

Notice to Prospective Investors in Italy

The offering of the Notes has not been registered with the Commissione Nazionale per le Società e la Borsa ("**CONSOB**") (the Italian Securities Exchange Commission) pursuant to Italian securities legislation and, accordingly, no Notes may be offered, sold or delivered, nor may copies of the Offering Memorandum or of any other document relating to the Notes be distributed in the Republic of Italy, except: (i) to qualified investors (*investitori qualificati*), as defined pursuant to Article 100 of Legislative Decree No. 58 of 24 February 1998, as amended (the Financial Services Act) and Article 34-ter, first paragraph, letter (b) of CONSOB Regulation No. 11971 of 14 May 1999, as amended from time to time (Regulation No. 11971); or (ii) in other circumstances which are exempted from the rules on public offerings pursuant to Article 100 of the Financial Services Act and Article 34-ter of Regulation No. 11971. Any offer, sale or delivery of the Notes or distribution of copies of the Offering Memorandum or any other document relating to the Notes in the Republic of Italy under (i) or (ii) above must be: (a) made by an investment firm, bank or financial intermediary permitted to conduct such activities in the Republic of Italy in accordance with the Financial Services Act, CONSOB Regulation No. 16190 of 29 October 2007 (as amended from time to time) and Legislative Decree No. 385 of 1 September 1993, as amended (the "**Banking Act**"); and (b) in compliance with Article 129 of the Banking Act, as amended, and the implementing guidelines of the Bank of Italy, as amended from time to time, pursuant to which the Bank of Italy may request information on the issue or the offer of securities in the Republic of Italy; and (c) in compliance with any other applicable laws and regulations or requirement imposed by CONSOB or other Italian authority.

Notice to Prospective Investors in Singapore

Each of the Initial Purchasers has acknowledged that this Offering Memorandum has not been and will not be registered as a prospectus with the Monetary Authority of Singapore (the "**MAS**"). Accordingly, each of the Initial Purchasers represents, warrants and agrees that it has not offered or sold any Notes or caused the Notes to be made the subject of an invitation for subscription or purchase and will not offer or sell any Notes or cause the Notes to be made the subject of an invitation for subscription or purchase, and will not offer or sell any Notes or cause the Notes to be made the subject of an invitation for subscription or purchase, and has not circulated or distributed, nor will it circulate or distribute, this Offering Memorandum or any other document or material in connection with the offer or sale, or invitation for subscription or purchase, of the Notes, whether directly or indirectly, to any person in Singapore other than (i) to an institutional investor (as defined in Section 4A of the Securities and Futures Act (Chapter 289 of Singapore) (the "**SFA**") pursuant to Section 274 of SFA, (ii) to a relevant person (as defined in Section 275(2) of the SFA) pursuant to Section 275(1) of the SFA, or any person pursuant to Section 275(1A) of the SFA, and in accordance with the conditions specified in Section 275 of the SFA and (where applicable) Regulation 3 of the Securities and Futures (Classes of Investors) Regulations 2018 of Singapore, or (iii) otherwise pursuant to, and in accordance with the conditions of, any other applicable provision of the SFA.

Where the Notes are subscribed or purchased under Section 275 of the SFA by a relevant person which is:

(a) a corporation (which is not an accredited investor (as defined in Section 4A of the SFA)) the sole business of which is to hold investments and the entire share capital of which is owned by one or more individuals, each of whom is an accredited investor; or

(b) a trust (where the trustee is not an accredited investor) whose sole purpose is to hold investments and each beneficiary of the trust is an individual who is an accredited investor,

securities (as defined in Section 239(1) of the SFA) of that corporation or the beneficiaries' rights and interest (howsoever described) in that trust shall not be transferred within six months after that corporation or that trust has acquired the Notes pursuant to an offer made under Section 275 of the SFA except:

(1) to an institutional investor or to a relevant person as defined in Section 275(2) of the SFA, or (in the case of such corporation) where the transfer arises from an offer referred to in Section 276(3)(i)(B) of the SFA or (in the case of such trust) where the transfer arises from an offer referred to in Section 276(4)(i)(B) of the SFA;

(2) where no consideration is or will be given for the transfer;

(3) where the transfer is by operation of law;

(4) as specified in Section 276(7) of the SFA; or

(5) as specified in Regulation 37A of the Securities and Futures (Offers of Investments) (Shares and Debentures) Regulations 2018 of Singapore.

Notice to Prospective Investors in Hong Kong

Each of the Initial Purchasers represents, warrants and undertakes that:

(a) it has not offered or sold and will not offer or sell in Hong Kong, by means of any document, any Notes other than (i) to "professional investors" as defined in the Securities and Futures Ordinance (Cap. 571) of Hong Kong (the "**SFO**") and any rules made under the SFO; or (ii) in other circumstances which do not result in the document being a "prospectus" as defined in the Companies (Winding Up and Miscellaneous Provisions Ordinance (Cap. 32) of Hong Kong (the "**C(WUMP)O**") or which do not constitute an offer to the public within the meaning of the C(WUMP)O; and

(b) it has not issued or had in its possession for the purposes of issue, and will not issue or have in its possession for the purposes of issue, whether in Hong Kong or elsewhere, any advertisement, invitation or document relating to the Notes, which is directed at, or the contents of which are likely to be accessed or read by, the public of Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to Notes which are or are intended to be disposed of only to persons outside Hong Kong or only to "professional investors" as defined in the SFO and any rules made under the SFO.

Notice to Prospective Investors in Canada

The Notes may be sold only to purchasers purchasing, or deemed to be purchasing, as principal in accordance with applicable Canadian securities laws, for investment only and not with a view to resale or redistribution, and that are "accredited investors", as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are "permitted clients", as defined in National Instrument 31-103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the Notes must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable Canadian securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this offering memorandum (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Notice to Prospective Investors in Japan

Each of the Initial Purchasers, severally and not jointly, represents, warrants and undertakes that the Notes have not been and will not be registered under the Financial Instruments and Exchange Act of Japan (Act No. 25 of 1948, as amended, the "**Financial Instruments and Exchange Act**") and that it has not, directly or indirectly, offered or sold and will not, directly or indirectly, offer or sell any Notes in Japan or to, or for the benefit of, any resident of Japan (which term as used herein means any person resident in Japan, including any corporation or other entity organized under the laws of Japan), or to others for re-offering or resale, directly or indirectly, in Japan or to, or for the benefit of, any resident of Japan except pursuant to an exemption from the registration requirements of, and otherwise in compliance with, the Financial Instruments and Exchange Act and other applicable laws and regulations of Japan.

Notice to Prospective Investors in the PRC

Each of the Initial Purchasers, severally and not jointly, represents, warrants and agrees that the Notes are not being offered or sold and may not be offered or sold, directly or indirectly, in the PRC (for such purposes, not including the Hong Kong and Macau Special Administrative Regions or Taiwan), except as permitted by the applicable laws of the PRC.

Notice to Prospective Investors in the Cayman Islands

Each of the Initial Purchasers, severally and not jointly, represents and agrees that it has not offered or sold, directly or indirectly, and will not offer or sell, directly or indirectly, any Notes to the public in the Cayman Islands.

TRANSFER RESTRICTIONS

Because of the following restrictions, purchasers are advised to consult legal counsel prior to making any offer, sale, resale, pledge or other transfer of the Notes.

Each purchaser of the Notes will be deemed to have represented and agreed as follows (terms used in this paragraph that are defined in Rule 144A or in Regulation S under the Securities Act are used herein as defined therein):

1. it is not an "affiliate" (as defined in Rule 144 under the Securities Act) of the Company or acting on behalf of the Company and (A)(i) is a Qualified Institutional Buyer, (ii) is aware that the sale of the Notes to it is being made in reliance on Rule 144A and (iii) is acquiring such Notes for its own account or the account of a Qualified Institutional Buyer, or (B) (i) is outside the United States and (ii) is not a U.S. person;

2. it acknowledges that the Notes have not been and will not be registered under the Securities Act or with any securities regulatory authority of any jurisdiction and may not be offered or sold within the United States except as set forth below;

3. (A) it understands and agrees that if it decides to resell, pledge or otherwise transfer any Notes or any beneficial interests in any Notes other than a Regulation S global note within the time period referred to in Rule 144(d) under the Securities Act with respect to such resale, pledge or transfer, such Notes may be resold, pledged, or transferred only if such purchaser is an initial investor, (i) to the Company or the Issuer or any subsidiary thereof, (ii) to a person whom the seller reasonably believes is a Qualified Institutional Buyer that purchases for its own account or for the account of a Qualified Institutional Buyer in a transaction meeting the requirements of Rule 144A, (iii) in an offshore transaction meeting the requirements of Rule 904 of Regulation S under the Securities Act (iv) pursuant to an exemption from registration under the Securities Act provided by Rule 144 under the Securities Act (if available) or (v) pursuant to an effective registration statement under the Securities Act, and in each of such cases, in accordance with any applicable securities laws of any state of the United States and any other jurisdiction; (B) if it is a purchaser in a sale that occurs outside the United States within the meaning of Regulation S, it acknowledges that until the expiration of the 40-day distribution compliance period, it shall not make any offer or sale of the Notes to a U.S. person or for the account or benefit of a U.S. person within the meaning of Rule 902 under the Securities Act, except pursuant to Rule 144A to a qualified institutional buyer taking delivery thereof in the form of a beneficial interest in a Rule 144A global note;

4. it agrees to, and each subsequent holder is required to, notify any purchaser of the Notes from it of the resale restrictions referred to in clause 3 above, if then applicable;

5. it understands and agrees that (A) the Notes initially offered in the United States to Qualified Institutional Buyers will be represented by Rule 144A global notes and (B) the Notes offered outside the United States in reliance on Regulation S will be represented by Regulation S global notes;

6. it understands that the Notes will bear a legend to the following effect, unless otherwise agreed to by the Company:

   [*IN THE CASE OF A RESTRICTED GLOBAL NOTE*] THIS NOTE HAS NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD WITHIN THE UNITED STATES OR TO, OR FOR THE ACCOUNT OR BENEFIT OF, U.S. PERSONS EXCEPT AS SET FORTH IN THE FOLLOWING SENTENCE. BY ITS ACQUISITION HEREOF, THE HOLDER (1) REPRESENTS THAT IT IS A "QUALIFIED INSTITUTIONAL BUYER" (AS DEFINED IN RULE 144A UNDER THE SECURITIES ACT) OR IT IS NOT A

U.S. PERSON AND IS ACQUIRING THIS NOTE IN AN OFFSHORE TRANSACTION IN COMPLIANCE WITH REGULATION S UNDER THE SECURITIES ACT, (2) AGREES THAT IT WILL NOT, WITHIN THE TIME PERIOD REFERRED TO IN RULE 144(d) UNDER THE SECURITIES ACT AS IN EFFECT WITH RESPECT TO SUCH TRANSFER, RESELL OR OTHERWISE TRANSFER THIS NOTE EXCEPT (A) TO THE COMPANY OR ANY SUBSIDIARY THEREOF, (B) INSIDE THE UNITED STATES TO A QUALIFIED INSTITUTIONAL BUYER IN COMPLIANCE WITH RULE 144A UNDER THE SECURITIES ACT, (C) OUTSIDE THE UNITED STATES IN AN OFFSHORE TRANSACTION IN COMPLIANCE WITH RULE 904 UNDER THE SECURITIES ACT, (D) PURSUANT TO THE EXEMPTION FROM REGISTRATION PROVIDED BY RULE 144 UNDER THE SECURITIES ACT (IF AVAILABLE) OR (E) PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT, AND (3) AGREES THAT IT WILL DELIVER TO EACH PERSON TO WHOM THIS NOTE IS TRANSFERRED A NOTICE SUBSTANTIALLY TO THE EFFECT OF THIS LEGEND. AS USED HEREIN, THE TERMS "OFFSHORE TRANSACTION," "UNITED STATES" AND "U.S. PERSON" HAVE THE MEANINGS GIVEN TO THEM BY REGULATION S UNDER THE SECURITIES ACT. THE INDENTURE CONTAINS A PROVISION REQUIRING THE TRUSTEE TO REFUSE TO REGISTER ANY TRANSFER OF THIS NOTE IN VIOLATION OF THE FOREGOING RESTRICTIONS.

[*IN THE CASE OF A REGULATION S GLOBAL NOTE*] THIS NOTE HAS NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR WITH ANY SECURITIES REGULATORY AUTHORITY OF ANY JURISDICTION, AND MAY NOT BE TRANSFERRED IN THE UNITED STATES EXCEPT PURSUANT TO AN AVAILABLE EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND ALL APPLICABLE STATE SECURITIES LAWS.

7. it acknowledges that the Company, the Initial Purchasers, the Trustee, the Paying Agent, the Transfer Agent, the Registrar and others will rely upon the truth and accuracy of the foregoing acknowledgments, representations and agreements and agrees that, if any of such acknowledgments, representations or agreements deemed to have been made by virtue of its purchase of the Notes are no longer accurate, it shall promptly notify the Company, and if it is acquiring any Notes as a fiduciary or agent for one or more accounts, it represents that it has sole investment discretion with respect to each such account and that it has full power to make the foregoing acknowledgments, representations and agreements on behalf of each such account.

For further discussion of the requirements (including the presentation of transfer certificates) under the Indenture to effect exchanges of transfer of interests in the global notes and of the Notes in certificated form, see "*Description of the Notes – Notes; Delivery and Form.*"

RATINGS

The Notes are expected to be rated Baa1 by Moody's, BBB by Standard & Poor's and BBB+ by Fitch. The ratings reflect the rating agencies' assessment of the likelihood of timely payment of the principal of and interest on the Notes. The ratings do not address the payment of any Additional Amounts and do not constitute recommendations to purchase, hold or sell the Notes inasmuch as such ratings do not comment as to market price or suitability for a particular investor. Each such rating should be evaluated independently of any other rating on the Notes, on other securities of ours, or on us. Additionally, we have been assigned an issuer rating of Baa1 with stable outlook by Moody's, a long-term corporate credit rating of BBB by Standard & Poor's with positive outlook and a rating of BBB+ by Fitch with stable outlook. We cannot assure you that the ratings will be confirmed or that they will remain in effect for any given period or that the ratings will not be revised by such rating agencies in the future if in their judgment circumstances so warrant.

LEGAL MATTERS

Certain legal matters with respect to the Notes will be passed upon for us by Sullivan & Cromwell (Hong Kong) LLP as to matters of Hong Kong, United States federal and New York law and Maples and Calder (Hong Kong) LLP as to matters of Cayman Islands law and Commerce & Finance Law Offices as to matters of PRC law. Certain legal matters will be passed upon for the Initial Purchasers by Davis Polk & Wardwell as to matters of United States federal and New York law and King & Wood Mallesons as to matters of PRC law.

INDEPENDENT ACCOUNTANTS

Our consolidated financial statements as of and for the years ended December 31, 2020 and 2021 included in this offering memorandum have been audited by Deloitte Touche Tohmatsu, as stated in their reports appearing herein.

For the purpose of the offers and sales to non-U.S. persons outside the United States in reliance on Regulation S and within the United States to "qualified institutional buyers" in reliance on Rule 144A under the Securities Act, Deloitte Touche Tohmatsu has acknowledged the references to its name and the inclusion of its reports in the form and context in which they are respectively included in this offering memorandum.

GENERAL INFORMATION

1. **Clearing Systems:** The Notes have been accepted for clearance through the facilities of Euroclear, Clearstream and DTC. Certain trading information with respect to the Notes is set forth below:

	ISIN	CUSIP	Common Code
Rule 144A global note	US29336EAA10	29336E AA1	248155809
Regulation S global note	USG3066DAA75	G3066D AA7	248155876

   Only Notes evidenced by a global note have been accepted for clearance through Euroclear, Clearstream or DTC, as the case may be. The Legal Entity Identifier of the Company is 549300V7BXPWT6WIPR03.

2. **Authorizations:** The Company has obtained all necessary consents, approvals and authorizations in connection with the issue and performance of its obligations under the Notes, the Indenture and Paying and Transfer Agent Appointment Letter. The issue of the Notes and entry into the transaction documents were authorized by resolutions of the board of directors of the Company on April 19, 2022.

3. **No Material Adverse Change:** Except for those as disclosed in this Offering Memorandum, there has been no material adverse change in the financial or trading position or prospects of the Company since December 31, 2021.

4. **Litigation:** The Company is not involved in any litigation or arbitration proceedings that the Company believes are material in the context of the Notes, nor is the Company aware that any such proceedings are pending or threatened.

5. **Available Documents:** The latest annual report and consolidated accounts of the Company, as well as the Indenture and Paying and Transfer Agent Appointment Letter, will be available for inspection from the Issue Date at Rooms 3101-04, 31st Floor, Tower 1, Lippo Centre, 89 Queensway, Hong Kong during normal business hours, so long as any of the Notes is outstanding.

6. **Financial Statements:** The Company's audited consolidated financial statements as of and for the years ended December 31, 2019, 2020 and 2021 have been audited by Deloitte Touche Tohmatsu in accordance with Hong Kong Standards on Auditing issued by the Hong Kong Institute of Certified Public Accountants, as stated in its report appearing herein.

7. **Listing:** Application will be made to the Hong Kong Stock Exchange for the listing of, and permission to deal in, the Notes by way of debt issues to Professional Investors only. It is expected that dealing in, and listing of, the Notes on the Hong Kong Stock Exchange will commence on May 18, 2022.

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INDEPENDENT AUDITOR'S REPORT

Deloitte. 德勤

TO THE SHAREHOLDERS OF ENN ENERGY HOLDINGS LIMITED
(incorporated in the Cayman Islands with limited liability)

Opinion

We have audited the consolidated financial statements of ENN Energy Holdings Limited (the "Company") and its subsidiaries (collectively referred to as the "Group") set out on pages 72 to 176 of this Annual Report, which comprise the consolidated statement of financial position as at 31 December 2021, and the consolidated statement of profit or loss and other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2021, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Hong Kong Financial Reporting Standards ("HKFRSs") issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA") and have been properly prepared in compliance with the disclosure requirements of the Hong Kong Companies Ordinance.

Basis for Opinion

We conducted our audit in accordance with Hong Kong Standards on Auditing ("HKSAs") issued by the HKICPA. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the HKICPA's Code of Ethics for Professional Accountants ("the Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matter	How our audit addressed the key audit matter
Impairment assessment of goodwill allocated to integrated energy business	
We identified the impairment assessment of goodwill attributable to integrated energy business (the "Integrated Energy CGU") as a key audit matter owing to the significance of the carrying amount of this goodwill and the significant estimates made by the management in determining the recoverable amounts of the Integrated Energy CGU, including revenue growth rate and discount rate as disclosed in Note 5 to the consolidated financial statements. As disclosed in Note 19 to the consolidated financial statements, the carrying amount of goodwill attributable to integrated energy business amounted to RMB2,028 million as at 31 December 2021.	Our audit procedures in relation to impairment assessment of goodwill allocated to the Integrated Energy CGU included: • Evaluating management's methodology for impairment assessment of goodwill and corroborating the discount rate used based on the market information with the assistance of internal valuation expert; and • Evaluating the discounted cash flows prepared by the management in deriving the recoverable amounts of the Integrated Energy CGU for the impairment assessment by checking the mathematical accuracy of discounted cash flow calculation, assessing the reasonableness of the key assumptions adopted by the management in the model with reference to the Group's historical performances and external market data, and reviewing the budget of the underlying projects approved by the management on a sample basis.

Key Audit Matters *(continued)*

Key audit matter	How our audit addressed the key audit matter
Fair value measurement of commodity derivative contracts We identified the fair value measurement of commodity derivative contracts as disclosed in Note 24 to the consolidated financial statements as a key audit matter due to the judgment and estimation required in establishing the relevant valuation techniques and inputs. The carrying amount of commodity derivative asset amounted to RMB2,407 million and of commodity derivative liability amounted to RMB1,665 million as at 31 December 2021. As further disclosed in Notes 5 and 53 to the consolidated financial statements, any changes in these factors could affect the fair values of commodity derivative contracts.	Our audit procedures in relation to the fair value measurement of commodity derivative contracts included: • Understanding the design and implementation of key controls over the valuation of commodity derivative contracts; • Testing the completeness of commodity derivative contracts by arranging confirmation to the counterparties; and • With the assistance of internal valuation expert, performing the following procedures on sample basis: – evaluating the appropriateness of management’s valuation methodology; – checking the relevant inputs used by the management to our independently sourced market inputs; and – comparing the valuation based on our inputs with the management’s results and investigating any differences.

Other Information

The directors of the Company are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated financial statements and our auditor’s report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Directors and Those Charged with Governance for the Consolidated Financial Statements

The directors of the Company are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with HKFRSs issued by the HKICPA and the disclosure requirements of the Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the Group’s ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group’s financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion solely to you, as a body, in accordance with our agreed terms of engagement, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with HKSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in the independent auditor's report is Lam Kam Chiu.

Deloitte Touche Tohmatsu
Certified Public Accountants
Hong Kong
18 March 2022

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the year ended 31 December 2021

	Notes	**2021 RMB million**	2020 RMB million
Revenue	6	**93,113**	71,617
Cost of sales		**(79,057)**	(59,285)
Gross profit		**14,056**	12,332
Other income	8	**1,077**	952
Other gains and losses	9	**984**	282
Distribution and selling expenses		**(1,122)**	(951)
Administrative expenses		**(3,725)**	(3,230)
Share of results of associates		**261**	306
Share of results of joint ventures		**438**	476
Finance costs	10	**(576)**	(609)
Profit before tax	11	**11,393**	9,558
Income tax expense	13	**(2,398)**	(2,227)
Profit for the year		**8,995**	7,331
Other comprehensive income			
Items that will not be reclassified to profit or loss:			
Fair value change of equity instruments at fair value through other comprehensive income ("FVTOCI")		**15**	65
Fair value change of a property transferred from property, plant and equipment to investment properties		**16**	–
Income tax relating to items that will not be reclassified to profit or loss		**(7)**	(16)
		24	49
Items that have been reclassified or may be reclassified subsequently to profit or loss:			
Exchange differences arising on translating foreign operations		**5**	1
Fair value change of derivative financial instruments under hedge accounting		**164**	(122)
Income tax relating to items that may be reclassified subsequently to profit and loss		**(37)**	14
Other comprehensive income for the year		**156**	(58)
Total comprehensive income for the year		**9,151**	7,273
Profit for the year attributable to:			
Owners of the Company		**7,755**	6,278
Non-controlling interests		**1,240**	1,053
		8,995	7,331
Total comprehensive income for the year attributable to:			
Owners of the Company		**7,905**	6,220
Non-controlling interests		**1,246**	1,053
		9,151	7,273

		RMB	RMB
Earnings per share	15		
– Basic		**6.88**	5.59
– Diluted		**6.86**	5.57

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

At 31 December 2021

	Notes	**2021 RMB million**	2020 RMB million
Non-current Assets			
Property, plant and equipment	16	**46,793**	41,861
Right-of-use assets	17	**2,119**	2,129
Investment properties	18	**288**	261
Goodwill	19	**2,520**	2,511
Intangible assets	20	**4,311**	4,446
Interests in associates	21	**3,655**	3,619
Interests in joint ventures	22	**5,063**	4,141
Other receivables	23	**18**	73
Derivative financial instruments	24	**946**	292
Financial assets at fair value through profit or loss (“FVTPL”)	25	**4,406**	4,760
Equity instruments at FVTOCI	26	**266**	211
Amounts due from associates	29	**21**	6
Amounts due from joint ventures	30	**4**	10
Deferred tax assets	32	**1,212**	1,370
Deposits paid for investments		**60**	1
Prepayment and deposits paid for acquisition of property, plant and equipment, land use rights and right of operation		**126**	134
Restricted bank deposits	34	**622**	650
		72,430	66,475
Current Assets			
Inventories	33	**1,508**	1,285
Trade and other receivables	23	**10,568**	9,053
Contract assets	28	**775**	732
Derivative financial instruments	24	**1,585**	336
Financial assets at FVTPL	25	**152**	70
Amounts due from associates	29	**1,165**	892
Amounts due from joint ventures	30	**2,440**	2,106
Amounts due from related companies	31	**318**	348
Restricted bank deposits	34	**363**	116
Cash and cash equivalents	34	**8,684**	8,630
		27,558	23,568

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

At 31 December 2021

	Notes	2021 RMB million	2020 RMB million
Current Liabilities			
Trade and other payables	36	**10,172**	8,302
Contract liabilities	37	**14,908**	14,242
Deferred income	38	**48**	38
Amounts due to associates	29	**424**	319
Amounts due to joint ventures	30	**1,249**	976
Amounts due to related companies	31	**964**	925
Taxation payables		**909**	971
Lease liabilities	35	**75**	89
Derivative financial instruments	24	**956**	401
Bank and other loans	40	**6,150**	4,590
Corporate bonds	41	**2,099**	–
Unsecured bonds	43	**3,601**	–
Senior notes	42	**–**	2,380
Share-based payment liabilities	45	**24**	–
		41,579	33,233
Net Current Liabilities		**(14,021)**	(9,665)
Total Assets less Current Liabilities		**58,409**	56,810
Capital and Reserves			
Share capital	39	**117**	117
Reserves		**35,660**	30,444
Equity attributable to owners of the Company		**35,777**	30,561
Non-controlling interests		**6,373**	5,611
Total Equity		**42,150**	36,172
Non-current Liabilities			
Contract liabilities	37	**2,993**	3,212
Deferred income	38	**789**	729
Amounts due to associates	29	**215**	–
Amounts due to joint ventures	30	**325**	585
Lease liabilities	35	**280**	310
Derivative financial instruments	24	**806**	526
Bank and other loans	40	**3,318**	2,078
Corporate bonds	41	**–**	2,097
Senior notes	42	**4,722**	4,827
Unsecured bonds	43	**–**	3,712
Deferred tax liabilities	32	**2,785**	2,562
Financial guarantee liabilities		**21**	–
Share-based payment liabilities	45	**5**	–
		16,259	20,638
		58,409	56,810

The consolidated financial statements on pages 72 to 176 of this Annual Report were approved and authorised for issue by the board of directors on 18 March 2022 and are signed on its behalf by:

Wang Yusuo
DIRECTOR

Wang Dongzhi
DIRECTOR

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2021

	Equity attributable to owners of the Company													
	Share capital RMB million (Note 39)	Treasury stocks RMB million	Share premium RMB million	Special reserve RMB million (Note a)	Revaluation reserve RMB million	Share options reserve RMB million	Exchange reserve RMB million	Surplus reserve fund RMB million (Note b)	Hedging reserve RMB million (Note 44)	Designated safety fund RMB million (Note c)	Retained earnings RMB million	Total RMB million	Non-controlling interests RMB million	Total equity RMB million
At 1 January 2020	116	(151)	2,690	(82)	23	128	–	2,648	–	59	20,437	25,868	5,152	31,020
Profit for the year	–	–	–	–	–	–	–	–	–	–	6,278	6,278	1,053	7,331
Other comprehensive income for the year	–	–	–	–	49	–	1	–	(108)	–	–	(58)	–	(58)
Total comprehensive income for the year	–	–	–	–	49	–	1	–	(108)	–	6,278	6,220	1,053	7,273
Cumulative loss transferred to initial carrying value of hedged items (Note 44)	–	–	–	–	–	–	–	–	71	–	–	71	–	71
Recognition of equity-settled share-based payment (Note 45)	–	–	–	–	–	70	–	–	–	–	–	70	–	70
Issue of ordinary shares upon exercise of share options (Notes 39 & 45)	1	–	163	–	–	(51)	–	–	–	–	–	113	–	113
Purchase of shares under Share Award Scheme	–	(17)	–	–	–	–	–	–	–	–	–	(17)	–	(17)
Acquisition of subsidiaries and businesses (Notes 47 & 48)	–	–	–	–	–	–	–	–	–	–	–	–	178	178
Disposal/deregistration of subsidiaries	–	–	–	–	–	–	–	–	–	–	–	–	(161)	(161)
Acquisition of additional interests in subsidiaries	–	–	–	(45)	–	–	–	–	–	–	–	(45)	(123)	(168)
Disposal of partial interest in a subsidiary	–	–	–	–	–	–	–	–	–	–	–	–	4	4
Capital contribution from non-controlling shareholders	–	–	–	–	–	–	–	–	–	–	–	–	97	97
Dividends appropriation (Note 14)	–	–	(1,719)	–	–	–	–	–	–	–	–	(1,719)	–	(1,719)
Dividends paid to non-controlling shareholders	–	–	–	–	–	–	–	–	–	–	–	–	(589)	(589)
Transfer to surplus reserve fund (Note b)	–	–	–	–	–	–	–	478	–	–	(478)	–	–	–
Transfer to designated safety fund (Note c)	–	–	–	–	–	–	–	–	–	8	(8)	–	–	–
At 31 December 2020	117	(168)	1,134	(127)	72	147	1	3,126	(37)	67	26,229	30,561	5,611	36,172
Profit for the year	–	–	–	–	–	–	–	–	–	–	7,755	7,755	1,240	8,995
Other comprehensive income for the year	–	–	–	–	18	–	5	–	127	–	–	150	6	156
Total comprehensive income for the year	–	–	–	–	18	–	5	–	127	–	7,755	7,905	1,246	9,151
Cumulative loss transferred to initial carrying value of hedged items (Note 44)	–	–	–	–	–	–	–	–	29	–	–	29	–	29
Recognition of share-based payment expenses (Note 45)	–	–	–	–	–	20	–	–	–	–	–	20	–	20
Issue of ordinary shares upon exercise of share options (Notes 39 & 45)	–	–	119	–	–	(29)	–	–	–	–	–	90	–	90
Acquisition of a subsidiary (Note 48)	–	–	–	–	–	–	–	–	–	–	–	–	229	229
Disposal/deregistration of subsidiaries	–	–	–	–	–	–	–	–	–	–	–	–	(16)	(16)
Acquisition of additional interests in subsidiaries	–	–	–	(1)	–	–	–	–	–	–	–	(1)	–	(1)
Capital contribution from non-controlling shareholders	–	–	–	–	–	–	–	–	–	–	–	–	51	51
Capital reduction from non-controlling shareholders	–	–	–	–	–	–	–	–	–	–	–	–	(1)	(1)
Dividends appropriation (Note 14)	–	–	–	–	–	–	–	–	–	–	(2,827)	(2,827)	–	(2,827)
Dividends paid to non-controlling shareholders	–	–	–	–	–	–	–	–	–	–	–	–	(747)	(747)
Transfer to surplus reserve fund (Note b)	–	–	–	–	–	–	–	420	–	–	(420)	–	–	–
Transfer to designated safety fund (Note c)	–	–	–	–	–	–	–	–	–	17	(17)	–	–	–
At 31 December 2021	117	(168)	1,253	(128)	90	138	6	3,546	119	84	30,720	35,777	6,373	42,150

Notes:

a. The balance represents the difference between the fair values of consideration paid and the carrying values of net assets attributable to the additional interests of subsidiaries acquired or disposed of with no change in control.

b. In accordance with the People's Republic of China ("PRC") regulations, the surplus reserve fund retained by subsidiaries in the PRC is non-distributable.

c. Pursuant to relevant PRC regulation, the Group is required to transfer 1.5% on revenue generated from construction and installation, transportation of gas or other dangerous chemical into a designated fund. The fund will be used for installation and repair and maintenance of safety facilities. The movement during the year represents the difference between the amount provided and the amount utilised during the year.

CONSOLIDATED STATEMENT OF CASH FLOWS

For the year ended 31 December 2021

	Note	**2021 RMB million**	2020 RMB million
OPERATING ACTIVITIES			
Profit before tax		**11,393**	9,558
Adjustments for:			
Share of results of associates		**(261)**	(306)
Share of results of joint ventures		**(438)**	(476)
Exchange differences		**(214)**	(553)
Net loss of financial assets at FVTPL		**43**	45
Net gain on fair value change of derivative financial instruments		**(980)**	(102)
Impairment loss under expected credit loss model, net of reversal		**123**	129
Impairment losses on property, plant and equipment		**37**	70
Loss on disposal of property, plant and equipment		**26**	128
Gain on disposal of right-of-use assets		**(4)**	(18)
(Gain) loss on disposal of subsidiaries	49	**(41)**	62
Loss (gain) on disposal of joint ventures		**4**	(4)
Gain on disposal of associates		**(9)**	–
Loss on deemed disposal of an associate		**9**	–
Loss on repurchase of unsecured bonds		**1**	9
Dividends income from financial assets at FVTPL		**(197)**	(73)
Dividends income from equity instruments at FVTOCI		**(6)**	(1)
Decrease in fair value of investment properties		**6**	7
Share-based payment expenses		**49**	70
Depreciation of property, plant and equipment		**1,783**	1,603
Depreciation of right-of-use assets		**156**	174
Amortisation of intangible assets		**324**	304
Interest income on bank deposits and loan receivables		**(200)**	(204)
Finance costs		**576**	609
Gain on disposal of an financial asset at FVTPL		**(10)**	–
Financial guarantee income		**(2)**	–
		12,168	11,031
Movements in working capital:			
Increase in inventories		**(234)**	(117)
Increase in trade and other receivables		**(1,291)**	(1,297)
(Increase) decrease in contract assets		**(47)**	36
Increase in contract liabilities		**447**	1,480
Increase in amounts due from associates		**(102)**	(57)
Increase in amounts due from joint ventures		**(147)**	(84)
Increase in amounts due from related companies		**(42)**	(49)
Increase in trade and other payables		**1,508**	348
Increase in amounts due to joint ventures		**138**	201
Increase (decrease) in amounts due to associates		**141**	(13)
Increase in deferred income		**70**	91
Increase (decrease) in amounts due to related companies		**30**	(165)
Cash generated from operations		**12,639**	11,405
PRC enterprise income tax paid		**(2,173)**	(1,709)
Net cash generated from operating activities		**10,466**	9,696

	Notes	**2021** **RMB million**	2020 RMB million
INVESTING ACTIVITIES			
Dividends received from joint ventures		**232**	405
Dividends received from associates		**251**	208
Dividends received from financial assets at FVTPL		**214**	56
Dividends received from equity instruments at FVTOCI		**6**	1
Gross cash outflow from derivative financial instruments		**(1,516)**	(133)
Gross cash inflow from derivative financial instruments		**1,558**	143
Option premium paid in relation to derivative financial instruments		**(10)**	(7)
Interest received		**200**	204
Purchases of property, plant and equipment		**(6,253)**	(5,515)
Acquisition of intangible assets		**(37)**	(61)
Proceeds from disposal of property, plant and equipment		**155**	179
Purchases of wealth management products		**(10,733)**	(10,364)
Redemptions of wealth management products		**10,651**	10,310
Addition of right-of-use assets		**(102)**	(80)
Deposits paid for investments		**(59)**	–
Deposits paid for acquisition of right-of use assets		**(6)**	(13)
Net cash outflow on acquisition of subsidiaries	47&48	**(726)**	(636)
Net cash inflow on disposal of subsidiaries	49	**19**	246
Proceeds from refund of financial assets at FVTPL		**24**	36
Proceeds from disposal of joint ventures		**31**	28
Proceeds from disposal of associates		**279**	12
Proceeds from disposal of right-of-use assets		**28**	31
Proceeds from disposal of financial assets at FVTPL		**297**	–
Purchases of equity instruments at FVTOCI		**(40)**	(23)
Investments in joint ventures		**(155)**	(211)
Investments in associates		**(319)**	(225)
Addition of restricted bank deposits		**(922)**	(547)
Release of restricted bank deposits		**703**	793
Amounts advanced to third parties		**(2,661)**	(1,421)
Amounts repaid by third parties		**2,430**	1,233
Amounts advanced to associates		**(296)**	(105)
Amounts repaid by associates		**100**	166
Amounts advanced to joint ventures		**(276)**	(1,097)
Amounts repaid by joint ventures		**94**	34
Amounts advanced to related companies		**–**	(139)
Amounts repaid by related companies		**73**	1
Net cash used in investing activities		**(6,766)**	(6,491)

CONSOLIDATED STATEMENT OF CASH FLOWS

For the year ended 31 December 2021

	2021 RMB million	2020 RMB million
FINANCING ACTIVITIES		
Interest paid	**(686)**	(756)
Advanced from banks and other financial institutions	**2,700**	10,830
Amounts repaid to banks and other financial institutions	**(2,700)**	(10,830)
Purchase of shares under Share Award Scheme	**–**	(17)
Net proceeds from ordinary shares issued upon exercise of share options	**90**	113
Proceeds from issuance of Green Senior Notes	**–**	5,065
Capital contribution from non-controlling shareholders	**51**	97
Capital reduction of non-controlling shareholders	**(13)**	–
Net cash outflow on acquisition of additional interest in subsidiaries	**–**	(154)
Net cash inflow on disposal of partial interest in a subsidiary	**–**	6
Dividends paid to non-controlling shareholders	**(747)**	(589)
Dividends paid to shareholders	**(2,827)**	(1,719)
New bank loans raised	**11,182**	9,941
Repayment of bank loans	**(8,245)**	(13,586)
Repayment of senior notes	**(2,372)**	–
Repayment of unsecured bonds	**(34)**	(208)
Repayment of lease liabilities	**(98)**	(107)
Advanced from associates	**271**	144
Amounts repaid to associates	**(92)**	(1)
Advanced from joint ventures	**183**	214
Amounts repaid to joint ventures	**(308)**	(374)
Advanced from related companies	**15**	33
Amounts repaid to related companies	**(6)**	(3)
Net cash used in financing activities	**(3,636)**	(1,901)
Net increase in cash and cash equivalents	**64**	1,304
Cash and cash equivalents at the beginning of the year	**8,630**	7,373
Effect of foreign exchange rate changes	**(10)**	(47)
Cash and cash equivalents at the end of the year	**8,684**	8,630

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2021

1. GENERAL INFORMATION

ENN Energy Holdings Limited (the "Company") is an exempted company incorporated in the Cayman Islands under the Companies Law and its shares are listed on the Main Board of The Stock Exchange of Hong Kong Limited (the "Stock Exchange"). The addresses of its registered office and principal place of business are disclosed in the section headed "Corporate Information" of the Company's Annual Report.

The consolidated financial statements of the Company and its subsidiaries (collectively referred to the "Group") are presented in Renminbi ("RMB"), which is the same as the functional currency of the Company.

The Company is an investment holding company. The activities of its principal subsidiaries are set out in Note 56.

2. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS

As at 31 December 2021, the Group has net current liabilities of approximately RMB14,021 million. The directors of the Company (the "Directors") have given careful consideration to the Group's future financial resource when preparing the consolidated financial statements. Taking into account the continuity and availability of financial resources to the Group, among other things, the cash flows generated from its principal operations, availability of banking facilities and its expected future working capital requirements, the Directors are therefore satisfied that the Group will be able to meet in full its financial obligations when they fall due and continue its existing operation in the foreseeable future. Accordingly, the consolidated financial statements for the year ended 31 December 2021 have been prepared on a going concern basis.

3. APPLICATION OF AMENDMENTS TO HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs")

Amendments to HKFRSs that are mandatorily effective for the current year

In the current year, the Group has applied the following amendments to HKFRSs issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA") for the first time, which are mandatorily effective for the annual periods beginning on or after 1 January 2021 for the preparation of the consolidated financial statements:

Amendments to HKFRS 16	Covid-19-Related Rent Concessions
Amendments to HKFRS 9, HKAS 39, HKFRS 7, HKFRS 4 and HKFRS 16	Interest Rate Benchmark Reform – Phase 2

In addition, the Group applied the agenda decision of the IFRS Interpretations Committee (the "Committee") of the International Accounting Standards Board issued in June 2021 which clarified the costs an entity should include as "estimated costs necessary to make the sale" when determining the net realisable value of inventories.

The application of the amendments to HKFRSs in the current year has had no material impact on the Group's financial positions and performance for the current and prior periods and/or on the disclosures set out in these consolidated financial statements.

3. APPLICATION OF AMENDMENTS TO HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs") *(continued)*

New and amendments to HKFRSs in issue but not yet effective

The Group has not early applied the following new and amendments to HKFRSs that have been issued but are not yet effective:

HKFRS 17	Insurance Contracts and the related Amendments[3]
Amendments to HKFRS 3	Reference to the Conceptual Framework[2]
Amendments to HKFRS 10 and HKAS 28	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture[4]
Amendment to HKFRS 16	Covid-19-Related Rent Concessions beyond 30 June 2021[1]
Amendments to HKAS 1	Classification of Liabilities as Current or Non-current and related amendments to Hong Kong Interpretation 5 (2020)[3]
Amendments to HKAS 1 and HKFRS Practice Statement 2	Disclosure of Accounting Policies[3]
Amendments to HKAS 8	Definition of Accounting Estimates[3]
Amendments to HKAS 12	Deferred Tax related to Assets and Liabilities arising from a Single Transaction[3]
Amendment to HKAS 16	Property, Plant and Equipment – Proceeds before Intended Use[2]
Amendment to HKAS 37	Onerous Contracts – Cost of Fulfilling a Contract[2]
Amendment to HKFRSs	Annual Improvements to HKFRSs 2018–2020[2]

[1] Effective for annual periods beginning on or after 1 April 2021

[2] Effective for annual periods beginning on or after 1 January 2022

[3] Effective for annual periods beginning on or after 1 January 2023

[4] Effective for annual periods beginning on or after a date to be determined

Except for the new and amendments to HKFRSs mentioned below, the management anticipates that the application of all other new and amendments to HKFRSs will have no material impact on the consolidated financial statements in the foreseeable future.

Amendments to HKAS 12 Deferred Tax related to Assets and Liabilities arising from a Single Transaction

The amendments narrow the scope of the recognition exemption of deferred tax liabilities and deferred tax assets in paragraphs 15 and 24 of HKAS 12 Income Taxes so that it no longer applies to transactions that, on initial recognition, give rise to equal taxable and deductible temporary differences.

As disclosed in Note 4, the Group applies HKAS 12 requirements to the relevant assets and liabilities separately. Temporary differences on initial recognition of the relevant assets and liabilities are not recognised due to application of the initial recognition exemption.

Upon the application of the amendments, the Group will recognise a deferred tax asset (to the extent that it is probable that taxable profit will be available against which the deductible temporary difference can be utilised) and a deferred tax liability for all deductible and taxable temporary differences associated with the right-of-use assets and the lease liabilities.

The amendments are effective for annual reporting periods beginning on or after 1 January 2023, with early application permitted. As at 31 December 2021, the carrying amounts of right-of-use assets and lease liabilities which are subject to the amendments amounted to RMB333 million and RMB355 million, respectively. The Group is still in the process of assessing the full impact of the application of the amendments. The cumulative effect of initially applying the amendments will be recognised as an adjustment to the opening balance of retained earnings (or other component of equity, as appropriate) at the beginning of the earliest comparative period presented.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES

Basis of preparation of consolidated financial statements

The consolidated financial statements have been prepared in accordance with HKFRSs issued by the HKICPA. For the purpose of preparation of the consolidated financial statements, information is considered material if such information is reasonably expected to influence decisions made by primary users. In addition, the consolidated financial statements include applicable disclosures required by the Rules Governing the Listing of Securities on The "Stock Exchange" (the "Listing Rules") and by the Hong Kong Companies Ordinance.

The consolidated financial statements have been prepared on the historical cost basis, except for certain properties and financial instruments, which are measured at fair values at the end of each reporting period, as explained in the accounting policies set out below.

Historical cost is generally based on the fair value of the consideration given in exchange for goods and services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of HKFRS 2 "Share-based Payment", leasing transactions that are accounted for in accordance with HKFRS 16 "Leases", and measurements that have some similarities to fair value but are not fair value, such as net realisable value in HKAS 2 "Inventories" or value in use in HKAS 36 "Impairment of Assets".

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

For financial instruments and investment properties which are transacted at fair value and a valuation technique that unobservable inputs is to be used to measure fair value in subsequent periods, the valuation technique is calibrated so that at initial recognition the results of the valuation technique equals the transaction price.

In addition, for financial reporting purposes, fair value measurements are categorised into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs are unobservable inputs for the asset or liability.

The principal accounting policies are set out below.

Significant accounting policies

Basis of consolidation

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company and its subsidiaries. Control is achieved where the Company:

- has power over the investee;
- is exposed, or has rights, to variable returns from its involvement with the investee; and
- has the ability to use its power to affect its returns.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Basis of consolidation (continued)

The Group reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Specifically, income and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated statement of profit or loss and other comprehensive income from the date the Group gains control until the date when the Group ceases to control the subsidiary.

Profit or loss and each item of other comprehensive income are attributed to the owners of the Company and to the non-controlling interests. Total comprehensive income of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with the Group's accounting policies.

All intragroup assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

Non-controlling interests in subsidiaries are presented separately from the Group's equity therein, which represent present ownership interests entitling their holders to a proportionate share of net assets of the relevant subsidiaries upon liquidation.

Changes in the Group's ownership interests in existing subsidiaries

Changes in the Group's interests in subsidiaries that do not result in the Group losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the Group's relevant components of equity and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries, including re-attribution of relevant reserves between the Group and the non-controlling interests according to the Group's and the non-controlling interests' proportionate interests.

Any difference between the amount by which the non-controlling interests are adjusted, and the fair value of the consideration paid or received is recognised directly in equity and attributed to owners of the Company.

When the Group loses control of a subsidiary, the assets and liabilities of that subsidiary and non-controlling interests (if any) are derecognised. A gain or loss is recognised in profit or loss and is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any retained interest and (ii) the previous carrying amount of the assets (including goodwill), and liabilities attributable to the owners of the Company. All amounts previously recognised in other comprehensive income in relation to that subsidiary are accounted for as if the Group had directly disposed of the related assets or liabilities of the subsidiary (i.e. reclassified to profit or loss or transferred to another category of equity as specified/permitted by applicable HKFRSs). The fair value of any investment retained in the former subsidiary at the date when control is lost is regarded as the fair value on initial recognition for subsequent accounting under HKFRS 9 "Financial Instruments" or, when applicable, the cost on initial recognition of an investment in an associate or a joint venture.

Business combinations or asset acquisition

Optional concentration test

The Group can elect to apply an optional concentration test, on a transaction-by-transaction basis, that permits a simplified assessment of whether an acquired set of activities and assets is not a business. The concentration test is met if substantially all of the fair value of the gross assets acquired is concentrated in a single identifiable asset or group of similar identifiable assets. The gross assets under assessment exclude cash and cash equivalents, deferred tax assets, and goodwill resulting from the effects of deferred tax liabilities. If the concentration test is met, the set of activities and assets is determined not to be a business and no further assessment is needed.

Asset acquisitions

When the Group acquires a group of assets and liabilities that do not constitute a business, the Group identifies and recognises the individual identifiable assets acquired and liabilities assumed by allocating the purchase price first to financial assets/financial liabilities at the respective fair values, the remaining balance of the purchase price is then allocated to the other identifiable assets and liabilities on the basis of their relative fair values at the date of purchase. Such a transaction does not give rise to goodwill or bargain purchase gain.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Business combinations or asset acquisition (continued)

Business combinations

Acquisitions of businesses are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the acquisition-date fair values of the assets transferred by the Group, liabilities incurred by the Group to the former owners of the acquiree and the equity interests issued by the Group in exchange for control of the acquiree. Acquisition-related costs are generally recognised in profit or loss as incurred.

Except for certain recognition exemptions, the identifiable assets acquired and liabilities assumed must meet the definitions of an asset and a liability in the "Framework for the Preparation and Presentation of Financial Statements (replaced by the "Conceptual Framework for Financial Reporting" issued in October 2010).

At the acquisition date, the identifiable assets acquired and the liabilities assumed are recognised at their fair value, except that:

(a) deferred tax assets or liabilities, and liabilities or assets related to employee benefit arrangements are recognised and measured in accordance with HKAS 12 "Income Taxes" and HKAS 19 "Employee Benefits" respectively;

(b) liabilities or equity instruments related to share-based payment arrangements of the acquiree or share-based payment arrangements of the Group entered into to replace share-based payment arrangements of the acquiree are measured in accordance with HKFRS 2 at the acquisition date;

(c) assets (or disposal groups) that are classified as held for sale in accordance with HKFRS 5 "Non-current Assets Held for Sale and Discontinued Operations" are measured in accordance with that standard; and

(d) lease liabilities are recognised and measured at the present value of the remaining lease payments (as defined in HKFRS 16) as if the acquired leases at the acquisition date, except for leases for which the lease term ends within 12 months of the acquisition date. Right-of-use assets are recognised and measured at the same amount as the relevant lease liabilities, adjusted to reflect favourable or unfavourable terms of the lease when compared with market terms.

Goodwill is measured as the excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the net amount of the identifiable assets acquired and the liabilities assumed as at acquisition date. If, after assessment, the net of the acquisition date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree and the fair value of the acquirer's previously held interest in the acquiree (if any), the excess is recognised immediately in profit or loss as a bargain purchase gain.

Non-controlling interests that are present ownership interests and entitle their holders to a proportionate share of the relevant subsidiary's net assets in the event of liquidation are initially measured at the non-controlling interests' proportionate share of the recognised amounts of the acquiree's identifiable net assets or at fair value.

When a business combination is achieved in stages, the Group's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date, and the resulting gain or loss, if any, is recognised in profit or loss or other comprehensive income, as appropriate. Amounts arising from interests in the acquiree prior to the acquisition date that have been recognised in other comprehensive income and measured under HKFRS 9 would be accounted for on the same basis as would be required if the Group had disposed directly of the previously held equity interest.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted retrospectively during the measurement period (which cannot exceed one year from the acquisition date), and additional assets or liabilities are recognised, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognised at that date.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Goodwill

Goodwill arising on an acquisition of a business is carried at cost less accumulated impairment losses, if any, and is presented separately in the consolidated statement of financial position.

For the purpose of impairment testing, goodwill is allocated to each of the Group's cash-generating units ("CGUs") (or groups of CGUs) that is expected to benefit from the synergies of the combination, which represent the lowest level at which the goodwill is monitored for internal management purposes.

A CGUs (or group of CGUs) to which goodwill has been allocated are tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. For goodwill arising on acquisition in a reporting period, the CGU (or group of CGUs) to which goodwill has been allocated is tested for impairment before the end of that reporting period. If the recoverable amount of the CGU is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro-rata basis based on the carrying amount of each asset in the unit (or group of CGUs). Any impairment loss for goodwill is recognised directly in profit or loss in the consolidated statement of profit or loss and other comprehensive income. An impairment loss recognised for goodwill is not reversed in subsequent periods.

On disposal of the relevant CGUs or any of the CGU within the group of CGUs, the attributable amount of goodwill is included in the determination of the amount of profit or loss on disposal. When the Group disposes of an operation within the CGU (or a CGU within a group of CGUs), the amount of goodwill disposed of is measured on the basis of the relative values of the operation (or the CGU) disposed of and the portion of the CGU (or the group of CGUs) retained.

The Group's policy for goodwill arising on the acquisition of an associate and joint venture is described below.

Investments in associates and joint ventures

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The results and assets and liabilities of associates or joint ventures are incorporated in these consolidated financial statements using the equity method of accounting, except when the investment, or a portion thereof, is classified as held for sale, in which case it is or the portion so classified is accounted for in accordance with HKFRS 5. Any retained portion of an investment in an associate or a joint venture that has not been classified as held for sale shall be accounted for using the equity method. The financial statements of associates and joint ventures used for equity accounting purposes are prepared using uniform accounting policies as those of the Group for like transactions and events in similar circumstances. Under the equity method, an investment in an associate or a joint venture is initially recognised in the consolidated statement of financial position at cost and adjusted thereafter to recognise the Group's share of the profit or loss and other comprehensive income of the associate or joint venture. Changes in net assets of the associate or joint venture other than profit or loss and other comprehensive income are not accounted for unless such changes resulted in changes in ownership interest held by the Group. When the Group's share of losses of an associate or a joint venture exceeds the Group's interest in that associate or joint venture (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate or joint venture), the Group discontinues recognising its share of further losses. Additional losses are recognised only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate or joint venture.

An investment in an associate or a joint venture is accounted for using the equity method from the date on which the investee becomes an associate or a joint venture. On acquisition of the investment in an associate or a joint venture, any excess of the cost of the investment over the Group's share of the net fair value of the identifiable assets and liabilities of the investee is recognised as goodwill, which is included within the carrying amount of the investment. Any excess of the Group's share of the net fair value of the identifiable assets and liabilities over the cost of the investment, after reassessment, is recognised immediately in profit or loss in the period in which the investment is acquired.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Investments in associates and joint ventures (continued)

The Group assesses whether there is an objective evidence that the interest in an associate or a joint venture may be impaired. When any objective evidence exists, the entire carrying amount of the investment (including goodwill) is tested for impairment in accordance with HKAS 36 as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs of disposal) with its carrying amount. Any impairment loss recognised is not allocated to any assets, including goodwill that forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognised in accordance with HKAS 36 to the extent that the recoverable amount of the investment subsequently increases.

When the Group ceases to have significant influence over an associate or joint control over a joint venture, it is accounted for as a disposal of the entire interest in the investee with a resulting gain or loss being recognised in profit or loss. When the Group retains an interest in the former associate or joint venture and the retained interest is a financial asset within the scope of HKFRS 9, the Group measures the retained interest at fair value at that date and the fair value is regarded as its fair value on initial recognition. The difference between the carrying amount of the associate or joint venture and the fair value of any retained interest and any proceeds from disposing of the relevant interest in the associate or joint venture is included in the determination of the gain or loss on disposal of the associate or joint venture. In addition, the Group accounts for all amounts previously recognised in other comprehensive income in relation to that associate or joint venture on the same basis as would be required if that associate or joint venture had directly disposed of the related assets or liabilities. Therefore, if a gain or loss previously recognised in other comprehensive income by that associate or joint venture would be reclassified to profit or loss on the disposal of the related assets or liabilities, the Group reclassifies the gain or loss from equity to profit or loss (as a reclassification adjustment) upon disposal/partial disposal of the relevant associate or joint venture.

The Group continues to use the equity method when an investment in an associate becomes an investment in a joint venture or an investment in a joint venture becomes an investment in an associate. There is no remeasurement to fair value upon such changes in ownership interests.

When a group entity transacts with an associate or a joint venture of the Group, profits or losses resulting from the transactions with the associate or joint venture are recognised in the consolidated financial statements only to the extent of interests in the associate or joint venture that are not related to the Group.

Revenue from contracts with customers

The Group recognises revenue when (or as) a performance obligation is satisfied, i.e. when “control” of the goods or services underlying the particular performance obligation is transferred to the customer.

A performance obligation represents a good or service (or a bundle of goods or services) that is distinct or a series of distinct goods or services that are substantially the same.

Control is transferred over time and revenue is recognised over time by reference to the progress towards complete satisfaction of the relevant performance obligation if one of the following criteria is met:

- the customer simultaneously receives and consumes the benefits provided by the Group’s performance as the Group performs;
- the Group’s performance creates or enhances an asset that the customer controls as the Group performs; or
- the Group’s performance does not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

Otherwise, revenue is recognised at a point in time when the customer obtains control of the distinct good or service.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Revenue from contracts with customers (continued)

Performance obligations for contracts with customers

The Group recognises revenue from the following sources:

(1) Retail gas sales

The Group sells natural gas to customers through pipelines, including both residential households and commercial and industrial customers. Revenue is recognised when the piped natural gas is transferred to and consumed by customers of which the volume of gas sold is measured by gas meters installed at customer sites.

The Group also operates vehicle gas refuelling stations to refuel vehicles with liquefied natural gas ("LNG") and compressed natural gas ("CNG"). Revenue is recognised when the refuelling is completed at the refuelling stations, being the time when LNG or CNG is transferred to customers.

(2) Sales of integrated energy

The Group supplies various energy products, such as gas, electricity, cooling, heating and steam. Revenue from sales of integrated energy is recognised when the energy is transferred to and consumed by the customers.

(3) Construction and installation

The Group provides construction and installation service under construction contracts with its customers. Such contracts are entered into for customers to gain access to the Group's gas pipelines or supply of integrated energy. Revenue is recognised over time based on the completion status of respective construction. The construction period is typically less than one year. The management considers that this output method is an appropriate measure of the progress towards complete satisfaction of the performance obligation.

(4) Wholesale of gas

The Group supplies LNG to wholesale customers. Revenue is recognised when control of LNG has transferred, being when the LNG has been bulk delivered to the customers' specific location.

(5) Value added business

The Group provides customers with a variety of value added services, including but not limit to kitchen solutions, heating systems and security systems. The performance obligations transferred are integral. Revenue is recognised when installation service is rendered, being at the point the customers accept the services.

In addition, the Group also sells construction materials and other energy products to commercial and industrial customers. Revenue is recognised when control of goods has transferred being at the point the customers purchase the goods.

A contract asset represents the Group's right to consideration in exchange for goods or services that the Group has transferred to a customer that is not yet unconditional. It is assessed for impairment in accordance with HKFRS 9. In contrast, a receivable represents the Group's unconditional right to consideration, i.e. only the passage of time is required before payment of that consideration is due.

A contract liability represents the Group's obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer.

A contract asset and a contract liability relating to the same contract are accounted for and presented on a net basis.

Contracts with multiple performance obligations (including allocation of transaction price)

For contracts that contain more than one performance obligation, the Group allocates the transaction price to each performance obligation on a relative stand-alone selling price basis.

The stand-alone selling price of the distinct good or service underlying each performance obligation is determined at contract inception. It represents the price at which the Group would sell a promised good or service separately to a customer. If a stand-alone selling price is not directly observable, the Group estimates it using appropriate techniques such that the transaction price ultimately allocated to any performance obligation reflects the amount of consideration to which the Group expects to be entitled in exchange for transferring the promised goods or services to the customer.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Revenue from contracts with customers (continued)

Over time revenue recognition: measurement of progress towards complete satisfaction of a performance obligation

The progress towards complete satisfaction of a performance obligation is measured based on output method, which is to recognise revenue on the basis of direct measurement of the value of the goods or services transferred to the customer to date relative to the remaining goods or services promised under the contract, that best depict the Group's performance in transferring control of goods or services.

Existence of significant financing component

In determining the transaction price, the Group adjusts the promised amount of consideration for the effects of the time value of money if the timing of payments agreed (either explicitly or implicitly) provides the customer or the Group with a significant benefit of financing the transfer of goods or services to the customer. In those circumstances, the contract contains a significant financing component. A significant financing component may exist regardless of whether the promise of financing is explicitly stated in the contract or implied by the payment terms agreed to by the parties to the contract.

For advance payments received from customers before the transfer of the associated goods or services in which the Group adjusts for the promised amount of considerations for a significant financing component, the Group applies a discount rate that would be reflected in a separate financing transaction between the Group and the customer at contract inception. The relevant interest expenses during the period between the advanced payments were received and the transfer of the associated goods and services are accounted for on the same basis as other borrowing costs.

Principal versus agent

When another party is involved in providing goods or services to a customer, the Group determines whether the nature of its promise is a performance obligation to provide the specified goods or services itself (i.e. the Group is a principal) or to arrange for those goods or services to be provided by the other party (i.e. the Group is an agent).

The Group is a principal if it controls the specified good or service before that good or service is transferred to a customer.

The Group is an agent if its performance obligation is to arrange for the provision of the specified good or service by another party. In this case, the Group does not control the specified good or service provided by another party before that good or service is transferred to the customer. When the Group acts as an agent, it recognises revenue in the amount of any fee or commission to which it expects to be entitled in exchange for arranging for the specified goods or services to be provided by the other party.

Lease

Definition of a lease

A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

For contracts entered into or modified on or after the date of initial application of HKFRS 16 or arising from business combinations, the Group assesses whether a contract is or contains a lease based on the definition under HKFRS 16 at inception or modification date. Such contract will not be reassessed unless the terms and conditions of the contract are subsequently changed.

The Group as a lessee

Allocation of consideration to components of a contract

For a contract that contains a lease component and one or more additional lease or non-lease components, the Group allocates the consideration in the contract to each lease component on the basis of the relative stand-alone price of the lease component and the aggregate stand-alone price of the non-lease components.

The Group applies practical expedient not to separate non-lease components from lease component, and instead account for the lease component and any associated non-lease components as a single lease component.

As a practical expedient, leases with similar characteristics are accounted for on a portfolio basis when the Group reasonably expects that the effects on the consolidated financial statements would not differ materially from individual leases within the portfolio.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Lease (continued)

The Group as a lessee *(continued)*

Short-term leases

The Group applies the short-term lease recognition exemption to leases of various offices, warehouses, equipment and vehicles that have a lease term of 12 months or less from the commencement date and do not contain a purchase option. Lease payments on short-term leases are recognised as expense on a straight-line basis over the lease term.

Right-of-use assets

The cost of right-of-use asset includes:

- the amount of the initial measurement of the lease liability;
- any lease payments made at or before the commencement date, less any lease incentives received; and
- any initial direct costs incurred by the Group.

Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities.

Right-of-use assets in which the Group is reasonably certain to obtain ownership of the underlying leased assets at the end of the lease term is depreciated from commencement date to the end of the useful life. Otherwise, right-of-use assets are depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term.

The Group presents right-of-use assets that do not meet the definition of investment property as a separate line item on the consolidated statement of financial position.

Refundable rental deposits

Refundable rental deposits paid are accounted for under HKFRS 9 and initially measured at fair value. Adjustments to fair value at initial recognition are considered as additional lease payments and included in the cost of right-of-use assets.

Lease liabilities

At the commencement date of a lease, the Group recognises and measures the lease liability at the present value of lease payments that are unpaid at that date. In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable.

The lease payments include:

- fixed payments less any lease incentives receivable;
- variable lease payments that depend on an index or a rate; and
- amounts expected to be paid under residual value guarantees.

After the commencement date, lease liabilities are adjusted by interest accretion and lease payments.

The Group remeasures lease liabilities (and makes a corresponding adjustment to the related right-of-use assets) whenever:

- the lease term has changed or there is a change in the assessment of exercise of a purchase option, in which case the related lease liability is remeasured by discounting the revised lease payments using a revised discount rate at the date of reassessment.
- the lease payments change due to changes in market rental rates following a market rent review, in which cases the related lease liability is remeasured by discounting the revised lease payments using the initial discount rate.

The Group presents lease liabilities as a separate line item on the consolidated statement of financial position.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Lease (continued)

The Group as a lessee *(continued)*

Lease modifications

The Group accounts for a lease modification as a separate lease if:

- the modification increases the scope of the lease by adding the right to use one or more underlying assets; and
- the consideration for the leases increases by an amount commensurate with the stand-alone price for the increase in scope and any appropriate adjustments to that stand-alone price to reflect the circumstances of the particular contract.

For a lease modification that is not accounted for as a separate lease, the Group remeasures the lease liability, based on the lease term of the modified lease by discounting the revised lease payments using a revised discount rate at the effective date of the modification.

The Group as a lessor

Classification and measurement of leases

Lease for which the Group is a lessor are classified as finance or operating leases. Whenever the terms of the lease transfer substantially all the risks and rewards incidental to ownership of an underlying asset to the lessee, the contract is classified as a finance lease. All other leases are classified as operating leases.

Rental income from operating leases is recognised in profit or loss on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset, and such costs are recognised as an expense on a straight-line basis over the lease term except for investment properties measured under fair value model.

Allocation of consideration to components of a contract

When a contract includes both leases and non-lease components, the Group applies HKFRS 15 “Revenue from Contracts with Customers” to allocate consideration in a contract to lease and non-lease components. Non-lease components are separated from lease component on the basis of their relative stand-alone selling prices.

Lease modification

Changes in considerations of lease contracts that were not part of the original terms and conditions are accounted for as lease modifications, including lease incentives provided through forgiveness or reduction of rentals.

The Group accounts for a modification to an operating lease as a new lease from the effective date of the modification, considering any prepaid or accrued lease payments relating to the original lease as part of the lease payments for the new lease.

Foreign currencies

In preparing the financial statements of each individual group entity, transactions in currencies other than the entity’s functional currency (foreign currencies) are recognised at the rates of exchanges prevailing on the dates of the transactions. At the end of the reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated at the rates prevailing on the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Foreign currencies (continued)

Exchange differences are recognised in profit or loss in the period in which they arise except for:

- exchange differences on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings;
- exchange differences on transactions entered into to hedge certain foreign currency risks (see below under financial instruments/ hedge accounting); and
- exchange differences on monetary items receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur in the foreseeable future (therefore forming part of the net investment in the foreign operation), which are recognised initially in other comprehensive income and reclassified from equity to profit or loss on disposal or partial disposal of the net investment.

For the purposes of presenting consolidated financial statements, the assets and liabilities of the Group's foreign operations are translated into the presentation currency of the Group (i.e. RMB) using exchange rates prevailing at the end of each reporting period. Income and expense items are translated at the average exchange rates for the period, unless exchange rates fluctuate significantly during that period, in which case the exchange rates at the dates of the transactions are used. Exchange differences are recognised in other comprehensive income and accumulated in equity under the heading of exchange reserve (attributed to non-controlling interests as appropriate). Such exchange differences are reclassified in profit or loss in the period in which the foreign operation is disposed of.

On the disposal of a foreign operation (i.e. a disposal of the Group's entire interest in a foreign operation, or a disposal involving loss of control over a subsidiary that includes a foreign operation, or a partial disposal of an interest in a joint arrangement or an associate that includes a foreign operation of which the retained interest becomes a financial asset), all of the exchange differences accumulated in equity in respect of that operation attributable to the owners of the Company are reclassified to profit or loss.

Goodwill and fair value adjustments to identifiable assets acquired and liabilities assumed through acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the rate of exchange prevailing at the end of each reporting period. Exchange differences arising are recognised in other comprehensive income.

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

To the extent that variable rate borrowings are used to finance a qualifying asset and are hedged in an effective cash flow hedge of interest rate risk, the effective portion of the derivative is recognised in other comprehensive income and reclassified to profit or loss when the qualifying asset impacts profit or loss.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

All other borrowing costs are recognised in the profit or loss in the period in which they are incurred.

Government grants

Government grants are not recognised until there is a reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received.

Government grants are recognised in profit or loss on a systematic basis over the periods in which the Group recognises as expenses the related costs for which the grants are intended to compensate. Specifically, government grants whose primary condition is that the Group should purchase, construct or otherwise acquire non-current assets are recognised as deferred income in the consolidated statement of financial position and transferred to profit or loss on a systematic and rational basis over the useful lives of the related assets.

Government grants related to income that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future related costs are recognised in profit or loss in the period in which they become receivable.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Employee benefits

Retirement benefit scheme contribution

Payable to the Mandatory Provident Fund Scheme and the retirement funds scheme managed by local social security bureau in accordance with the government regulations of the PRC, are recognised as an expense when employees have rendered service entitling them to the contributions.

Short-term and other long-term employee benefit

Short-term employee benefits are recognised at the undiscounted amount of the benefits to be paid as and when employees rendered the service. All short-term employee benefits are recognised as expense unless another HKFRS requires or permits the inclusion of the benefit in the cost of an asset.

A liability is recognised for benefits accruing to employees in respect of wages and salaries, annual leave and sick leave after deducting any amount already paid.

Liabilities recognised in respect of other long-term employee benefits are measured at the present value of the estimated future cash outflows expected to be made by the Group in respect of services provided by employees up to the reporting date. Any changes in the liabilities' carrying amounts resulting from service cost, interest and remeasurements are recognised in profit or loss except to the extent that another HKFRS requires or permits their inclusions in the cost of an asset.

Share-based payment

Equity-settled share-based payment transactions

Share options granted by the Company to employees (including Directors)

Equity-settled share-based payments to employees and others providing similar services are measured at the fair value of the equity instruments at the grant date.

The fair value of the equity-settled share-based payments determined at the grant date without taking into consideration all non-market vesting conditions is expensed on a straight-line basis over the vesting period, based on the Group's estimate of equity instruments that will eventually vest, with a corresponding increase in equity (share options reserve). Vesting conditions, other than market condition, shall not be taken into account when estimating the fair value of the share options at the measurement date. Instead, vesting conditions, i.e. a specified service period with or without a performance target, shall be taken into account in estimating the number of equity instrument that will ultimately vest. At the end of each reporting period, the Group revises its estimate of the number of equity instruments expected to vest based on assessment of all relevant non-market vesting conditions. The impact of the revision of the original estimates, if any, is recognised in profit or loss such that the cumulative expense reflects the revised estimate, with a corresponding adjustment to the share options reserve.

When share options are exercised, the amount previously recognised in share options reserve will be transferred to share capital and share premium. When the share options are forfeited after the vesting date or are still not exercised at the expiry date, the amount previously recognised in share options reserve will be transferred to retained earnings.

Cash-settled share-based payment transactions

For cash-settled share-based payments, a liability is recognised for the goods or services acquired, measured initially at the fair value of the liability. The fair value of the cash-settled share-based payments is determined without taking into consideration all non-market vesting conditions.

At the end of each reporting period until the liability is settled, and at the date of settlement, the liability is remeasured to fair value. For cash-settled share-based payments that are already vested, any changes in fair value are recognised in profit or loss for the year. For cash-settled share-based payments which are still subject to non-market vesting conditions, the effects of vesting and non-vesting conditions are accounted on the same basis as equity-settled share-based payments.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

The tax currently payable is based on taxable profit for the year. Taxable profit differs from profit before tax as reported in the consolidated statement of profit or loss and other comprehensive income because of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax base used in the computation of taxable profit. Deferred tax liabilities are generally recognised for all taxable temporary differences. Deferred tax assets are generally recognised for all deductible temporary difference to the extent that is probable that taxable profits will be available against which those deductible temporary differences can be utilised. Such deferred tax assets and liabilities are not recognised if the temporary difference arises from the initial recognition (other than in a business combination) of assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit. In addition, deferred tax liabilities are not recognised if the temporary difference arises from the initial recognition of goodwill.

Deferred tax liabilities are recognised for taxable temporary difference associated with investments in subsidiaries and interests in associates and joint ventures, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognised to the extent that it is probable that there will be sufficient taxable profits against which to utilise the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of the reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset is realised, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amounts of its assets and liabilities.

For the purposes of measuring deferred tax for leasing transactions in which the Group recognises the right-of-use assets and the related lease liabilities, the Group first determines whether the tax deductions are attributable to the right-of-use assets or the lease liabilities.

For leasing transactions in which the tax deductions are attributable to the lease liabilities, the Group applies HKAS 12 requirements to right-of-use assets and lease liabilities separately. Temporary differences relating to right-of-use assets and lease liabilities are not recognised due to application of the initial recognition exemption. Temporary differences arising from subsequent revision to the carrying amounts of right-of-use assets and lease liabilities, resulting from remeasurement of lease liabilities and lease modifications, that are not subject to initial recognition exemption are recognised on the date of remeasurement or modification.

For the purposes of measuring deferred tax for investment properties that are measured using the fair value model, the carrying amounts of such properties are presumed to be recovered entirely through sale, unless the presumption is rebutted. The presumption is rebutted when the investment property is depreciable and is held within a business model whose objective is to consume substantially all of the economic benefits embodied in the investment property over time, rather than through sale, expect for freehold land, which is always presumed to be recovered entirely through sale.

Current and deferred tax are recognised in profit or loss, except when it relates to items that are recognised in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognised in other comprehensive income or directly in equity respectively. Where current tax or deferred tax arises from initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Property, plant and equipment

Property, plant and equipment are tangible assets included building and leasehold land (classified as finance lease) that are held for use in the production or supply of goods or services, or for administrative purposes (other than properties under construction as described below), are stated in the consolidated statement of financial position at cost or deemed cost for properties transferred from investment properties, less subsequent accumulated depreciation and accumulated impairment losses, if any.

Properties in the course of construction for production, supply or administrative purposes are carried at cost, less any recognised impairment loss. Costs include any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and, for qualifying assets, borrowing costs capitalised in accordance with the Group's accounting policy. Depreciation of these assets, on the same basis as other property assets, commences when the assets are ready for their intended use.

Ownership interests in leasehold land and building

When the Group makes payments for ownership interests of properties which includes both leasehold land and building elements, the entire consideration is allocated between the leasehold land and the building elements in proportion to the relative fair values at initial recognition.

To the extent the allocation of the relevant payments can be made reliably, interest in leasehold land that is accounted for as an operating lease is presented as "right-of-use assets" in the consolidated statement of financial position except for those that are classified and accounted for as investment properties under the fair value model. When the consideration cannot be allocated reliably between non-lease building element and undivided interest in the underlying leasehold land, the entire properties are classified as property, plant and equipment.

Depreciation is recognised so as to write off the costs or deemed cost of assets (other than properties under construction) less their residual values over their estimated useful lives, using the straight-line method. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

If a property becomes an investment property because its use has changed as evidenced by end of owner-occupation, any difference between the carrying amount and the fair value of that item (including the relevant leasehold land classified as right-of-use) at the date of transfer is recognised in other comprehensive income and accumulated in revaluation reserve. On the subsequent sale or retirement of the property, the relevant revaluation reserve will be transferred directly to retained earnings.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in the profit or loss.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Investment properties

Investment properties are properties held to earn rentals and/or for capital appreciation.

Investment properties are measured initially at cost, including any directly attributable expenditure. Subsequent to initial recognition, investment properties are measured at their fair values, adjusted to exclude any prepaid or accrue operating lease income.

Gains or losses arising from changes in the fair value of investment property are included in profit or loss for the period in which they arise.

An investment property is derecognised upon disposal or when the investment property is permanently withdrawn from use or no future economic benefits are expected from its disposals. Any gain or loss arising on derecognition of the property (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the profit or loss in the period in which the property is derecognised.

For a transfer from investment property to property, plant and equipment, the investment property is measured at the fair value at the date of transfer. The fair value of the investment property will be recognised as the deemed cost of the property for subsequent accounting in accordance with the accounting policy of property, plant and equipment as set out above.

Intangible assets

Intangible assets acquired separately

Intangible assets with finite useful lives that are acquired separately are carried at costs less accumulated amortisation and any accumulated impairment losses (see the accounting policy in respect of impairment losses on property, plant and equipment, right-of-use assets and intangible assets other than goodwill below). Amortisation is recognised on a straight-line basis over their estimated useful lives. The estimated useful life and amortisation method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis.

Internally-generated intangible assets – research and development expenditure

Expenditure on research activities is recognised as an expense in the period in which it is incurred.

An internally-generated intangible asset arising from development or from the development phase of an internal project is recognised if, and only if, all of the following have been demonstrated:

- the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- the intention to complete the intangible asset and use or sell it;
- the ability to use or sell the intangible asset;
- how the intangible asset will generate probable future economic benefits;
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- the ability to measure reliably the expenditure attributable to the intangible asset during its development.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Intangible assets (continued)

Internally-generated intangible assets – research and development expenditure *(continued)*

The amount initially recognised for internally-generated intangible asset is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria listed above. Where no internally generated intangible asset can be recognised, development expenditure is charged to profit or loss in the period in which it is incurred.

Subsequent to initial recognition, internally-generated intangible asset is measured at cost less accumulated amortisation and accumulated impairment losses (if any), on the same basis as intangible assets that are acquired separately.

Intangible assets acquired in a business combination

Intangible assets that are acquired in a business combination are recognised separately from goodwill and are initially recognised at their fair value at the acquisition date (which is regarded as their cost).

Subsequent to initial recognition, intangible assets acquired in a business combination with finite useful lives are reported at costs less accumulated amortisation and any accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

An intangible asset is derecognised on disposal, or when no future economic benefits are expected from use or disposal. Gains and losses arising from derecognition of an intangible asset are measured at the difference between the net disposal proceeds and the carrying amount of the asset and are recognised in the profit or loss in the period when the asset is derecognised.

Impairment losses on property, plant and equipment, right-of-use assets and intangible assets other than goodwill (see the accounting policy in respect of goodwill above)

At the end of the reporting period, the Group reviews the carrying amounts of its property, plant and equipment, right-of-use assets and intangible assets with finite useful lives to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the relevant asset is estimated in order to determine the extent of the impairment loss, if any. Intangible assets not yet available for use are tested for impairment at least annually, and whenever there is an indication that they may be impaired.

The recoverable amounts of property, plant and equipment, right-of-use assets and intangible assets are estimated individually. When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the CGU to which the asset belongs.

In testing a CGU for impairment, corporate assets are allocated to the relevant cash-generating unit when a reasonable and consistent basis of allocation can be established, or otherwise they are allocated to the smallest group of cash generating units for which a reasonable and consistent allocation basis can be established. The recoverable amount is determined for the CGU or group of CGUs to which the corporate asset belongs, and is compared with the carrying amount of the relevant cash-generating unit or group of CGUs.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Impairment losses on property, plant and equipment, right-of-use assets and intangible assets other than goodwill (see the accounting policy in respect of goodwill above) (continued)

Recoverable amount is the higher of fair value less costs of disposal and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or a CGU) is estimated to be less than its carrying amount, the carrying amount of the asset (or a CGU) is reduced to its recoverable amount. For corporate assets or portion of corporate assets which cannot be allocated on a reasonable and consistent basis to a CGU, the Group compares the carrying amount of a group of CGUs, including the carrying amounts of the corporate assets or portion of corporate assets allocated to that group of CGUs, with the recoverable amount of the group of CGUs. In allocating the impairment loss, the impairment loss is allocated first to reduce the carrying amount of any goodwill (if applicable) and then to the other assets on a pro-rata basis based on the carrying amount of each asset in the unit. The carrying amount of an asset is not reduced below the highest of its fair value less costs of disposal (if applicable), its value in use (if determinable) and zero. The amount of the impairment loss that would otherwise have been allocated to the asset is allocated pro-rata to the other assets of the unit. An impairment loss is recognised immediately in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or a CGU) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or a CGU) in prior years. A reversal of an impairment loss is recognised immediately in profit or loss.

Inventories

Inventories, including construction materials, gas appliances, natural gas, other energy inventories, spare parts and consumables and integrated energy appliances are stated at the lower of cost and net realisable value. Costs of inventories are determined using weighted average cost formula. Net realisable value represents the estimated selling price for inventories less all estimated costs to completion and the costs necessary to make the sale. Costs necessary to make the sale include incremental costs directly attributable to the sale and non-incremental costs which the Group must incur to make the sale.

Financial instruments

Financial assets and financial liabilities are recognised when a group entity becomes a party to the contractual provisions of the instrument. All regular way purchases or sales of financial assets are recognised and derecognised on a trade day basis. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the market place.

Financial assets and financial liabilities are initially measured at fair value except for trade receivables arising from contracts with customers which are initially measured in accordance with HKFRS 15. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at FVTPL) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at FVTPL are recognised immediately in profit or loss.

The effective interest method is a method of calculating the amortised cost of a financial asset or financial liability and of allocating interest income and interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts and payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial asset or financial liability, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Financial instruments (continued)

Financial assets

Classification and subsequent measurement of financial assets

Financial assets that meet the following conditions are subsequently measured at amortised cost:

- the financial asset is held within a business model whose objective is to collect contractual cash flows; and
- the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets that meet the following conditions are subsequently measured at FVTOCI:

- the financial asset is held within a business model whose objective is achieved by both selling and collecting contractual cash flows; and
- the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

All other financial assets are subsequently measured at FVTPL, except that at initial recognition of a financial asset the Group may irrevocably elect to present subsequent changes in fair value of an equity investment in other comprehensive income if that equity investment is neither held for trading nor contingent consideration recognised by an acquirer in a business combination to which HKFRS 3 “Business Combinations” applies.

A financial asset is held for trading if:

- it has been acquired principally for the purpose of selling in the near term; or
- on initial recognition it is a part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- it is a derivative that is not designated and effective as a hedging instrument.

In addition, the Group may irrevocably designate a financial asset that are required to be measured at the amortised cost or FVTOCI as measured at FVTPL if doing so eliminates or significantly reduces an accounting mismatch.

(i) Amortised cost and interest income

Interest income is recognised using the effective interest method for financial assets measured subsequently at amortised cost. Interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for financial assets that have subsequently become credit-impaired (see below). For financial assets that have subsequently become credit-impaired, interest income is recognised by applying the effective interest rate to the amortised cost of the financial asset from the next reporting period. If the credit-risk on the credit impaired financial instrument improves so that the financial asset is no longer credit-impaired, interest income is recognised by applying the effective interest rate to the gross carrying amount of the financial asset from the beginning of the reporting period following the determination that the asset is no longer credit-impaired.

(ii) Equity instruments designated as at FVTOCI

Investments in equity instruments at FVTOCI are subsequently measured at fair value with gains and losses arising from changes in fair value recognised in other comprehensive income and accumulated in the revaluation reserve; and are not subject to impairment assessment. The cumulative gain or loss will not be reclassified to profit or loss on disposal of the equity investments, and will be transferred to retained earnings.

Dividends from these investments in equity instruments are recognised in profit or loss when the Group’s right to receive the dividends is established, unless the dividends clearly represent a recovery of part of the cost of the investment. Dividends are included in the “other income” line item in profit or loss.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Financial instruments (continued)

Financial assets *(continued)*

Classification and subsequent measurement of financial assets (continued)

(iii) Financial assets at FVTPL

Financial assets that do not meet the criteria for being measured at amortised cost or FVTOCI or designated as FVTOCI are measured at FVTPL.

Financial assets at FVTPL are measured at fair value at the end of each reporting period, with any fair value gains or losses recognised in profit or loss to the extent they are not part of a designated hedging relationship (see hedge accounting policy). The net gain or loss recognised in profit or loss excludes any dividend or interest earned on the financial asset and is included in the "other gains and losses" line item.

Impairment of financial assets and other items subject to impairment assessment under HKFRS 9

The Group performs impairment assessment under expected credit loss ("ECL") model on financial assets (including trade receivables and part of other receivables, restricted bank deposits, cash and cash equivalents, amounts due from associates/joint ventures/related companies) and other items (contract assets and financial guarantee contracts) which are subject to impairment assessment under HKFRS 9. The amount of ECL is updated at each reporting date to reflect changes in credit risk since initial recognition.

Lifetime ECL represents the ECL that will result from all possible default events over the expected life of the relevant instrument. In contrast, 12-month ECL represents the portion of lifetime ECL that is expected to result from default events that are possible within 12 months after the reporting date. Assessments are done based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current conditions at the reporting date as well as the forecast of future conditions.

The Group always recognises lifetime ECL for trade receivables and contract assets. The ECL on these assets are assessed individually for debtors with significant balances and collectively using a provision matrix with appropriate groupings for the remaining.

For all other financial assets at amortised cost, the Group measures the loss allowance equal to 12-month ECL, unless there has been a significant increase in credit risk since initial recognition, in which the Group recognises lifetime ECL. The assessment of whether lifetime ECL should be recognised is based on significant increases in the likelihood or risk of a default occurring since initial recognition.

(i) Significant increase in credit risk

In assessing whether the credit risk has increased significantly since initial recognition, the Group compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition. In making this assessment, the Group considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort.

In particular, the following information is taken into account when assessing whether credit risk has increased significantly:

- an actual or expected significant deterioration in the financial instrument's external (if available) or internal credit rating;
- significant deterioration in external market indicators of credit risk, e.g. a significant increase in the credit spread, the credit default swap prices for the debtor;
- existing or forecast adverse changes in business, financial or economic conditions that are expected to cause a significant decrease in the debtor's ability to meet its debt obligations;
- an actual or expected significant deterioration in the operating results of the debtor; and
- an actual or expected significant adverse change in the regulatory, economic, or technological environment of the debtor that results in a significant decrease in the debtor's ability to meet its debt obligations.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Financial instruments (continued)

Financial assets *(continued)*

Impairment of financial assets and other items subject to impairment assessment under HKFRS 9 (continued)

(i) Significant increase in credit risk *(continued)*

Irrespective of the outcome of the above assessment, the Group presumes that the credit risk has increased significantly since initial recognition when contractual payments are more than 30 days past due, unless the Group has reasonable and supportable information that demonstrates otherwise.

Despite the foregoing, the Group assumes that the credit risk on a debt instrument has not increased significantly since initial recognition if the debt instrument is determined to have low credit risk at the reporting date. A debt instrument is determined to have low credit risk if i) it has a low risk of default; ii) the borrower has a strong capacity to meet its contractual cash flow obligations in the near term and iii) adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfil its contractual cash flow obligations. The Group considers a debt instrument to have low credit risk when it has an external credit rating of "investment grade" as per globally understood definitions.

The Group regularly monitors the effectiveness of the criteria used to identify whether there has been a significant increase in credit risk and revises them as appropriate to ensure that the criteria are capable of identifying significant increase in credit risk before the amount becomes past due.

(ii) Definition of default

For internal credit risk management, the Group considers an event of default occurs when information developed internally or obtained from external sources indicates that the debtor is unlikely to pay its creditors, including the Group, in full (without taking into account any collaterals held by the Group).

Default has been considered occurred when the instrument is more than 90 days past due unless the Group has reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate.

(iii) Credit-impaired financial assets

A financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit-impaired includes observable data about the following events:

(a) significant financial difficulty of the issuer or the borrower;

(b) a breach of contract, such as a default or past due event;

(c) the lender(s) of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider;

(d) it is becoming probable that the borrower will enter bankruptcy or other financial reorganisation; or

(e) the disappearance of an active market for that financial asset because of financial difficulties.

(iv) Write-off policy

The Group writes off a financial asset when there is information indicating that the counterparty is in severe financial difficulty and there is no realistic prospect of recovery, for example, when the counterparty has been placed under liquidation or has entered into bankruptcy proceedings, whichever occurs sooner. Financial assets written off may still be subject to enforcement activities under the Group's recovery procedures, taking into account legal advice where appropriate. A write-off constitutes a derecognition event. Any subsequent recoveries are recognised in profit or loss.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Financial instruments (continued)

Financial assets *(continued)*

Impairment of financial assets and other items subject to impairment assessment under HKFRS 9 (continued)

(v) Measurement and recognition of ECL

The measurement of ECL is a function of the probability of default, loss given default (i.e. the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss given default is based on historical data adjusted by forward-looking information. Estimation of ECL reflects an unbiased and probability-weighted amount that is determined with the respective risks of default occurring as the weights.

Generally, the ECL is the difference between all contractual cash flows that are due to the Group in accordance with the contract and the cash flows that the Group expects to receive, discounted at the effective interest rate determined at initial recognition.

For a financial guarantee contract, the Group is required to make payments only in the event of a default by the debtor in accordance with the terms of the instrument that is guaranteed. Accordingly, the ECL is the present value of the expected payments to reimburse the holder for a credit loss that it incurs less any amounts that the Group expects to receive from the holder, the debtors or any other party.

For ECL on financial guarantee contracts for which the effective interest rate cannot be determined, the Group will apply a discount rate that reflects the current market assessment of the time value of money and the risks that are specific to the cash flows but only if, and to the extent that, the risks are taken into account by adjusting the discount rate instead of adjusting the cash shortfalls being discounted.

Lifetime ECL for trade receivables, contract assets and amounts due from associates/joint ventures/related companies arising from contracts with customers are considered individually for debtors with significant balances and collectively for the remaining taking into consideration past due information and relevant credit information such as forward-looking macroeconomic information.

For collective assessment, the Group takes into consideration the following characteristics when formulating the grouping:

- Past-due status;
- Nature, size and industry of debtors; and
- External credit ratings where available.

The grouping is regularly reviewed by management to ensure the constituents of each group continue to share similar credit risk characteristics.

Expect for financial guarantee contracts, the Group recognises an impairment gain or loss in profit or loss for all financial instruments by adjusting their carrying amount, with the exception of trade and other receivables, contract assets and amounts due from associate/joint ventures/related companies where the corresponding adjustment is recognised through a loss allowance account.

Financial liabilities and equity instruments

Classification as debt or equity

Debt and equity instruments issued by a group entity are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Company are recognised at the proceeds received, net of direct issue costs.

Repurchase of the Company's own equity instruments is recognised and deducted directly in equity. No gain or loss is recognised in profit or loss on the purchase, sale, issue or cancellation of the Company's own equity instruments.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Financial instruments (continued)

Financial liabilities and equity instruments *(continued)*

Financial liabilities

All financial liabilities are measured subsequently at amortised cost using the effective interest method or at FVTPL.

However, financial liabilities that arise when a transfer of a financial asset does not qualify for derecognition or when the continuing involvement approach applies, and financial guarantee contracts issued by the Group, are measured in accordance with the specific accounting policies set out below.

Financial liabilities at FVTPL

Financial liabilities are classified as at FVTPL when the financial liability is (i) contingent consideration of an acquirer in a business combination; (ii) held for trading or (iii) it is designated as at FVTPL.

A financial liability is classified as held for trading if:

- it has been acquired principally for the purpose of repurchasing it in the near term; or
- on initial recognition it is part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- it is a derivative, except for a derivative that is a financial guarantee contract or a designated and effective hedging instrument.

Financial liabilities at FVTPL are measured at fair value, with any gains or losses arising on changes in fair value recognised in profit or loss to the extent that they are not part of a designated hedging relationship (see hedge accounting policy). The net gain or loss recognised in profit or loss incorporates any interest paid on the financial liability and is included in the “other gains and losses” line item in profit or loss.

Financial liabilities at amortised cost

Financial liabilities (including trade and other payables, amounts due to associates/joint ventures/related companies, bank and other loans, corporate bonds, senior notes and unsecured bonds) that are not (i) contingent consideration of an acquirer in a business combination; (ii) held-for trading, or (iii) designated as at FVTPL, are measured subsequently at amortised cost, using the effective interest method.

Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument.

A financial guarantee contract issued by the Group is initially measured at its fair value and if not designated as at FVTPL, are subsequently measured at the higher of: (i) the amount of the loss allowance determined in accordance with HKFRS 9; and (ii) the amount initially recognised less, where appropriate, cumulative amortisation. Amount initially recognised is amortised over the duration of the guarantee using the straight-line method.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Financial instruments (continued)

Derecognition

The Group derecognises a financial asset only when the rights to receive cash flows from the assets expire or, when it transfers the financial assets and substantially all the risks and rewards of ownership of the assets to another entity. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

On derecognition of a financial asset, the difference between the asset's carrying amount and the sum of the consideration received and receivable is recognised in profit or loss.

The Group derecognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in profit or loss.

Derivative financial instruments

Derivatives are initially recognised at fair value at the date when derivative contracts are entered into and are subsequently remeasured to their fair value at the end of the reporting period. The resulting gain or loss is recognised in profit or loss immediately unless the derivative is designated and effective as a hedging instrument, in which event the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

Embedded derivatives

Derivatives embedded in hybrid contracts that contain financial asset hosts within the scope of HKFRS 9 are not separated. The entire hybrid contract is classified and subsequently measured in its entirety as either amortised cost or fair value as appropriate.

Derivatives embedded in non-derivative host contracts that are not financial assets within the scope of HKFRS 9 are treated as separate derivatives when they meet the definition of a derivative, their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVTPL.

Generally, multiple embedded derivatives in a single instrument that are separated from the host contracts are treated as a single compound embedded derivative unless those derivatives relate to different risk exposures and are readily separable and independent of each other.

Hedge accounting

The Group designates certain derivatives as hedging instruments for cash flow hedges.

At the inception of the hedging relationship, the Group documents the relationship between the hedging instrument and the hedged item, along with its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Group documents whether the hedging instrument is highly effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk.

For the purpose of determining whether a forecast transaction (or a component thereof) is highly probable, the Group assumes that the interest rate benchmark on which the hedged cash flows (contractually or non-contractually specified) are based is not altered as a result of interest rate benchmark reform.

Assessment of hedging relationship and effectiveness

For hedge effectiveness assessment, the Group considers whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk, which is when the hedging relationships meet all of the following hedge effectiveness requirements:

- there is an economic relationship between the hedged item and the hedging instrument;
- the effect of credit risk does not dominate the value changes that result from that economic relationship; and
- the hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the entity actually uses to hedge that quantity of hedged item.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Significant accounting policies *(continued)*

Financial instruments (continued)

Assessment of hedging relationship and effectiveness *(continued)*

The Group designates only the intrinsic value of option contracts as a hedged item, i.e. excluding the time value of the option. The changes in the fair value of the aligned time value of the option are recognised in other comprehensive income and accumulated in the cost of hedging reserve. If the hedged item is transaction-related, the time value is reclassified to profit or loss when the hedged item affects profit or loss. If the hedged item is time period related, the amount accumulated in the cost of hedging reserve is reclassified to profit or loss on a straight-line basis. Those reclassified amounts are recognised in profit or loss in the same line as the hedged item. If the hedged item is a non-financial item, then the amount accumulated in the cost of hedging reserve is removed directly from equity and included in the initial carrying amount of the recognised non-financial item. Furthermore, if the Group expects that some or all of the loss accumulated in cost of hedging reserve will not be recovered in the future, that amount is immediately reclassified to profit or loss.

Cash flow hedges

The effective portion of changes in the fair value of derivatives and other qualifying hedging instruments that are designated and qualify as cash flow hedges is recognised in other comprehensive income and accumulated under the heading of cash flow hedge reserve, limited to the cumulative change in fair value of the hedged item from inception of the hedge. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss, and is included in the ‘other gains and losses’ line item.

Amounts previously recognised in other comprehensive income and accumulated in equity are reclassified to profit or loss in the periods when the hedged item affects profit or loss, in the same line as the recognised hedged item. However, when the hedged forecast transaction results in the recognition of a non-financial asset or a non-financial liability, the gains and losses previously recognised in other comprehensive income and accumulated in equity are removed from equity and included in the initial measurement of the cost of the non-financial asset or non-financial liability. This transfer does not affect other comprehensive income. Furthermore, if the Group expects that some or all of the loss accumulated in the cash flow hedge reserve will not be recovered in the future, that amount is immediately reclassified to profit or loss.

Discontinuation of hedge accounting

The Group discontinues hedge accounting prospectively only when the hedging relationship (or a part thereof) ceases to meet the qualifying criteria (after rebalancing, if applicable). This includes instances when the hedging instrument expires or is sold, terminated or exercised. Discontinuing hedge accounting can either affect a hedging relationship in its entirety or only a part of it (in which case hedge accounting continues for the remainder of the hedging relationship).

For cash flow hedge, any gain or loss recognised in other comprehensive income and accumulated in equity at that time remains in equity and is recognised when the forecast transaction is ultimately recognised in profit or loss. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in equity is recognised immediately in profit or loss.

5. KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Group's accounting policies, which are described in Note 4, the Directors are required to make estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and underlying assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the reporting period in which the estimate is revised if the revision affects only that reporting period, or in the reporting period of the revision and future reporting periods if the revision affects both current and future reporting periods.

The following are the key assumptions concerning the future, and other key sources of estimation uncertainty at the end of the reporting period that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

Recognition of intangible assets acquired in business acquisition

The Group accounts for acquisitions of businesses by using the acquisition method, and the consideration transferred for the business acquisition is allocated to the identifiable assets acquired and liabilities assumed based on their respective fair values as at acquisition date, including intangible assets. The Group usually determines the fair value of intangible assets using excess earning method, which requires a set of estimations and determination of key inputs, including the future cash flow, gross profit margins, revenue growth rates and discount rates. Any changes to these inputs may have significant impact on the fair value of intangible assets, and will consequently have further impact on the goodwill or the profit or loss in the case of a bargain purchase.

Impairment assessment of goodwill and intangible assets

Determining whether goodwill and intangible assets are impaired requires the estimation of the recoverable amount of the CGUs to which goodwill and intangible assets have been allocated which is the higher of the fair value less costs of disposal and its value in use. The value in use calculation requires the Group to estimate the future cash flows expected to arise from the CGU and a suitable inputs, including revenue growth rate and discount rate in order to calculate the present value. Where the actual future cash flows are less than expected, or changes in facts and circumstances which results in downward revision of future cash flows or upward revision of discount rate, a material impairment loss or further impairment loss may arise.

As at 31 December 2021, the carrying amounts of goodwill and intangible assets are RMB2,520 million and RMB4,311 million (2020: RMB2,511 million and RMB4,446 million), respectively. Details of the impairment assessment is set out in Note 19.

Fair value measurement of financial instruments

Certain of the Group's financial instruments, including unlisted equity securities and derivative financial instruments, amounting to RMB4,939 million (2020: RMB3,871 million) as at 31 December 2021 are measured at fair values with fair values being determined based on various valuation techniques and unobserved inputs. Judgment and estimation are required in establishing the relevant valuation techniques and the relevant inputs such as liquidity discount, estimates of future prices, market price volatility and credit risk. Changes in these factors could affect the fair values of these instruments. Further disclosures are set out in Note 53.

Depreciation of property, plant and equipment

Property, plant and equipment are depreciated on a straight-line basis over their estimated useful lives, after taking into account the estimated residual value. The Group assesses annually the residual value and the useful life of the property, plant and equipment and if the expectation differs from the original estimates, such differences from the original estimates will impact the depreciation charges in the year in which the estimates change. As at 31 December 2021, the carrying amount of property, plant and equipment is RMB46,793 million (2020: RMB41,861 million).

6. REVENUE

Revenue from contract with customers comprises the following:

	2021 RMB million	2020 RMB million
Sales of goods		
Retail gas sales business	49,247	40,510
Integrated energy business	7,138	4,611
Wholesale of gas	25,634	17,936
Value added business	2,154	1,471
	84,173	64,528
Provision of services		
Construction and installation	8,086	6,444
Integrated energy business	667	431
Value added business	187	214
	8,940	7,089
	93,113	71,617

Disaggregation of revenue from contracts with customers

	2021			2020		
	Sales of goods RMB million	Provision of services RMB million	Total RMB million	Sales of goods RMB million	Provision of services RMB million	Total RMB million
Types of goods or services						
Retail gas sales business	49,247	–	49,247	40,510	–	40,510
Integrated energy business	7,138	667	7,805	4,611	431	5,042
Wholesale of gas	25,634	–	25,634	17,936	–	17,936
Construction and installation	–	8,086	8,086	–	6,444	6,444
Value added business	2,154	187	2,341	1,471	214	1,685
Total	84,173	8,940	93,113	64,528	7,089	71,617

The performance obligations of the Group are for periods of one year or less. As permitted under HKFRS 15, the transaction price allocated to these unsatisfied contracts is not disclosed.

7. SEGMENT INFORMATION

Information reported to the vice chairman of the board of directors of the Company, being the chief operating decision maker (the "CODM"), for the purposes of resource allocation and performance assessment among segments focuses specifically on different type of goods and services.

Segment revenue and results

Segment profit represents the profit earned by each segment without allocation of full amount of administrative costs, distribution and selling expenses, share of results of associates and joint ventures, other income, other gains and losses and finance costs. This is the measure reported to the CODM for the purposes of resource allocation and performance assessment.

Inter-segment sales are charged at prevailing market rates.

The following is an analysis of the Group's revenue and results by reportable segments which are also the operating segments for the year:

2021	**Retail gas sales business RMB million**	**Integrated energy business RMB million**	**Wholesale of gas RMB million**	**Construction and installation RMB million**	**Value added business RMB million**	**Total RMB million**
Segment revenue	**71,195**	**7,880**	**61,328**	**9,593**	**7,798**	**157,794**
Inter-segment sales	**(21,948)**	**(75)**	**(35,694)**	**(1,507)**	**(5,457)**	**(64,681)**
Revenue from external customers	**49,247**	**7,805**	**25,634**	**8,086**	**2,341**	**93,113**
Segment profit before depreciation and amortisation	**7,317**	**1,558**	**362**	**4,831**	**1,727**	**15,795**
Depreciation and amortisation	**(1,153)**	**(193)**	**(4)**	**(385)**	**(4)**	**(1,739)**
Gross profit	**6,164**	**1,365**	**358**	**4,446**	**1,723**	**14,056**

2020	Retail gas sales business RMB million	Integrated energy business RMB million	Wholesale of gas RMB million	Construction and installation RMB million	Value added business RMB million	Total RMB million
Segment revenue	57,875	5,099	38,451	7,434	6,391	115,250
Inter-segment sales	(17,365)	(57)	(20,515)	(990)	(4,706)	(43,633)
Revenue from external customers	40,510	5,042	17,936	6,444	1,685	71,617
Segment profit before depreciation and amortisation	7,576	1,049	366	3,616	1,315	13,922
Depreciation and amortisation	(1,085)	(146)	(4)	(352)	(3)	(1,590)
Gross profit	6,491	903	362	3,264	1,312	12,332

7. SEGMENT INFORMATION *(continued)*

Segment assets and liabilities

An analysis of the Group's total assets and liabilities by segments is as follows:

2021	**Retail gas sales business RMB million**	**Integrated energy business RMB million**	**Wholesale of gas RMB million**	**Construction and installation RMB million**	**Value added business RMB million**	**Total RMB million**
Assets:						
Segment assets	**38,494**	**10,953**	**3,846**	**11,357**	**4,322**	**68,972**
Interests in associates						**3,655**
Interests in joint ventures						**5,063**
Unallocated corporate assets						**22,298**
Consolidated total assets						**99,988**
Liabilities:						
Segment liabilities	**14,205**	**4,249**	**757**	**14,572**	**2,472**	**36,255**
Bank and other loans						**9,468**
Corporate bonds						**2,099**
Senior notes						**4,722**
Unsecured bonds						**3,601**
Unallocated corporate liabilities						**1,693**
Consolidated total liabilities						**57,838**

2020	Retail gas sales business RMB million	Integrated energy business RMB million	Wholesale of gas RMB million	Construction and installation RMB million	Value added business RMB million	Total RMB million
Assets:						
Segment assets	34,274	7,997	2,649	9,364	2,998	57,282
Interests in associates						3,619
Interests in joint ventures						4,141
Unallocated corporate assets						25,001
Consolidated total assets						90,043
Liabilities:						
Segment liabilities	11,281	3,509	577	12,246	2,048	29,661
Bank and other loans						6,668
Corporate bonds						2,097
Senior notes						7,207
Unsecured bonds						3,712
Unallocated corporate liabilities						4,526
Consolidated total liabilities						53,871

7. SEGMENT INFORMATION *(continued)*

Segment assets and liabilities *(continued)*

For the purposes of monitoring segment performances and allocating resources between segments:

- all assets are allocated to reportable segments other than unallocated corporate assets, mainly including unallocated property, plant and equipment, right-of-use assets, intangible assets, goodwill, investment properties, interests in associates, interests in joint ventures, deferred tax assets, certain other receivables, deposits, amounts due from associates, joint ventures and related companies, equity instruments at FVTOCI, financial assets at FVTPL, derivative financial instruments, restricted bank deposits and cash and cash equivalents. Assets used jointly by segments are allocated on the basis of the revenues earned by individual segments; and
- all liabilities are allocated to reportable segments other than unallocated corporate liabilities, mainly including certain other payables, amounts due to associates, joint ventures and related companies, taxation payables, lease liabilities, bank and other loans, corporate bonds, senior notes, derivative financial instruments, unsecured bonds and deferred tax liabilities. Liabilities for which segments are jointly liable are allocated in proportion to segments assets.

For the purposes of presenting segment revenue, results, assets and liabilities, the Group allocates certain property, plant and equipment, intangible assets and right-of-use assets to certain segments with the related depreciation and amortisation of right-of-use assets to those segments.

Other segment information

Amounts included in the measurement of segment profit and segment assets:

	Retail gas sales business	**Integrated energy business**	**Wholesale of gas**	**Construction and installation**	**Value added business**	**Total**
	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million
2021						
Additions to non-current assets (Note b)	**4,808**	**1,601**	**129**	**923**	**32**	**7,493**
Depreciation and amortisation	**1,153**	**193**	**4**	**385**	**4**	**1,739**
2020						
Additions to non-current assets (Note b)	4,938	1,497	105	874	22	7,436
Depreciation and amortisation	1,085	146	4	352	3	1,590

	Additions to non-current assets (note b)		**Depreciation and amortisation**	
	2021	2020	**2021**	2020
	RMB million	RMB million	**RMB million**	RMB million
Segment total	**7,493**	7,436	**1,739**	1,590
Adjustments (Note a)	**65**	62	**524**	491
Total	**7,558**	7,498	**2,263**	2,081

Notes:

a. Adjustments represent amounts incurred for corporate headquarters and are not allocated to operating segments.

b. Non-current assets include property, plant and equipment, right-of-use assets, goodwill and intangible assets.

There is no single customer contribute more than 10% of the total revenue of the Group.

Substantially all of the Group's revenue and non-current assets are located in the PRC. For the year ended 31 December 2021, the revenues from the PRC and overseas were RMB92,843 million (2020: RMB71,450 million) and RMB270 million (2020: RMB167 million), respectively. As of 31 December 2021, the non-current assets located in the PRC were RMB66,135 million (2020: RMB60,461 million) and overseas were RMB12 million (2020: RMB12 million).

8. OTHER INCOME

	2021 RMB million	2020 RMB million
Other income mainly includes:		
Incentive subsidies (Note)	**317**	350
Dividends income from equity instruments at FVTOCI	**6**	1
Dividends income from financial assets at FVTPL	**197**	73
Interest income on bank deposits	**81**	77
Interest income on loan receivables from joint ventures, associates and related parties	**37**	29
Interest income on loan receivables from third parties	**82**	98
Rental income from investment properties	**7**	10
Rental income from equipment	**59**	42

Note: The amount mainly represents refunds of various taxes as incentives and other incentives related to the Group's operation by the government authorities in various cities of the PRC.

9. OTHER GAINS AND LOSSES

	2021 RMB million	2020 RMB million
Net (loss) gain on disposal of:		
– Property, plant and equipment	**(26)**	(128)
– Right-of-use assets	**4**	18
– Subsidiaries (Note 49)	**41**	(62)
– Joint ventures	**(4)**	4
– Associates	**9**	–
– A financial asset at FVTPL	**10**	–
Decrease in fair value of investment properties (Note 18)	**(6)**	(7)
Loss on deemed disposal of an associate	**(9)**	–
Net (loss) gain of:		
– Financial assets at FVTPL (Note 25)	**(43)**	(45)
– Derivative financial instruments (Note 24)	**980**	102
Impairment losses under expected credit loss model, net of reversal		
– Trade and other receivables	**(109)**	(106)
– Contract assets	**(4)**	9
– Amounts due from associates/joint ventures/related companies	**(10)**	(32)
Impairment loss recognised in respect of property, plant and equipment	**(37)**	(70)
Loss on repurchase of unsecured bonds	**(1)**	(9)
Gain on foreign exchange, net (Note)	**189**	608
	984	282

Note: Included in the amount for the year ended 31 December 2021 is an exchange gain of approximately RMB230 million (2020: exchange gain of approximately RMB605 million) arising from the translation of senior notes, unsecured bonds and bank loans denominated in United States dollars ("USD") to RMB.

10. FINANCE COSTS

	2021 RMB million	2020 RMB million
Interest on:		
Bank and other loans	232	288
Senior notes	188	198
Corporate bonds	89	90
Unsecured bonds	124	139
Lease liabilities	21	27
	654	742
Less: Amount capitalised under construction in progress (Note)	(126)	(181)
	528	561
Fair value loss reclassified from equity on foreign currency derivative designated as cash flow hedges for USD debts	48	48
	576	609

Note: Borrowing costs capitalised during both years were incurred on funds borrowed specifically and generally for the purpose of expenditure on qualifying assets. In respect of funds borrowed generally for the purpose of expenditure on qualifying assets, the amount of borrowing costs capitalised during the year was calculated by applying a capitalisation rate of 3.08% (2020: 3.43%) per annum.

11. PROFIT BEFORE TAX

	2021 RMB million	2020 RMB million
Profit before tax has been arrived at after charging (crediting):		
Share-based payment expenses, including directors' emoluments (included in administrative expenses)	54	70
Other staff costs, including directors' emoluments	3,810	3,364
Less: Amount of other staff costs capitalised under construction in progress	(150)	(168)
	3,714	3,266
Depreciation and amortisation:		
Property, plant and equipment	1,783	1,603
Intangible assets	324	304
Right-of-use assets	156	174
Total depreciation and amortisation (Note)	2,263	2,081
Auditors' remuneration	19	20
Expense relating to short-term lease and other leases with lease terms ended within 12 months of the date of initial application of HKFRS 16	33	24

11. PROFIT BEFORE TAX *(continued)*

Note: The amount of total staff costs and depreciation and amortisation included in cost of sales, distribution and selling expenses and administrative expenses are as follows:

	2021 RMB million	2020 RMB million
Staff costs included in:		
Cost of sales	1,144	1,094
Distribution and selling expenses	718	656
Administrative expenses	1,852	1,516
	3,714	3,266
Depreciation and amortisation included in:		
Cost of sales	1,739	1,590
Distribution and selling expenses	117	96
Administrative expenses	407	395
	2,263	2,081

12. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS

a. Directors' emoluments

Emoluments paid and payable to the Directors for the year were as follows:

	2021					
Name of director	Fee RMB'000	Salaries and allowance RMB'000	Discretionary performance bonus RMB'000	Share-based payment RMB'000	Retirement benefit scheme contributions RMB'000	Total emoluments RMB'000
Executive Directors: (Note a)						
Wang Yusuo	–	2,900	–	1,601	–	4,501
Zheng Hongtao*	–	2,000	2,780	13,524	130	18,434
Wu Xiaojing**	–	59	120	159	2	340
Wang Dongzhi	–	1,900	1,400	1,067	99	4,466
Sub-total	–	6,859	4,300	16,351	231	27,741
Non-executive directors:						
Wang Zizheng***	500	–	–	1,064	15	1,579
Jin Yongsheng****	500	–	–	–	–	500
Zhang Yuying*****	–	2,100	2,220	5,048	132	9,500
Sub-total	1,000	2,100	2,220	6,112	147	11,579
Independent Non-executive Directors: (Note b)						
Ma Zhixiang	500	–	–	200	–	700
Yuen Po Kwong	500	–	–	200	–	700
Law Yee Kwan, Quinn	500	–	–	200	–	700
Yien Yu Yu, Catherine	500	–	–	200	–	700
Sub-total	2,000	–	–	800	–	2,800
Total	3,000	8,959	6,520	23,263	378	42,120

12. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS *(continued)*

a. Directors' emoluments *(continued)*

	2020					
Name of director	Fee RMB'000	Salaries and allowance RMB'000	Discretionary performance bonus RMB'000	Share-based payment RMB'000	Retirement benefit scheme contributions RMB'000	Total emoluments RMB'000
Executive Directors: (Note a)						
Wang Yusuo	–	2,850	–	2,817	–	5,667
Cheung Yip Sang******	–	450	–	824	7	1,281
Han Jishen*******	–	2,409	–	1,771	106	4,286
Wang Dongzhi	–	1,900	1,100	1,877	–	4,877
Zhang Yuying*****	–	1,750	4,546	1,164	105	7,565
Zheng Hongtao*	–	362	1,472	–	22	1,856
Sub-total	–	9,721	7,118	8,453	240	25,532
Non-executive directors:						
Wang Zizheng***	396	368	–	2,062	16	2,842
Jin Yongsheng****	417	–	–	15	–	432
Sub-total	813	368	–	2,077	16	3,274
Independent Non-executive Directors: (Note b)						
Ma Zhixiang	483	–	–	350	–	833
Yuen Po Kwong	483	–	–	350	–	833
Law Yee Kwan, Quinn	483	–	–	350	–	833
Yien Yu Yu, Catherine	483	–	–	322	–	805
Sub-total	1,932	–	–	1,372	–	3,304
Total	2,745	10,089	7,118	11,902	256	32,110

* Mr. Zheng Hongtao was appointed as an executive director of the Company on 14 September 2020.

** Ms. Wu Xiaojing was appointed as an executive director of the Company on 20 December 2021.

*** Mr. Wang Zizheng was re-designated as a non-executive director of the Company from an executive director of the Company since 16 March 2020.

**** Mr. Jin Yongsheng was appointed as a non-executive director of the Company on 16 March 2020.

***** Mr. Zhang Yuying was re-designated as a non-executive director of the Company from an executive director of the Company since 20 December 2021. The amount was inclusive of the emoluments paid for his service as an executive director of the Company during the year ended 31 December 2021.

****** Mr. Cheung Yip Sang retired on 13 May 2020.

******* Mr. Han Jishen resigned on 2 November 2020.

Notes:

a. The executive directors' emoluments shown above were mainly for their services in connection with the management of the affairs of the Company and the Group.

b. The independent non-executive directors' emoluments shown above were mainly for their services as directors of the Company.

None of the Directors waived any emoluments or received any compensation for loss of office or as inducement to join the Company during both years. The discretionary performance bonus is determined by reference to the Group's performance during the year.

12. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS *(continued)*

b. Five highest paid individuals

None of the five highest paid individuals received any compensation for loss of office or as inducement to join the Company during both years,

The five highest paid employees of the Group during the year included two (2020: two) directors, details of whose remuneration are set out in Note 12(a) above. Details of the remuneration for the year of the remaining three (2020: three) highest paid employees who are neither a director nor chief executive of the Company are as follows:

	2021 RMB'000	2020 RMB'000
Salaries and allowance	**6,550**	5,800
Discretionary performance bonus	**11,155**	11,433
Share-based payment	**1,440**	2,878
Retirement benefits scheme contributions	**347**	383
	19,492	20,494

The number of the highest paid employees included the Directors whose remuneration fell within the following bands is as follows:

	2021 Number of employees	2020 Number of employees
HK$6,000,001 to HK$6,500,000	**–**	1
HK$7,000,001 to HK$7,500,000	**–**	1
HK$7,500,001 to HK$8,000,000	**2**	1
HK$8,000,001 to HK$8,500,000	**1**	1
HK$8,500,001 to HK$9,000,000	**–**	1
HK$11,000,001 to HK$11,500,000	**1**	–
HK$22,000,001 to HK$22,500,000	**1**	–
	5	5

13. INCOME TAX EXPENSE

	2021 RMB million	2020 RMB million
Current tax	**2,139**	1,736
Underprovision (overprovision) in prior years	**2**	(10)
Withholding tax	**30**	63
Overprovision of withholding tax in prior years	**(60)**	(71)
	2,111	1,718
Deferred tax (Note 32)	**287**	509
	2,398	2,227

The expense substantially represents PRC Enterprise Income Tax for both years.

Under the Law of the PRC on Enterprise Income Tax (the "EIT Law") and Implementation Regulation of the EIT Law, the tax rate applicable for PRC group entities is 25%.

13. INCOME TAX EXPENSE *(continued)*

Certain subsidiaries of the Company are qualified as "High and New Technology Enterprises", which are subject to PRC Enterprise Income Tax at the preferential rate of 15% of the estimated assessable profit as determined in accordance with relevant tax rules and regulations in the PRC. This preferential rate could be applied for three years and the subsidiaries are eligible to apply the tax concession again upon expiry of the three-year period.

Hong Kong Profits Tax is calculated at 16.5% of the estimated assessable profit.

Income tax expense for the year can be reconciled to the profit before tax per the consolidated statement of profit or loss and other comprehensive income as follows:

	2021 RMB million	2020 RMB million
Profit before tax	**11,393**	9,558
Tax at the PRC Enterprise Income Tax rate of 25% (2020: 25%)	**2,848**	2,390
Tax effects of share of results of associates	**(65)**	(77)
Tax effects of share of results of joint ventures	**(110)**	(119)
Tax effects of income not taxable for tax purpose	**(55)**	(44)
Tax effects of expenses not deductible for tax purpose	**169**	107
Tax effects of tax losses not recognised	**227**	113
Utilisation of tax losses previously not recognised	**(134)**	(80)
Utilisation of temporary differences not recognised	**(101)**	(23)
Tax concession and exemption granted to certain PRC subsidiaries	**(249)**	(143)
Effect of different tax rates of subsidiaries operating in Hong Kong	**(144)**	(30)
Underprovision (overprovision) in prior years	**2**	(10)
Withholding tax on undistributed profit of PRC entities	**10**	143
Income tax expense for the year	**2,398**	2,227

14. DIVIDENDS

	2021 RMB million	2020 RMB million
Dividends declared and paid		
Interim dividend	**554**	–
Final dividend	**1,972**	1,719
Special dividend	**301**	–
	2,827	1,719

Note a: The interim dividend declared in 2021 of HK$0.59 (equivalent to approximately RMB0.49) per share, the final dividend declared in the financial year 2020 of HK$2.10 (equivalent to approximately RMB1.77) per share and the special dividend of HK$0.32 (equivalent to approximately RMB0.27) per share, amounting to approximately RMB2,827 million in aggregate was paid during the year ended 31 December 2021.

Note b: The 2019 final dividend of HK$1.67 (equivalent to approximately RMB1.50) per share or approximately RMB1,719 million in aggregate was paid during the year ended 31 December 2020.

Note c: After the end of the reporting period, the Board has recommended a final dividend of HK$2.11 per share (equivalent to approximately RMB1.72 per share) for the year ended 31 December 2021, and is subject to approval by the shareholders in the forthcoming Annual General Meeting ("AGM"). The final dividend proposed after the end of the reporting period has not been recognised as a liability in the consolidated financial statements.

15. EARNINGS PER SHARE

The calculation of the basic and diluted earnings per share attributable to owners of the Company is based on the following data:

Basic earnings per share

Basic earnings per share for the years ended 31 December 2021 and 2020 are calculated by dividing the profit attributable to owners of the Company by the weighted average number of ordinary shares in issue during the year.

	2021	2020
Profit for the year attributable to the owners of the Company (RMB million)	**7,755**	6,278
Weighted average number of ordinary shares	**1,126,611,575**	1,123,467,932
Basic earnings per share (RMB)	**6.88**	5.59

Diluted earnings per share

Diluted earnings per share for the years ended 31 December 2021 and 2020 are calculated assuming all dilutive potential shares were converted during the year.

	2021	2020
Earnings		
Earnings for the purpose of diluted earnings per share (RMB million)	**7,755**	6,278
Number of shares		
Weighted average number of shares for the purpose of basic earnings per share	**1,126,611,575**	1,123,467,932
Effect of dilutive potential shares:		
– share options	**4,177,613**	2,714,693
Weighted average number of shares for the purpose of diluted earnings per share	**1,130,789,188**	1,126,182,625
Diluted earnings per share (RMB)	**6.86**	5.57

16. PROPERTY, PLANT AND EQUIPMENT

	Leasehold land and buildings RMB million	Pipelines RMB million	Machinery and equipment RMB million	Motor vehicles RMB million	Office equipment RMB million	Properties under construction RMB million	Total RMB million
COST							
At 1 January 2020	4,644	29,408	3,261	472	1,960	6,175	45,920
Acquisition of subsidiaries (Notes 47 & 48)	127	317	81	6	1	26	558
Additions	37	70	226	75	252	5,048	5,708
Reclassification	487	4,383	557	–	73	(5,500)	–
Transfer to investment properties	(3)	–	–	–	–	–	(3)
Disposal of subsidiaries (Note 49)	(202)	(219)	(165)	(2)	(7)	(4)	(599)
Disposals	(140)	(222)	(146)	(86)	(32)	(7)	(633)
At 31 December 2020	4,950	33,737	3,814	465	2,247	5,738	50,951
Acquisition of subsidiaries (Notes 47 & 48)	26	679	26	1	–	9	741
Additions	56	120	365	49	193	5,596	6,379
Reclassification	730	5,344	1,254	–	38	(7,366)	–
Transfer to investment properties	(18)	–	–	–	–	–	(18)
Disposal of subsidiaries (Note 49)	(10)	(153)	(29)	(9)	(4)	(1)	(206)
Disposals	(51)	(295)	(110)	(40)	(40)	(15)	(551)
At 31 December 2021	5,683	39,432	5,320	466	2,434	3,961	57,296
DEPRECIATION AND IMPAIRMENT							
At 1 January 2020	783	5,011	870	273	1,028	–	7,965
Provided for the year	165	938	261	50	189	–	1,603
Impairment loss	17	–	53	–	–	–	70
Disposal of subsidiaries	(61)	(53)	(99)	(2)	(7)	–	(222)
Eliminated on disposals	(30)	(114)	(84)	(75)	(23)	–	(326)
At 31 December 2020	874	5,782	1,001	246	1,187	–	9,090
Provided for the year	167	1,015	360	50	191	–	1,783
Impairment loss	6	–	31	–	–	–	37
Disposal of subsidiaries	(3)	(4)	(21)	(8)	(1)	–	(37)
Eliminated on disposals	(12)	(213)	(82)	(33)	(30)	–	(370)
At 31 December 2021	1,032	6,580	1,289	255	1,347	–	10,503
CARRYING VALUES							
At 31 December 2021	4,651	32,852	4,031	211	1,087	3,961	46,793
At 31 December 2020	4,076	27,955	2,813	219	1,060	5,738	41,861

16. PROPERTY, PLANT AND EQUIPMENT *(continued)*

The above items of property, plant and equipment, other than properties under construction, are depreciated on a straight-line basis as follows:

Leasehold land and buildings	Over the shorter of 30 years or the term of the leases
Pipelines	Over the shorter of 30 years or the term of the leases
Machinery and equipment	10–15 years
Motor vehicles	6 years
Office equipment	6 years

At the end of the reporting period, except for certain land and buildings with carrying value of RMB35 million (2020: RMB35 million) which are located in Hong Kong, the remaining land and buildings are located in the PRC.

At the end of the reporting period, the Group is in the process of applying for ownership certificates for its buildings in the PRC amounting to approximately RMB508 million (2020: RMB421 million).

17. RIGHT-OF-USE ASSETS

	Land use rights RMB million	**Leasehold land and buildings** RMB million	**Motor vehicles** RMB million	**Equipment** RMB million	**Total** RMB million
As at 1 January 2020	1,653	501	29	2	2,185
Acquisition of subsidiaries (Note 47)	97	–	–	–	97
Additions	115	80	1	6	202
Disposal of subsidiaries (Note 49)	(41)	(105)	–	–	(146)
Disposals	(15)	(20)	–	–	(35)
Depreciation	(57)	(98)	(17)	(2)	(174)
As at 31 December 2020	1,752	358	13	6	2,129
Acquisition of subsidiaries (Note 47)	31	–	–	–	31
Additions	116	92	–	–	208
Disposal of subsidiaries (Note 49)	(31)	(4)	–	–	(35)
Disposals	(28)	(30)	–	–	(58)
Depreciation	(54)	(89)	(10)	(3)	(156)
As at 31 December 2021	1,786	327	3	3	2,119

	2021 **RMB million**	2020 RMB million
Expense relating to short-term lease	**33**	24
Variable lease payments not included in the measurement of lease liabilities	**4**	6
Total cash outflow for leases	**135**	137

The Group leases various offices, warehouses, equipment and vehicles for its operations. Lease contracts are entered into for fixed term of 1 month to 50 years, but may have extension and termination options. Lease terms are negotiated on an individual basis and contain different terms and conditions. In determining the lease term and assessing the length of the non-cancellable period, the Group applies the definition of a contract and determines the period for which the contract is enforceable.

At the end of the reporting period, the Group is in the process of applying for the land use right certificates for the land in the PRC amounting to approximately RMB114 million (2020: RMB101 million). In the opinion of the Directors, the Group is not required to incur additional cost in obtaining the land use right certificates.

The Group entered into several short-term leases for various offices, warehouses, equipment and vehicles. As at 31 December 2021, the total outstanding commitments of such leases is RMB9 million (2020: RMB8 million).

18. INVESTMENT PROPERTIES

	RMB million
FAIR VALUE	
At 1 January 2020	268
Exchange realignment	(3)
Net decrease in fair value recognised in profit or loss (Note 9)	(7)
Transfer from property, plant and equipment	3
At 31 December 2020	261
Exchange realignment	(1)
Net decrease in fair value recognised in profit or loss (Note 9)	(6)
Transfer from property, plant and equipment	34
At 31 December 2021	288

All of the Group's property interests held under operating leases to earn rentals or for capital appreciation purposes are measured using the fair value model and are classified and accounted for as investment properties. These investment properties include land and buildings which comprise operating leases in respect of properties situated in the PRC and Hong Kong.

The fair value of the Group's investment properties at 31 December 2021 and 2020 has been arrived at on the basis of a valuation carried out on those dates by Knight Frank Petty Limited, a firm of independent valuers. The fair value was determined based on the income approach, where the market rentals of all lettable units of the properties are assessed and discounted at the market yield expected by investors for this type of properties. A significant increase in the market rent used would result in a significant increase in fair value, and vice versa. The Group's investment properties were classified in the Level 3 of fair value hierarchy as at 31 December 2021 and 2020.

In estimating the fair value of the properties, the highest and best use of the properties is their current use.

19. GOODWILL

	2021 RMB million	2020 RMB million
COST		
At 1 January	**2,562**	2,430
Acquisition of subsidiaries (Note 47)	**10**	148
Disposal of subsidiaries (Note 49)	**(1)**	(16)
At 31 December	**2,571**	2,562
IMPAIRMENT		
At 1 January and 31 December	**(51)**	(51)
CARRYING VALUES		
At 31 December	**2,520**	2,511

19. GOODWILL *(continued)*

Note: The Group tests goodwill for impairment annually, or more frequently if there are indications that goodwill might be impaired.

For the purposes of impairment testing, goodwill has been allocated to the following CGUs. At the end of the reporting period, the carrying value of goodwill mainly represents goodwill arising from the acquisition of:

	2021 **RMB million**	2020 RMB million
Integrated energy business located in the PRC	**2,028**	2,028
Sale of piped gas business located in Xuancheng, the PRC	**100**	100
Sale of piped gas business located in Linyi, the PRC	**15**	15
Sale of piped gas business located in Pujiang, the PRC	**27**	27
Sale of piped gas business located in Inner Mongolia, the PRC	**21**	21
Sale of piped gas business located in Jiangsu, the PRC	**62**	52
Sale of piped gas business located in Haerbin, the PRC	**18**	18
Other CGUs of sales of piped gas business, the PRC	**249**	250
	2,520	2,511

For the purpose of impairment testing, the recoverable amounts of the CGUs are determined from value in use calculations.

CGU of integrated energy business in the PRC

The Group prepares cash flow projection for integrated energy business in the PRC covering a 5 year (2020: 5 year) period and the cash flow beyond the 5 year (2020: 5 year) period was extrapolated using a steady growth rate of 3% (2020: 3%). For the 5 year (2020: 5 year) period, the first three years are based on financial budgets approved by management and based on the pattern consistent with the track record of the respective entity taking into account the stage of the development of the respective integrated energy projects. The revenues beyond the 3 year period but within the fifth (2020: fifth) year were estimated using an annualised growth rates of 9.73% (2020: 8.83%). The growth rates are based on the management's estimation on the respective entities projected market share and do not exceed average long-term growth rate for the relevant industry. The gross profit margin will be assumed the same beyond the 5 year (2020: 5 year) period.

The Directors estimate discount rate using pre-tax rate that reflect current market assessment of the time value of money and the risks specific to the CGU and determined the discount rate to be 15.17% (2020: 15.23%).

CGUs of sales of piped gas business in the PRC

For the CGUs of sales of piped gas business in the PRC, the Group prepares a cash flow projection based on management best estimate. The cash flow projections for the first three years are based on financial budgets approved by management which are prepared based on the pattern consistent with the track record of the respective entities taking into account the stage of the development of the respective gas projects. From the fourth to the tenth year, cash flow are extrapolated using an estimated growth pattern at an annualised growth rates of revenue for each CGU ranging from 2.85% to 4.98% (2020: 3.97% to 8.13%). For cash flow on the remaining contractual operating period, i.e. beyond the tenth year, a steady growth rate of 3% will be adopted.

The growth rates are based on the management's estimation on the respective entity's projected market share and will not exceed the growth rate of natural gas consumption projected by the relevant government authorities.

The Directors estimate discount rates using pre-tax rates that reflect current market assessments of the time value of money and the risks specific to the CGUs and determined the discount rate to be 16.39% to 18.60% (2020: 14.56% to 16.40%).

The Directors believe that any reasonably possible change in any of these assumptions would not cause the carrying amounts of goodwill to exceed the recoverable amount of respective CGUs.

20. INTANGIBLE ASSETS

	Right of operation RMB million	Customer base RMB million	Software RMB million	Technology RMB million	Development cost RMB million	Total RMB million
COST						
At 1 January 2020	4,410	51	179	549	11	5,200
Acquisition of subsidiaries (Notes 47 & 48)	684	40	–	–	–	724
Additions	28	–	7	–	26	61
Reclassification	–	–	13	–	(13)	–
Disposal of subsidiaries (Note 49)	(221)	–	–	–	–	(221)
At 31 December 2020	4,901	91	199	549	24	5,764
Acquisition of subsidiaries (Note 47)	152	–	–	–	–	152
Additions	–	–	6	–	31	37
Reclassification	–	–	45	–	(45)	–
At 31 December 2021	5,053	91	250	549	10	5,953
AMORTISATION						
At 1 January 2020	901	24	26	74	–	1,025
Charge for the year	223	2	24	55	–	304
Disposal of subsidiaries (Note 49)	(11)	–	–	–	–	(11)
At 31 December 2020	1,113	26	50	129	–	1,318
Charge for the year	238	6	25	55	–	324
At 31 December 2021	1,351	32	75	184	–	1,642
CARRYING VALUES						
At 31 December 2021	3,702	59	175	365	10	4,311
At 31 December 2020	3,788	65	149	420	24	4,446

Right of operation and customer base are amortised on a straight-line method over the operation periods ranging from 10 to 50 years and from 15 to 50 years, respectively.

Software and technology is amortised on a straight-line method over the periods ranging from 1 to 10 years.

Development cost mainly represents expenditure incurred during the development phase of the Group's integrated energy service technologies and online LNG data platform.

21. INTERESTS IN ASSOCIATES

	2021 RMB million	2020 RMB million
Cost of investments	**2,509**	2,500
Share of post-acquisition profits, net of dividends received	**1,120**	1,093
	3,629	3,593
Deemed capital contribution		
Financial guarantee	**26**	26
	3,655	3,619

Included in the interests in associates is goodwill of approximately RMB56 million (2020: RMB47 million) arising on acquisitions.

In the opinion of the Directors, none of the associates principally affected the results or net assets of the Group. To give details of the associates of the Group would, in the opinion of the Directors, result in particulars of excessive length.

The associates are accounted for using the equity method in these consolidated financial statements.

21. INTERESTS IN ASSOCIATES *(continued)*

Aggregate information of associates:

	2021 RMB million	2020 RMB million
Profit and total comprehensive income for the year	**336**	575
Group's share of profit and total comprehensive income from associates for the year	**261**	306
Aggregate carrying amount of the Group's interests in these associates	**3,655**	3,619

22. INTERESTS IN JOINT VENTURES

	2021 RMB million	2020 RMB million
Cost of investments	**3,281**	2,612
Share of post-acquisition profits, net of dividends received	**1,702**	1,472
	4,983	4,084
Deemed capital contribution		
Financial guarantee	**76**	53
Fair value adjustments on interest-free advances	**4**	4
	80	57
	5,063	4,141

Included in the interests in joint ventures is goodwill of approximately RMB259 million (2020: RMB192 million) arising on acquisitions.

The joint ventures are accounted for using the equity method in these consolidated financial statements.

Details of the Group's principal joint ventures as at 31 December 2021 and 2020 are as follows:

Name of company	Form of business structure	Place of establishment/ operation	Proportion of nominal value of registered capital held by the Group 2021	2020	Principal activities
東莞新奧燃氣有限公司 (“Dongguan Xinao”) (Note)	Incorporated	The PRC	**55%**	55%	Investment in gas pipeline infrastructure and sales of piped gas and gas appliances
煙台新奧燃氣發展有限公司 (“Yantai Xinao”) (Note)	Incorporated	The PRC	**50%**	50%	Sales of piped gas, integrated energy and services and provision of construction and installation services

Note: The Group holds 50% or more than 50% of the registered capital of these entities but it does not have the power to appoint sufficient number of directors to control these entities and the joint venture partners in each entity control jointly on the operational and financial policies of each entity. Accordingly, these entities are classified as joint ventures of the Group.

The table above lists the joint ventures of the Group which, in the opinion of the Directors, principally affected the results or net assets of the Group. To give details of other joint ventures of the Group would, in the opinion of the Directors, result in particulars of excessive length.

22. INTERESTS IN JOINT VENTURES *(continued)*

Summarised financial information of material joint ventures

Summarised financial information in respect of the Group's material joint ventures is set out below. The summarised financial information below represents amounts shown in the joint venture's financial statements prepared in accordance with HKFRSs.

Dongguan Xinao

	2021 RMB million	2020 RMB million
Current assets	**767**	731
Non-current assets	**3,897**	3,390
Current liabilities	**2,919**	2,433
Non-current liabilities	**32**	77
Non-controlling interests	**200**	183

The above amounts of assets and liabilities include the following:

	2021 RMB million	2020 RMB million
Cash and cash equivalents	**163**	361
Current financial liabilities (excluding trade and other payables)	**533**	233

	2021 RMB million	2020 RMB million
Revenue	**5,959**	4,295
Profit and total comprehensive income for the year	**185**	218
Dividends received from Dongguan Xinao during the year	**55**	78

The above profit for the year includes the following:

	2021 RMB million	2020 RMB million
Depreciation and amortisation	**147**	143
Interest income	**26**	34
Interest expense	**46**	38
Income tax expense	**20**	87

Reconciliation of the above summarised financial information to the carrying amount of the interest in Dongguan Xinao is recognised in the consolidated financial statements:

	2021 RMB million	2020 RMB million
Net assets of Dongguan Xinao	**1,513**	1,428
Proportion of the Group's ownership interest in Dongguan Xinao	**832**	785
Goodwill	**31**	31
Carrying amount of the Group's interest in Dongguan Xinao	**863**	816

22. INTERESTS IN JOINT VENTURES *(continued)*

Summarised financial information of material joint ventures *(continued)*

Yantai Xinao

	2021 RMB million	2020 RMB million
Current assets	760	613
Non-current assets	1,359	1,190
Current liabilities	1,045	840
Non-current liabilities	29	24
Non-controlling interests	5	2

The above amounts of assets and liabilities include the following:

	2021 RMB million	2020 RMB million
Cash and cash equivalents	272	357
Current financial liabilities (excluding trade and other payables)	184	160

	2021 RMB million	2020 RMB million
Revenue	2,027	1,603
Profit and total comprehensive income for the year	189	171
Dividends received from Yantai Xinao during the year	43	40

The above profit for the year includes the following:

	2021 RMB million	2020 RMB million
Depreciation and amortisation	52	58
Interest income	3	6
Interest expense	6	10
Income tax expense	63	61

Reconciliation of the above summarised financial information to the carrying amount of the interest in Yantai Xinao is recognised in the consolidated financial statements:

	2021 RMB million	2020 RMB million
Net assets of Yantai Xinao	1,040	937
Proportion of the Group's ownership interest in Yantai Xinao	520	469
Goodwill	7	7
Capitalisation of financial guarantee	1	1
Carrying amount of the Group's interest in Yantai Xinao	528	477

22. INTERESTS IN JOINT VENTURES *(continued)*

Summarised financial information of material joint ventures *(continued)*

Aggregate information of joint ventures that are not individually material:

	2021 RMB million	2020 RMB million
Profit and total comprehensive income for the year	**517**	488
Group's share of profit and total income from joint ventures for the year	**242**	270
Aggregate carrying amount of the Group's interests in these joint ventures	**3,672**	2,848

23. TRADE AND OTHER RECEIVABLES

	2021 RMB million	2020 RMB million
Trade receivables	**4,072**	2,519
Less: Allowance for credit losses	**(442)**	(335)
	3,630	2,184
Bills receivable (Note)	**1,354**	1,441
Other receivables	**664**	702
Loan receivables	**566**	379
	2,584	2,522
Less: Allowance for credit losses	**(24)**	(22)
	2,560	2,500
Deductible input value added tax and prepayment of other taxes and charges	**1,596**	1,499
Advances to suppliers and prepayments	**2,800**	2,943
Total trade and other receivables	**10,586**	9,126
Analysed for reporting purpose as:		
Current portion	**10,568**	9,053
Non-current portion	**18**	73

Note: The bills receivable were endorsed by PRC banks for guarantee payments and the default risk is considered to be minimal.

The following is an aged analysis of trade receivables, net of allowance for credit losses presented based on invoice date at the end of the reporting period:

	2021 RMB million	2020 RMB million
0 to 3 months	**2,663**	1,418
4 to 6 months	**343**	301
7 to 9 months	**212**	181
10 to 12 months	**113**	16
More than one year	**299**	268
	3,630	2,184

23. TRADE AND OTHER RECEIVABLES *(continued)*

As at 1 January 2020, trade receivables, net of allowance for credit losses amounted to RMB2,362 million.

As at 31 December 2021, total bills receivable amounting to RMB1,354 million (2020: RMB1,441 million) are with a maturity period of less than one year.

As at 31 December 2021, included in the Group's trade receivables balance are debtors with aggregate carrying amount of RMB1,015 million (2020: RMB779 million) which are past due at the end of the reporting period and is not considered as in default because the Group has assessed the historical payment pattern of the debtors and the credit quality of these customers.

Details of impairment assessment of trade and other receivables for the year ended 31 December 2021 are set out in Note 53.

24. DERIVATIVE FINANCIAL INSTRUMENTS

	2021 RMB million	2020 RMB million
Derivative financial assets		
Derivatives designated as cash flow hedges:		
Foreign currency derivative contracts (Note a)	**–**	2
Commodity derivative contracts (Note b)	**124**	–
Derivatives not designated in hedge accounting:		
Commodity derivative contracts (Note b)	**2,407**	626
	2,531	628
Derivative financial liabilities		
Derivatives designated as cash flow hedges:		
Foreign currency derivative contracts (Note a)	**97**	135
Commodity derivative contracts (Note b)	**–**	62
Derivatives not designated in hedge accounting:		
Commodity derivative contracts (Note b)	**1,665**	730
	1,762	927
Analysed for reporting purpose as:		
Assets		
Current portion	**1,585**	336
Non-current portion	**946**	292
Liabilities		
Current portion	**956**	401
Non-current portion	**806**	526

For the year ended 31 December 2021

	Commodity Derivatives RMB million	**Foreign Currency Derivatives RMB million**	**Total RMB million**
Net unrealised gain (loss) included in other gains and losses			
Derivatives designated as cash flow hedges – ineffective portion	**14**	**(14)**	**–**
Derivatives not designated in hedge accounting	**782**	**–**	**782**
	796	**(14)**	**782**
Net realised gain included in other gains and losses			
Derivatives not designated in hedge accounting	**198**	**–**	**198**
	994	**(14)**	**980**

24. DERIVATIVE FINANCIAL INSTRUMENTS *(continued)*

For the year ended 31 December 2020

	Commodity Derivatives RMB million	Foreign Currency Derivatives RMB million	Total RMB million
Net unrealised gain (loss) included in other gains and losses			
Derivatives designated as cash flow hedges – ineffective portion	(13)	–	(13)
Derivatives not designated in hedge accounting	45	6	51
	32	6	38
Net realised gain (loss) included in other gains and losses			
Derivatives designated as cash flow hedges – ineffective portion	–	(55)	(55)
Derivatives not designated in hedge accounting	171	(52)	119
	171	(107)	64
	203	(101)	102

Notes:

a. The Group is exposed to exchange rate risk mainly arising from various bonds and bank loans denominated in USD. To manage and mitigate the foreign exchange exposure, the Group entered into various foreign currency derivative contracts (the "Foreign Currency Derivatives") with certain financial institutions. As at 31 December 2021, the Foreign Currency Derivatives have a total notional amount of USD550 million (2020: USD750 million), of which the maturity dates match to the maturity dates of certain debts denominated in USD. The Foreign Currency Derivatives will enable the Group to buy USD at the predetermined RMB/USD exchange rates on maturity dates. The Foreign Currency Derivatives are designated as hedging instruments and accounted for under hedge accounting.

b. The Group has entered into sale and purchase agreements to acquire LNG from certain international suppliers. The purchase prices of these arrangements are linked to certain commodity price indexes. Details of these arrangements are set out in Note 50.

   In order to manage and mitigate the commodity price risk arising from the highly probable forecast LNG purchases under these agreements, the Group has entered into various commodity derivative contracts (the "Commodity Derivatives") with certain financial institutions. Certain Commodity Derivatives are designated as hedging instruments and accounted for under hedge accounting.

25. FINANCIAL ASSETS AT FVTPL

	2021 RMB million	2020 RMB million
Financial assets at FVTPL		
Listed equity interest in Shanghai Dazhong Public Utilities (Group) Co., Ltd ("Shanghai Utilities") (Note a)	**181**	244
Unlisted equity interest in Sinopec Marketing Co., Ltd ("Sinopec Marketing") (Note b)	**4,170**	4,170
Unlisted equity securities (Note c)	**55**	346
Unlisted wealth management products	**152**	70
	4,558	4,830
Analysed for reporting purpose as:		
Assets		
Current portion	**152**	70
Non-current portion	**4,406**	4,760

	2021 RMB million	2020 RMB million
Net unrealised (loss) gain included in other gains and losses		
Listed equity interest in Shanghai Utilities (Note a)	**(63)**	(43)
Other unlisted equity securities (Note c)	**20**	(2)
	(43)	(45)

25. FINANCIAL ASSETS AT FVTPL *(continued)*

Notes:

a. The above listed investment represents 4.38% of the total issued share capital of Shanghai Utilities (1635.HK). During the year ended 31 December 2021, the Group received dividend income of approximately RMB6 million (2020: RMB7 million) from Shanghai Utilities.

b. The above investment represents 1.13% unlisted equity interest in Sinopec Marketing Co., Ltd ("Sinopec Marketing"). During the year ended 31 December 2021, the Group received dividend income of approximately RMB191 million (2020: RMB66 million) from Sinopec Marketing.

c. The unlisted investments represent investments in unlisted equity securities issued by private entities incorporated in the PRC.

26. EQUITY INSTRUMENTS AT FVTOCI

	2021 RMB million	2020 RMB million
Listed equity securities	**113**	62
Unlisted equity securities	**153**	149
	266	211

The above unlisted investments represent investments in unlisted equity securities issued by private entities incorporated in the PRC. The Directors have elected to designate these investments as equity instruments at FVTOCI as they believe that the Group will hold these investments for strategic cooperation purpose and has no intention to dispose of these investments in the foreseeable future.

27. TRANSFER OF FINANCIAL ASSETS

The following were the Group's financial assets as at 31 December 2021 and 2020 that were transferred to banks or suppliers by discounting, pledging to banks or endorsing those receivables on a full recourse basis. As the Group has not transferred the significant risks and rewards relating to these receivables, it continues to recognise the full carrying amount of the receivables and the corresponding liabilities included in secured borrowings or trade payables respectively. These financial assets are carried at amortised cost in the consolidated statement of financial position.

At 31 December 2021

	Bills receivable discounted or pledged to banks RMB million	**Bills receivable endorsed to suppliers RMB million**	**Total RMB million**
Carrying amount of transferred assets	**390**	**677**	**1,067**
Carrying amount of associated liabilities	**(390)**	**(677)**	**(1,067)**
	–	**–**	**–**

At 31 December 2020

	Bills receivable discounted or pledged to banks RMB million	Bills receivable endorsed to suppliers RMB million	Total RMB million
Carrying amount of transferred assets	112	523	635
Carrying amount of associated liabilities	(112)	(523)	(635)
	–	–	–

28. CONTRACT ASSETS

	2021	2020
	RMB million	RMB million
Gas pipeline installation	**667**	650
Integrated energy construction contracts	**108**	82
	775	732

As at 1 January 2020, contract assets amounted to RMB757 million.

29. AMOUNTS DUE FROM/TO ASSOCIATES

	2021	2020
	RMB million	RMB million
Amounts due from associates:		
Current portion	**1,165**	892
Non-current portion	**21**	6
	1,186	898
Amounts due to associates:		
Current portion	**424**	319
Non-current portion	**215**	–
	639	319

Included in the amounts due from/to associates are trade receivables amounting to approximately RMB589 million (2020: RMB531 million) and trade payables amounting to approximately RMB212 million (2020: RMB71 million).

The aged analysis presented based on the invoice date, at the end of the reporting period is as follows:

	2021	2020
	RMB million	RMB million
Trade receivables due from associates		
0 to 3 months	**342**	229
4 to 6 months	**74**	130
7 to 9 months	**13**	64
10 to 12 months	**46**	14
More than one year	**114**	94
	589	531

There is no formal credit period applied and the balance was repayable on demand. Owing to the strategic relationship with the associates, the Directors are of the view that the balance is not considered as in default.

The amounts due from/to associates are unsecured, interest-free and repayable on demand except for the amounts due from/to associates detailed in the following table.

At 31 December 2021

	Maturity date	**Effective interest rate per annum**	**2021 RMB million**
Loan receivables from associates			
Unsecured	11/01/2022–10/03/2024	3.85%–8.00%	**113**
Loan payables to associates			
Savings in ENN Finance Company Limited (“ENN Finance”)		0.35%	**193**
Unsecured	14/10/2024	3.70%	**215**
			408

29. AMOUNTS DUE FROM/TO ASSOCIATES *(continued)*

At 31 December 2020

	Maturity date	Effective interest rate per annum	2020 RMB million
Loan receivables from associates			
Unsecured	28/03/2021–16/01/2023	4.35%–8.00%	191
Loan payables to associates			
Savings in ENN Finance		0.35%	144
Unsecured	20/12/2021	4.35%	35
			179

Details of impairment assessment of amounts due from associates are set out in Note 53.

30. AMOUNTS DUE FROM/TO JOINT VENTURES

	2021 RMB million	2020 RMB million
Amounts due from joint ventures:		
Current portion	**2,440**	2,106
Non-current portion	**4**	10
	2,444	2,116
Amounts due to joint ventures:		
Current portion	**1,249**	976
Non-current portion	**325**	585
	1,574	1,561

Included in the amounts due from joint ventures was approximately RMB355 million (2020: RMB245 million) arising from the deposits placed for purchases of gas by the Group from the joint ventures. The balance approximates its fair value and is repayable on demand.

Included in the amounts due from/to joint ventures are trade receivables amounting to approximately RMB501 million (2020: RMB735 million) and trade payables amounting to approximately RMB924 million (2020: RMB786 million) and the aged analysis presented based on invoice date, is as follows:

	2021 RMB million	2020 RMB million
Trade receivables due from joint ventures		
0 to 3 months	**345**	533
4 to 6 months	**22**	40
7 to 9 months	**22**	24
10 to 12 months	**16**	7
More than one year	**96**	131
	501	735

30. AMOUNTS DUE FROM/TO JOINT VENTURES *(continued)*

	2021 RMB million	2020 RMB million
Trade payables due to joint ventures		
0 to 3 months	**340**	566
4 to 6 months	**150**	102
7 to 9 months	**90**	51
10 to 12 months	**62**	26
More than one year	**282**	41
	924	786

There is no formal credit period applied and the balance was repayable on demand. Owing to the strategic relationship with the joint ventures, the Directors are of the view that the balance is not considered as in default.

The amounts due from/to joint ventures are unsecured, interest-free and repayable on demand except for the amounts due from/to joint ventures detailed in the following table:

At 31 December 2021

	Maturity date	**Effective interest rate per annum**	**2021 RMB million**
Loan receivables from joint ventures			
Unsecured	26/05/2022–17/12/2022	4.35%–6.00%	**360**
Loan payables to joint ventures			
Unsecured	13/08/2023–29/11/2023	4.35%–4.75%	**325**
Savings in ENN Finance		0.35%	**195**
			520

At 31 December 2020

	Maturity date	Effective interest rate per annum	2020 RMB million
Loan receivables from joint ventures			
Unsecured	15/06/2021–26/09/2022	4.35%–6.00%	532
Loan payables to joint ventures			
Unsecured	12/02/2021–29/12/2022	0.35%–5.00%	623
Savings in ENN Finance		0.35%	57
			680

Details of impairment assessment of amounts due from joint ventures are set out in Note 53.

31. AMOUNTS DUE FROM/TO RELATED COMPANIES

	2021 **RMB million**	2020 RMB million
Amounts due from companies controlled by a director and shareholder with significant influence	**318**	348
Amounts due to companies controlled by a director and shareholder with significant influence	**964**	925

The related companies are controlled by Mr. Wang Yusuo ("Mr. Wang") who is a director and shareholder of the Company with significant influence. The maximum amount outstanding during the year in respect of the amounts due from companies controlled by Mr. Wang is RMB461 million (2020: RMB510 million).

Included in the amounts due from/to related companies are trade receivables amounting to approximately RMB216 million (2020: RMB209 million) and trade payables amounting to approximately RMB891 million (2020: RMB861 million) and the aged analysis presented based on invoice date, at the end of the reporting period is as follow:

	2021 **RMB million**	2020 RMB million
Trade receivables due from related companies		
0 to 3 months	**43**	51
4 to 6 months	**20**	24
7 to 9 months	**30**	32
10 to 12 months	**63**	9
More than one year	**60**	93
	216	209

	2021 **RMB million**	2020 RMB million
Trade payables due to related companies		
0 to 3 months	**639**	577
4 to 6 months	**58**	98
7 to 9 months	**65**	53
10 to 12 months	**43**	34
More than one year	**86**	99
	891	861

There is no formal credit period applied and the balance was repayable on demand. Owing to the strategic relationship with the related companies, the Directors are of the view that the balance is not considered as in default.

Details of impairment assessment of amounts due from related companies are set out in Note 53.

32. DEFERRED TAXATION

	2021 **RMB million**	2020 RMB million
Deferred tax assets	**1,212**	1,370
Deferred tax liabilities	**(2,785)**	(2,562)
	(1,573)	(1,192)

The following are the major deferred tax assets and liabilities recognised and movements thereon during the years ended 31 December 2021 and 2020:

	Intangible assets RMB million	**Capitalisation of interest in property, plant and equipment** RMB million	**Undistributed retained profits of PRC entities from 1 January 2008** RMB million (Note)	**Deferred income** RMB million	**Unrealised profits** RMB million	**Equipment for one time deduction from 1 January 2018** RMB million	**Others** RMB million	**Total** RMB million
At 1 January 2020	848	212	182	(1,070)	(345)	727	(26)	528
Acquisition of subsidiaries (Note 47)	209	–	–	–	–	–	–	209
(Credit) charge to profit or loss	(60)	36	151	9	(78)	483	(32)	509
Charge to other comprehensive income	–	–	–	–	–	–	2	2
Disposal of subsidiaries (Note 49)	(56)	–	–	–	–	–	–	(56)
At 31 December 2020	941	248	333	(1,061)	(423)	1,210	(56)	1,192
Acquisition of subsidiaries (Note 47)	50	–	–	–	–	–	–	50
(Credit) charge to profit or loss	(66)	21	40	30	(134)	300	96	287
Charge to other comprehensive income	–	–	–	–	–	–	44	44
At 31 December 2021	925	269	373	(1,031)	(557)	1,510	84	1,573

Note: The amount represents deferred taxation in respect of the temporary differences attributable to the undistributed retained profits earned after 1 January 2008 by the group entities registered in the PRC. The amount has been provided based on the amount of undistributed retained profits of certain PRC entities from 1 January 2008 attributable to non-PRC parent entities at a withholding tax rate of 10% or 5% as the Directors consider the amount will be probably reversed in the foreseeable future upon distribution of profit by the respective group entities.

Deferred taxation of approximately RMB1,164 million (2020: RMB930 million) has not been provided for in the consolidated financial statements in respect of temporary differences attributable to undistributed retained profits of certain PRC subsidiaries as the Group is able to control the timing of the reversal of the temporary differences and it is probable that the temporary differences will not reverse in the foreseeable future.

32. DEFERRED TAXATION *(continued)*

As at 31 December 2021, the Group has unused tax losses of approximately RMB2,309 million (2020: RMB1,924 million) available for offset against future profits. No deferred tax asset has been recognised in respect of the unused tax losses due to the uncertainty of future profit streams. The unrecognised tax losses will be expired in the following years ending 31 December:

	2021 RMB million	2020 RMB million
2021	**–**	80
2022	**90**	96
2023	**237**	446
2024	**648**	848
2025	**427**	454
2026	**907**	–
	2,309	1,924

As at 31 December 2021, the Group has no other deductible temporary differences (2020: RMB403 million). Prior year balance were mainly arising from impairment of trade and other receivables and unrealised profits within the Group. No deferred tax asset has been recognised in relation to such other deductible temporary differences as it is not probable that taxable profit will be available for offsetting against which the deductible temporary differences can be utilised.

33. INVENTORIES

	2021 RMB million	2020 RMB million
Construction materials	**770**	787
Gas appliances	**240**	178
Natural gas	**408**	233
Other energy inventories	**30**	34
Spare parts and consumables	**8**	6
Integrated energy appliances	**52**	47
	1,508	1,285

The cost of inventories recognised as an expense during the year was approximately RMB72,632 million (2020: RMB55,280 million).

34. CASH AND CASH EQUIVALENTS/RESTRICTED BANK DEPOSITS

	2021 RMB million	2020 RMB million
Cash and cash equivalents	**8,684**	8,630
Restricted bank deposits		
Current portion	**363**	116
Non-current portion	**622**	650
	985	766

	2021 RMB million	2020 RMB million
Bank deposits secured for:		
Letter of credit	–	15
Right of operation	**36**	59
Mandatory reserves in the People's Bank of China ("PBOC")	**443**	465
Energy supplies	**154**	76
Bills payable	**352**	151
	985	766

Cash and cash equivalents include bank balances with original maturities less than three months carrying interest at market rates which range from 0.01% to 2.75% (2020: 0.03% to 4.18%) per annum as at 31 December 2021. The bank balances denominated in RMB are deposited with banks in the PRC.

At the end of the reporting period, the cash and cash equivalents denominated in foreign currencies other than the functional currency of respective group entities is RMB1,067 million (2020: RMB684 million), of which approximately RMB1,024 million (2020: RMB578 million) and approximately RMB43 million (2020: RMB101 million) are denominated in USD and HK$, respectively.

As at 31 December 2021, the restricted bank deposits carry fixed interest rate ranging from 0.30% to 4.13% (2020: from 0.03% to 3.71%) per annum. Except for the amount of mandatory reserves in the PBOC, other restricted bank deposits will be released upon the settlement of bank loans, the expiry of purchase contracts or right of operation. The mandatory reserves in the PBOC classified as non-current assets are deposits placed by ENN Finance and the reserves amount is subject to change with respect to the savings accepted by ENN Finance and the PBOC reserve rate is adjusted from time to time.

35. LEASE LIABILITIES

	2021 RMB million	2020 RMB million
Lease liabilities payables:		
Within one year	**75**	89
More than one year, but not more than two years	**60**	66
More than two years, but not more than five years	**116**	116
More than five years	**104**	128
	355	399
Less: Amounts due within one year shown under current liabilities	**(75)**	(89)
Amounts shown under non-current liabilities	**280**	310

The weighted average incremental borrowing rates applied to lease liabilities range from 3.04% to 5.23% (2020: from 3.04% to 5.23%).

36. TRADE AND OTHER PAYABLES

	2021 RMB million	2020 RMB million
Trade payables	**7,623**	6,186
Accrued staff cost	**624**	618
Other tax payables	**235**	203
Accrued charges and other payables	**1,690**	1,295
	10,172	8,302

The following is an aged analysis of trade payables presented based on the invoice date at the end of the reporting period.

	2021 RMB million	2020 RMB million
0 to 3 months	**5,087**	3,472
4 to 6 months	**1,038**	1,094
7 to 9 months	**389**	535
10 to 12 months	**261**	236
More than one year	**848**	849
	7,623	6,186

The average credit period on purchases of goods is 30 to 90 days.

37. CONTRACT LIABILITIES

	2021 RMB million	2020 RMB million
Deposit for gas charges and other sales (Note a)	**7,821**	7,082
Deposit for construction and installation contracts (Note b)	**6,790**	6,893
Deferred income (Note c)	**3,290**	3,479
	17,901	17,454
Analysed for reporting purpose as:		
Current portion	**14,908**	14,242
Non-current portion	**2,993**	3,212
	17,901	17,454

As at 1 January 2020, contract liabilities amounted to RMB15,915 million.

Contract liabilities are classified as current and non-current based on the Group's earliest obligation to transfer goods or services to the customers.

The amount of revenue recognised in the current year relates to carried-forward contract liabilities were RMB12,230 million (2020: RMB10,431 million).

Notes:

a. The Group requires the customers to deposit gas charges into magnetic cards which connected to the gas meters. When the customers consume the natural gas, corresponding value of deposits will be recognised as revenue in line with the volume of gas consumed at pre-determined unit price. The deposit would be typically consumed within one year.

b. For construction and installation contracts, the Group normally receives a deposit before construction work commences. The Group continues to recognise revenue over time and apply output method in estimating the performance obligations satisfied throughout the construction and the installation period.

c. The deferred income represents fees received from certain customers for maintaining the ongoing deliverability to supply gas at the discretion of the customers. The period to supply gas would be consistent with the operating period as stated in the right of operation.

38. DEFERRED INCOME

	Government grants RMB million
GROSS	
At 1 January 2020	758
Additions	123
Disposal of subsidiaries (Note 49)	(11)
At 31 December 2020	870
Additions	109
Acquisition of subsidiaries (Note 47)	2
At 31 December 2021	981
RECOGNITION	
At 1 January 2020	75
Release to profit or loss	32
Disposal of subsidiaries	(4)
At 31 December 2020	103
Release to profit or loss	41
At 31 December 2021	144
CARRYING VALUES	
At 31 December 2021	837
At 31 December 2020	767

	2021 **RMB million**	2020 RMB million
Analysed for reporting purposes as:		
Current portion	**48**	38
Non-current portion	**789**	729
	837	767

39. SHARE CAPITAL

	2021 **Number of shares**	2020 Number of shares	**2021** **HK$ million**	2020 HK$ million
Shares of HK$0.10 each				
Authorised:				
At beginning and end of the year	**3,000,000,000**	3,000,000,000	**300**	300
Issued and fully paid:				
At beginning of the year	**1,128,365,108**	1,125,477,108	**113**	112
Issue of shares upon exercise of share options (Note)	**1,770,667**	2,888,000	**–**	1
At end of the year	**1,130,135,775**	1,128,365,108	**113**	113

39. SHARE CAPITAL *(continued)*

	2021 RMB million	2020 RMB million
Presented in consolidated financial statements as:		
At beginning of the year	**117**	116
Issue of shares upon exercise of share options	**–**	1
At end of the year	**117**	117

Note: During the year ended 31 December 2021, 753,200 shares and 1,017,467 shares (2020: 2,212,800 shares and 475,200 shares) were issued at the exercise price of HK$40.34 and HK$76.36 per ordinary share under Scheme 2012, respectively, in relation to the exercise of outstanding share options. These shares rank pari passu with the then existing shares in all respects as set out in Note 45.

Save as disclosed above and in Note 45, none of the Company's subsidiaries purchased, sold or redeemed any of the Company's listed securities up to 31 December 2021.

40. BANK AND OTHER LOANS

	2021 RMB million	2020 RMB million
Bank loans		
Secured	**652**	456
Unsecured	**8,720**	6,099
	9,372	6,555
Other loans		
Secured	**–**	16
Unsecured	**96**	97
	96	113
	9,468	6,668

	2021 RMB million	2020 RMB million
The bank and other loans are repayable:		
On demand or within one year	**6,150**	4,590
More than one year, but not more than two years	**693**	64
More than two years, but not more than five years	**1,754**	753
More than five years	**871**	1,261
	9,468	6,668
Less: Amounts due within one year shown under current liabilities	**(6,150)**	(4,590)
Amounts shown under non-current liabilities	**3,318**	2,078

As at 31 December 2021, all the bank and other loans are denominated in the functional currency of respective group entities except for approximately RMB3,672 million (2020: RMB1,631 million) which are denominated in USD.

The secured bank and other loans are secured by property, plant and equipment, rights to receive fee income of certain subsidiaries and joint ventures as set out in Note 52.

40. BANK AND OTHER LOANS *(continued)*

Details of the terms of the Group's borrowings are set out below:

At 31 December 2021

	Maturity date	**Effective interest rate per annum**	**Carrying amount RMB million**
Fixed-rate borrowings			
Unsecured RMB bank loans	07/01/2022–20/10/2029	1.85%–4.80%	**3,328**
Unsecured RMB other loans	31/12/2022	3.79%	**96**
Secured RMB bank loans	03/03/2022–25/12/2024	3.35%–4.41%	**652**
Unsecured USD bank loans	06/01/2022–24/01/2022	0.64%–0.70%	**3,672**
Total fixed-rate borrowings			**7,748**
Floating-rate borrowings			
Unsecured RMB bank loans at PBOC base rate	05/08/2024–07/11/2032	3.50%–5.39%	**1,720**
Total borrowings			**9,468**

At 31 December 2020

	Maturity date	Effective interest rate per annum	Carrying amount RMB million
Fixed-rate borrowings			
Unsecured RMB bank loans	12/02/2021–21/12/2029	1.70%–4.80%	3,494
Unsecured RMB other loans	31/12/2021	3.79%	97
Secured RMB bank loans	23/02/2021–25/12/2024	3.40%–4.41%	456
Secured RMB other loan	23/08/2022	4.35%	16
Unsecured USD bank loans	22/01/2021–05/02/2021	2.40%–2.53%	652
Total fixed-rate borrowings			4,715
Floating-rate borrowings			
Unsecured RMB bank loans at PBOC base rate	30/01/2021–07/11/2032	4.30%–5.39%	974
Unsecured USD bank loan at London Interbank Offered Rate ("LIBOR")	30/11/2021	1.23%	979
Total floating-rate borrowings			1,953
Total borrowings			6,668

41. CORPORATE BONDS

Details of the terms of the three tranches' corporate bonds issued by Xinao (China) Gas Investment Company Limited ("Xinao (China)") are set out below:

Date of issuance	**22 January 2019**	**8 March 2019**	**11 November 2019**
Principal amount	**RMB500 million**	**RMB1,000 million**	**RMB600 million**
Interest rate	**4.19%**	**4.20%**	**3.98%**
Maturity date	**22 January 2022**	**8 March 2022**	**12 November 2022**
Net proceeds after deducting transaction costs	**RMB498 million**	**RMB996 million**	**RMB599 million**
Date of listing on the Shanghai Stock Exchange	**20 February 2019**	**29 March 2019**	**22 November 2019**
Effective interest rate after the adjustment for transaction costs	**4.36%**	**4.36%**	**4.04%**

41. CORPORATE BONDS *(continued)*

The corporate bonds recognised in the consolidated statement of financial position are calculated cumulatively as follows:

	2021 RMB million	2020 RMB million
Nominal value of corporate bonds	**2,100**	2,100
Issue costs	**(7)**	(7)
Fair value at date of issuance	**2,093**	2,093
Cumulative effective interest recognised	**237**	148
Cumulative interest paid/payable	**(231)**	(144)
Carrying amount at 31 December	**2,099**	2,097

42. SENIOR NOTES

a. 2021 Senior Notes

On 13 May 2011, the Company issued 6% senior notes with an aggregated nominal value of USD750 million (equivalent to approximately RMB4,863 million) (the "2021 Senior Notes") at face value. The net proceeds, after deducting the issuance costs, amounted to USD735 million (equivalent to approximately RMB4,765 million).

The 2021 Senior Notes recognised in the consolidated statement of financial position are calculated cumulatively as follows:

	2021 RMB million	2020 RMB million
Nominal value of 2021 Senior Notes	**4,863**	4,863
Issue costs	**(98)**	(98)
Fair value at date of issuance	**4,765**	4,765
Repurchased (Note)	**(2,603)**	(2,603)
Repayment upon maturity	**(2,372)**	–
Cumulative effective interest recognised	**2,296**	2,241
Cumulative interest paid/payable	**(2,225)**	(2,175)
Exchange loss	**139**	152
Carrying amount at 31 December	**–**	2,380

Note: In September 2015 and December 2016, the Company repurchased in aggregate of principal amount of USD35,000,000 and USD349,457,000 (equivalent to approximately RMB222 million and RMB2,410 million) in the open market. The remaining balance of the 2021 Senior Notes was matured and fully repaid on 13 May 2021.

b. Green Senior Notes

On 17 September 2020, the Company issued 2.63% green senior notes with an aggregated nominal value of USD750 million (equivalent to approximately RMB5,137 million) (the "Green Senior Notes") at face value. The net proceeds, after deducting the issuance costs, amounted to USD739 million (equivalent to approximately RMB5,065 million). The Green Senior Notes will be matured on 17 September 2030. The Green Senior Notes are listed on the Stock Exchange and dealt in over-the-counter market through a financial institution as the principal agent.

42. SENIOR NOTES *(continued)*

b. Green Senior Notes *(continued)*

According to the terms of the Green Senior Notes, the Company may, at any time and from time to time redeem the Green Senior Notes. The applicable Green Senior Notes will be redeemable at: (A) prior to 17 June 2030, the greater of (1) 100% of the principal amount of the applicable Green Senior Notes to be redeemed and (2) the sum of the present values of the remaining scheduled payments of principal and interest on the applicable Green Senior Notes to be redeemed, discounted to the date of redemption on a semi-annual basis at the Adjusted Treasury Rate (as defined in the offering memorandum dated 10 September 2020) plus 50 basis points, plus accrued and unpaid interest on the applicable Green Senior Notes to be redeemed; or (B) on or after 17 June 2030, 100% of the principal amount of the Green Senior Notes to be redeemed, plus accrued and unpaid interest, if any.

The fair value of the early redemption right is insignificant at initial recognition and at the end of the reporting periods. The effective interest rate is approximately 2.81% per annum after the adjustment for transaction costs.

The Green Senior Notes recognised in the consolidated statement of financial position are calculated cumulatively as follows:

	2021 **RMB million**	2020 RMB million
Nominal value of Green Senior Notes	**5,137**	5,137
Discount cost	**(43)**	(43)
Issue costs	**(29)**	(29)
Fair value at date of issuance	**5,065**	5,065
Cumulative effective interest recognised	**173**	40
Cumulative interest paid/payable	**(165)**	(38)
Exchange gain	**(351)**	(240)
Carrying amount at 31 December	**4,722**	4,827

43. UNSECURED BONDS

On 24 July 2017, the Company issued 3.25% unsecured bonds with an aggregate nominal value of USD600 million (equivalent to approximately RMB4,066 million) (the "Unsecured Bonds"). The net proceeds after discounting and deducting the issuance costs amounted to USD596 million (equivalent to approximately RMB4,037 million). The Unsecured Bonds will mature on 24 July 2022. The Unsecured Bonds are listed on the Stock Exchange and dealt in over-the-counter market through a financial institution as the principal agent.

According to the terms and conditions of Unsecured Bonds, the Company may at any time and from time to time, on giving not less than 30 nor more than 60 days' notice to the holders of the Unsecured Bonds, redeem the Unsecured Bonds, in whole but not in part, at a make whole price as of, with an accrued and unpaid interest, if any, to (but excluding), the redemption date. The make whole price means, with respect to a bond at the option redemption date, the amount calculated by the quotation agent that is the greater of (1) the present value of the principal amount of the Unsecured Bonds, assuming a scheduled repayment thereof on the maturity date plus all required remaining scheduled interest repayments due on such bond through the maturity date (but excluding accrued and unpaid interest to the option redemption date), computed using a discount rate equalled to the adjusted treasury rate plus 50 basis points, and (2) the principal amount of such bonds.

The estimated fair value of the early redemption right is insignificant at initial recognition and at the end of the reporting periods. The effective interest rate is approximately 3.44% per annum after deducting the adjustment for transaction costs for Unsecured Bonds.

43. UNSECURED BONDS *(continued)*

The Unsecured Bonds recognised in the consolidated statement of financial position are calculated cumulatively as follows:

	2021 RMB million	2020 RMB million
Nominal value of Unsecured Bonds	**4,066**	4,066
Discount cost	**(5)**	(5)
Issue costs	**(24)**	(24)
Fair value at date of issuance	**4,037**	4,037
Repurchased and cancelled (Note)	**(232)**	(199)
Cumulative effective interest recognised	**598**	474
Cumulative interest paid/payable	**(574)**	(455)
Exchange gain	**(228)**	(145)
Carrying amount at 31 December	**3,601**	3,712

Note: In October 2020, November 2020, and January 2021 the Company repurchased in aggregate of principal amount of USD19,564,000, USD10,100,000 and USD5,000,000 (equivalent to approximately RMB132 million, RMB67 million and RMB33 million) in the open market. The principal amount of USD565 million (2020: USD570 million) was outstanding as at 31 December 2021.

44. HEDGING RESERVE

The hedging reserve includes cash flow hedge reserve and cost of hedging reserve. The following table provides a reconciliation of the hedging reserve in respect of foreign exchange risk and commodity risk.

	Foreign exchange risk RMB million	**Commodity risk RMB million**	**Total RMB million**
Cash flow hedge reserve			
At 1 January 2021	**19**	**(43)**	**(24)**
(Loss) gain arising on changes in fair value of hedging instruments	**(146)**	**140**	**(6)**
Gain reclassified to profit or loss – hedged item has affected profit or loss	**126**	**–**	**126**
Cumulative loss transferred to initial carrying amount of hedged items	**–**	**29**	**29**
Income tax relating to items that may be reclassified subsequently	**–**	**(28)**	**(28)**
At 31 December 2021	**(1)**	**98**	**97**
Of which:			
Balance related to continuing cash flow hedges	**97**		
Balance related to discontinued cash flow hedges	**–**		

	Foreign exchange risk RMB million	**Commodity risk RMB million**	**Total RMB million**
Cost of hedging reserve			
At 1 January 2021	**17**	**(30)**	**(13)**
Changes in fair value of time value/foreign currency basis components of time period related hedged items	**11**	**–**	**11**
Changes in the fair value in relation to time period related hedged items	**–**	**56**	**56**
Amortisation to profit or loss on changes in fair value in relation to time period related hedged items	**(23)**	**–**	**(23)**
Income tax relating to items that may be reclassified subsequently	**–**	**(9)**	**(9)**
At 31 December 2021	**5**	**17**	**22**
	4	**115**	**119**

44. HEDGING RESERVE *(continued)*

The cash flow hedging reserve represents the cumulative effective portion of gains and losses arising on changes in fair value of hedging instruments entered into for cash flow hedges. The cumulative gain and loss arising from changes in fair value of the hedging instrument that are recognised and accumulated under the heading of cash flow hedging reserve will be reclassified to profit or loss when the hedged transaction affects the profit or loss or when the hedged forecast transaction is no longer expected to occur. When the hedged forecast transaction results in the recognition of a non-financial item, the cumulative gain or loss is included in the initial measurement of the cost of such item.

The cost of hedging reserve represents the changes in fair value of the time value of options and foreign currency basis spread of hedging instruments and will be reclassified to profit or loss only when the hedged transaction affects profit or loss, or included as a basis adjustment to the non-financial hedged item.

The following table provides a reconciliation of the hedging reserve in respect of foreign exchange risk and commodity price risk during the prior period.

	Foreign exchange risk RMB million	Commodity risk RMB million	Total RMB million
Cash flow hedge reserve			
At 1 January 2020	–	–	–
Loss arising on changes in fair value of hedging instruments	(299)	(122)	(421)
Gain reclassified to profit or loss – hedged item has affected profit or loss	323	–	323
Loss reclassified to profit or loss – forecast transaction no longer expected to occur	(5)	–	(5)
Cumulative loss transferred to initial carrying amount of hedged items	–	71	71
Income tax relating to items that may be reclassified subsequently	–	8	8
At 31 December 2020	19	(43)	(24)
Of which:			
Balance related to continuing cash flow hedges	(24)		
Balance related to discontinued cash flow hedges	–		

44. HEDGING RESERVE *(continued)*

	Foreign exchange risk RMB million	Commodity risk RMB million	Total RMB million
Cost of hedging reserve			
At 1 January 2020	–	–	–
Changes in fair value of time value/foreign currency basis component of time period related hedged items	45	–	45
Changes in fair value of time value of transaction related hedged items	–	(36)	(36)
Amortisation to profit or loss of changes in fair value in relation to time period related hedged items	(26)	–	(26)
Gain arising on changes in fair value in relation to reclassified to profit or loss – forecast transaction no longer expected to occur	(2)	–	(2)
Income tax relating to items that may be reclassified subsequently	–	6	6
At 31 December 2020	17	(30)	(13)
	36	(73)	(37)

45. SHARE BASED PAYMENT TRANSACTIONS

The Company has adopted a share option scheme pursuant to an ordinary resolution passed at an annual general meeting of the Company held on 26 June 2012 (the "Scheme 2012").

The Company has adopted a share award scheme pursuant to the board resolution of the Company dated 30 November 2018 (the "Share Award Scheme") to use as a supplement to the Scheme 2012.

a. Scheme 2012

On 9 December 2015, the Company granted share options to the Directors and certain employees (the "2015 Grantees") to subscribe for a total of 12,000,000 ordinary shares of the Company under the Scheme 2012. Among the share options granted, 2,659,000 share options were granted to the Directors and the remaining were granted to certain employees of the Group. Vesting of the share options is conditional upon the fulfilment of certain vesting conditions as set out in the respective offer letters of the 2015 Grantees, which may involve fulfilment of performance targets.

On 28 March 2019, the Company granted share options to Directors and certain employees of the Company, and business consultants who contribute to the success of the Company (the "2019 Grantees") to subscribe for a total of 12,328,000 ordinary shares of the Company under the Scheme 2012. Among the share options granted above, 2,480,000 share options were granted to the Directors and the remaining were granted to certain employees of the Group and business consultants. Vesting of the share options is conditional upon the fulfilment of certain vesting conditions as set out in the respective offer letters of the 2019 Grantees, which may involve fulfilment of performance targets.

2015 Grantees and 2019 Grantees should satisfy stipulated minimum service periods and performance targets for the attainment of the designated vesting conditions and periods. The vesting period of the share options is from the date of the grant until the commencement of the exercisable period.

45. SHARE BASED PAYMENT TRANSACTIONS *(continued)*

a. Scheme 2012 *(continued)*

The following tables disclose details of the Company's share options held by the grantees and movements in such holdings under the share option scheme during the current year:

						Number of options			
		Date of grant	Exercise period	Exercise price (HK$)	Outstanding at 1.1.2021	Exercised during the year	Forfeited during the year	Reclassified during the year	Outstanding at 31.12.2021
Scheme 2012- batch 1									
Directors	Tranche 1	9.12.2015	1.4.2017 to 8.12.2025	40.34	160,000	(145,000)	–	–	15,000
	Tranche 2	9.12.2015	1.4.2018 to 8.12.2025	40.34	160,000	(145,000)	–	–	15,000
	Tranche 3	9.12.2015	1.4.2019 to 8.12.2025	40.34	160,000	(145,000)	–	–	15,000
	Tranche 4	9.12.2015	1.4.2020 to 8.12.2025	40.34	160,525	(145,000)	–	42,500	58,025
Employees	Tranche 1	9.12.2015	1.4.2017 to 8.12.2025	40.34	131,100	(19,000)	(15,600)	–	96,500
	Tranche 2	9.12.2015	1.4.2018 to 8.12.2025	40.34	151,924	(22,500)	(50)	–	129,374
	Tranche 3	9.12.2015	1.4.2019 to 8.12.2025	40.34	230,550	(55,750)	–	–	174,800
	Tranche 4	9.12.2015	1.4.2020 to 8.12.2025	40.34	441,911	(75,950)	(12,125)	(42,500)	311,336
Subtotal					1,596,010	(753,200)	(27,775)	–	815,035
Exercisable at the end of the year									815,035
Weighted average exercise price									HK$40.34

						Number of options			
		Date of grant	Exercise period	Exercise price (HK$)	Outstanding at 1.1.2021	Exercised during the year	Forfeited during the year	Reclassified during the year	Outstanding at 31.12.2021
Scheme 2012- batch 2									
Directors	Tranche 1	28.3.2019	1.4.2020 to 27.3.2029	76.36	15,000	–	–	–	15,000
	Tranche 2	28.3.2019	1.4.2021 to 27.3.2029	76.36	528,200	(292,600)	(100,000)	73,400	209,000
	Tranche 3	28.3.2019	1.4.2022 to 27.3.2029	76.36	528,400	–	–	73,300	601,700
	Tranche 4	28.3.2019	1.4.2023 to 27.3.2029	76.36	528,400	–	–	73,300	601,700
Employees	Tranche 1	28.3.2019	1.4.2020 to 27.3.2029	76.36	449,600	(177,425)	(77,925)	–	194,250
	Tranche 2	28.3.2019	1.4.2021 to 27.3.2029	76.36	2,748,400	(528,942)	(796,533)	(73,400)	1,349,525
	Tranche 3	28.3.2019	1.4.2022 to 27.3.2029	76.36	2,749,900	–	(242,792)	(73,300)	2,433,808
	Tranche 4	28.3.2019	1.4.2023 to 27.3.2029	76.36	2,749,900	–	(242,792)	(73,300)	2,433,808
Business Consultants	Tranche 1	28.3.2019	1.4.2020 to 27.3.2029	76.36	91,500	(18,500)	–	–	73,000
	Tranche 2	28.3.2019	1.4.2021 to 27.3.2029	76.36	178,500	–	(13,500)	–	165,000
	Tranche 3	28.3.2019	1.4.2022 to 27.3.2029	76.36	178,500	–	–	–	178,500
	Tranche 4	28.3.2019	1.4.2023 to 27.3.2029	76.36	178,500	–	–	–	178,500
Subtotal					10,924,800	(1,017,467)	(1,473,542)	–	8,433,791
Exercisable at the end of the year									2,055,775
Weighted average exercise price									HK$76.36
Total					12,520,810	(1,770,667)	(1,501,317)	–	9,248,826

45. SHARE BASED PAYMENT TRANSACTIONS *(continued)*

a. Scheme 2012 *(continued)*

The following tables disclose details of the Company's share options held by the grantees and movements in such holdings under the share option scheme during the prior year:

		Date of grant	Exercise period	Exercise price (HK$)	Outstanding at 1.1.2020	Number of options Exercised during the year	Forfeited during the year	Reclassified during the year	Outstanding at 31.12.2020
Scheme 2012- batch 1									
Directors	Tranche 1	9.12.2015	1.4.2017 to 8.12.2025	40.34	230,500	(106,000)	–	35,500	160,000
	Tranche 2	9.12.2015	1.4.2018 to 8.12.2025	40.34	442,575	(167,700)	–	(114,875)	160,000
	Tranche 3	9.12.2015	1.4.2019 to 8.12.2025	40.34	538,775	(176,025)	–	(202,750)	160,000
	Tranche 4	9.12.2015	1.4.2020 to 8.12.2025	40.34	581,250	(217,975)	(96,575)	(106,175)	160,525
Employees	Tranche 1	9.12.2015	1.4.2017 to 8.12.2025	40.34	205,250	(38,650)	–	(35,500)	131,100
	Tranche 2	9.12.2015	1.4.2018 to 8.12.2025	40.34	366,261	(329,212)	–	114,875	151,924
	Tranche 3	9.12.2015	1.4.2019 to 8.12.2025	40.34	560,474	(514,924)	(17,750)	202,750	230,550
	Tranche 4	9.12.2015	1.4.2020 to 8.12.2025	40.34	1,425,000	(662,314)	(426,950)	106,175	441,911
Subtotal					4,350,085	(2,212,800)	(541,275)	–	1,596,010
Exercisable at the end of the year									1,596,010
Weighted average exercise price									HK$40.34

		Date of grant	Exercise period	Exercise price (HK$)	Outstanding at 1.1.2020	Number of options Exercised during the year	Forfeited during the year	Reclassified during the year	Outstanding at 31.12.2020
Scheme 2012- batch 2									
Directors	Tranche 1	28.3.2019	1.4.2020 to 27.3.2029	76.36	15,000	–	–	–	15,000
	Tranche 2	28.3.2019	1.4.2021 to 27.3.2029	76.36	768,200	–	–	(240,000)	528,200
	Tranche 3	28.3.2019	1.4.2022 to 27.3.2029	76.36	768,400	–	–	(240,000)	528,400
	Tranche 4	28.3.2019	1.4.2023 to 27.3.2029	76.36	768,400	–	–	(240,000)	528,400
Employees	Tranche 1	28.3.2019	1.4.2020 to 27.3.2029	76.36	1,061,300	(365,700)	(246,000)	–	449,600
	Tranche 2	28.3.2019	1.4.2021 to 27.3.2029	76.36	2,539,900	–	(31,500)	240,000	2,748,400
	Tranche 3	28.3.2019	1.4.2022 to 27.3.2029	76.36	2,541,400	–	(31,500)	240,000	2,749,900
	Tranche 4	28.3.2019	1.4.2023 to 27.3.2029	76.36	2,541,400	–	(31,500)	240,000	2,749,900
Business Consultants	Tranche 1	28.3.2019	1.4.2020 to 27.3.2029	76.36	201,000	(109,500)	–	–	91,500
	Tranche 2	28.3.2019	1.4.2021 to 27.3.2029	76.36	201,000	–	(22,500)	–	178,500
	Tranche 3	28.3.2019	1.4.2022 to 27.3.2029	76.36	201,000	–	(22,500)	–	178,500
	Tranche 4	28.3.2019	1.4.2023 to 27.3.2029	76.36	201,000	–	(22,500)	–	178,500
Subtotal					11,808,000	(475,200)	(408,000)	–	10,924,800
Exercisable at the end of the year									556,100
Weighted average exercise price									HK$76.36
Total					16,158,085	(2,688,000)	(949,275)	–	12,520,810

45. SHARE BASED PAYMENT TRANSACTIONS *(continued)*

a. Scheme 2012 *(continued)*

Exercise price of the share options granted on 9 December 2015 is HK$40.34 per share, which represents the highest of (i) the closing price of HK$39.00 per share as stated in the daily quotations sheet of the Stock Exchange on 9 December 2015, being the date of grant; (ii) the average closing price of HK$40.34 per share as stated in the daily quotations sheets of the Stock Exchange for the five trading days immediately preceding the date of grant; and (iii) the nominal value of the share.

Exercise price of the share options granted on 28 March 2019 is HK$76.36 per share, which represents the highest of (i) the closing price of HK$74.10 per share as stated in the daily quotations sheet of the Stock Exchange on 28 March 2019, being the date of grant; (ii) the average closing price of HK$76.36 per share as stated in the daily quotations sheets of the Stock Exchange for the five trading days immediately preceding the date of grant; and (iii) the nominal value of the share.

No share options were granted in both years presented. 1,770,667 (2020: 2,688,000) share options were exercised and 1,501,317 (2020: 949,275) share options were forfeited. As at 31 December 2021, the number of outstanding share options is 9,248,826 (2020: 12,520,810). During the year, the Group recognised share-based payment expenses of RMB20 million (2020: RMB70 million) and transferred RMB29 million (2020: RMB51 million) from share options reserve to share premium upon exercise of share options.

b. Share Award Scheme

Pursuant to the Share Award Scheme, the Company may from time to time at its absolute discretion grant shares of the Company (the "Awarded Shares") at no consideration to selected employees of any members of the Group. Vesting of the Awarded Shares granted is conditional upon the fulfilment of vesting conditions as specified in the grant notice issued to each grantee.

On 12 March 2019, pursuant to the terms of the Share Award Scheme and the trust deed, the Company established a trust (the "Trust") and appointed a trustee (the "Trustee") to administer the Share Award Scheme. During the effective period of the Share Award Scheme, the board of directors of the Company may from time to time contribute funds to the Trust and instruct the Trustee to purchase shares of the Company on the Stock Exchange or in off-market transactions. Shares held under the Trustee are non-transferrable prior to vesting and have no voting rights.

During the year ended 31 December 2021, no shares were purchased by the Trustee (2020: 270,000 shares). As at 31 December 2021, 2,685,100 shares (31 December 2020: 2,685,100 shares) were held by the Trustee. The cost of the shares purchased was recognised in equity as treasury stocks.

During the year ended 31 December 2021, 866,600 awarded shares (2020: 62,000 awarded shares) with an award price of HK$76.36 (2020: HK$76.36) had been nominally granted to certain directors and employees in tranches. Vesting of such shares is subject to satisfying relevant performance conditions and a service condition requiring continuous service until the respective vesting dates, and can occur as early as on 1 April in the year following the financial year to which the corresponding performance conditions related. Hence, the vesting period of these shares is from the date of the grant to the respective vesting dates.

During the exercise period from the relevant vesting dates to the expiry date, i.e. 27 March 2029, the grantees may exercise the right to receive in cash the notional gain (if any) of the vested Awarded Shares, which is the excess of the fair value of such shares on the exercise date over the award price.

45. SHARE BASED PAYMENT TRANSACTIONS *(continued)*

b. Share Award Scheme *(continued)*

The following table discloses details of the awarded shares held by the grantees and movements in such holdings under the Share Award Scheme during the current period:

		Financial year to which the performance conditions relate	Exercise price	Outstanding at 1.1.2021	Number of awarded shares Granted during the year	Exercised during the year	Forfeited during the year	Outstanding at 31.12.2021
Directors	Tranche 1	2020	HK$76.36	–	160,000	(70,000)	–	90,000
	Tranche 2	2021	HK$76.36	–	160,000	–	–	160,000
	Tranche 3	2022	HK$76.36	–	160,000	–	–	160,000
Employees	Tranche 1	2020	HK$76.36	31,000	128,867	(21,000)	–	138,867
	Tranche 2	2021	HK$76.36	15,500	128,867	–	–	144,367
	Tranche 3	2022	HK$76.36	15,500	128,866	–	–	144,366
Total				62,000	866,600	(91,000)	–	837,600
Exercisable at the end of the year								201,867
Weighted average exercise price								HK$76.36

The Group recognised share-based payment expenses of RMB34 million during the year ended 31 December 2021 in respect of these awarded shares. As at 31 December 2021, the Group has recorded liabilities of RMB29 million. The fair values for these awarded shares granted were calculated using the Binomial Option Pricing Model.

46. RETIREMENT BENEFITS SCHEME

	2021 RMB million	2020 RMB million
Retirement benefits scheme contribution made during the year	237	27

According to the relevant laws and regulations in the PRC, the PRC subsidiaries within the Group are required to contribute a certain percentage of the payrolls of their employees to the retirement benefits scheme to fund the retirement benefits of their employees. The Group operates a Mandatory Provident Fund Scheme (the "MPF Scheme") for all qualifying employees in Hong Kong. The assets of the schemes are held separately from those of the Group, in funds under the control of trustees. The Group contributes 5% of relevant payroll costs to the MPF Scheme, contribution of which is matched by employees. The maximum monthly amount of contribution is limited to HK$1,500 per employee. During the years ended 31 December 2021 and 2020, the Group had no forfeited contributions under the MPF Scheme which may be used by the Group to reduce existing level of contributions. No forfeited contributions were also available at 31 December 2021 and 2020 for the Group to reduce contribution payables in future years, if applicable.

47. ACQUISITION OF BUSINESSES

a. Acquisition of businesses during the year ended 31 December 2021

Acquisition date	Company acquired	Registered capital acquired	Consideration RMB million	Nature of business
27 July 2021	彩虹（南通）能源有限公司 ("Nantong")	100.00%	37	Retail gas sales business
26 September 2021	唐山新奧新能源發展有限公司 ("Tangshan")	40.00%	3	Retail gas sales business
29 September 2021	洛陽順和能源有限公司 ("Luoyang")	100.00%	77	Retail gas sales business
13 December 2021	中廣核雙閭燃氣江蘇有限公司 (Zhongguanghe")	100.00%	96	Retail gas sales business

47. ACQUISITION OF BUSINESSES *(continued)*

a. Acquisition of businesses during the year ended 31 December 2021 *(continued)*

Nantong, Tangshan, Luoyang and Zhongguanghe were acquired (collectively referred to as "2021 Companies Acquired") with the objective of expansion in market coverage of the Group's business.

The amounts of fair value of the assets and liabilities at the date of acquisition are as follows:

	Nantong RMB million	**Tangshan** RMB million	**Luoyang** RMB million	**Zhongguanghe** RMB million	**Total** RMB million
Non-current assets					
Property, plant and equipment	5	14	51	99	169
Intangible assets	50	–	29	73	152
Right-of-use assets	1	–	15	15	31
Current assets					
Inventories	–	–	–	8	8
Trade and other receivables	–	2	–	40	42
Cash and cash equivalents	2	–	–	9	11
Current liabilities					
Trade and other payables	(8)	(8)	(5)	(127)	(148)
Bank and other loans – due within one year	–	–	–	(5)	(5)
Non-current liabilities					
Deferred tax liabilities	(13)	–	(13)	(24)	(50)
Deferred income	–	–	–	(2)	(2)
Net assets acquired	37	8	77	86	208
Goodwill arising on acquisition					
Total consideration	37	3	77	96	213
Add: Fair value of interest previously held	–	5	–	–	5
Less: Fair value of identified net assets acquired by the Group	(37)	(8)	(77)	(86)	(208)
Goodwill arising on acquisition	–	–	–	10	10
Total consideration satisfied by:					
Cash	37	3	62	96	198
Consideration payables	–	–	15	–	15
	37	3	77	96	213
Net cash outflow arising on acquisition:					
Cash consideration paid	(37)	(3)	(62)	(96)	(198)
Less: Cash and cash equivalents acquired	2	–	–	9	11
	(35)	(3)	(62)	(87)	(187)

47. ACQUISITION OF BUSINESSES *(continued)*

a. Acquisition of businesses during the year ended 31 December 2021 *(continued)*

The fair value of property, plant and equipment and intangible assets at the date of acquisition was provisional and pending for the valuation carried out by an independent firm of professional valuer.

Included in the profit for the year ended 31 December 2021 was RMB1 million of profit attributable to the additional businesses generated by 2021 Companies Acquired. Revenue for the year ended 31 December 2021 includes RMB39 million generated from 2021 Companies Acquired.

Had the acquisitions of 2021 Companies Acquired been completed on 1 January 2021, the revenue of the Group for the year ended 31 December 2021 would have been approximately RMB93,260 million, and the profit for the year would have been approximately RMB8,878 million. The pro forma information is for illustrative purposes only and is not necessarily an indication of revenue and results of operations of the Group that actually would have been achieved had the acquisitions been completed on 1 January 2021, nor is intended to be a projection of future results.

In determining the “pro-forma” revenue and profit of the Group, had 2021 Companies Acquired been acquired on 1 January 2021, the Directors have calculated the depreciation and amortisation of property, plant and equipment and intangible assets acquired on the basis of the fair values rather than the carrying amounts recognised in the pre-acquisition financial statements.

b. Acquisition of businesses during the year ended 31 December 2020

Acquisition date	Company acquired	Registered Capital acquired	Consideration RMB million	Nature of business
26 March 2020	浙江省浦江高峰管道燃氣有限公司 (“Pujiang”)	90.00%	155	Retail gas sales business
31 March 2020	內蒙古華億能源股份有限公司 (“Huayi”)	100.00%	180	Retail gas sales business
10 August 2020	興化東方燃氣有限公司 (“Xinghua”)	65.00%	29	Retail gas sales business
17 August 2020	江蘇能源控股有限公司 (“Jiangsu”)	70.00%	284	Retail gas sales business
29 December 2020	雙城中慶燃氣有限公司 (“Shuangcheng”)	100.00%	121	Retail gas sales business
29 December 2020	上海中芬熱電有限公司 (“Zhongfen”)	51.00%	85	Sales of integrated energy and services

Pujiang, Huayi, Xinghua, Jiangsu, Shuangcheng and Zhongfen were acquired (collectively referred to as “2020 Companies Acquired”) with the objective of expansion in market coverage of the Group’s business.

47. ACQUISITION OF BUSINESSES *(continued)*

b. Acquisition of businesses during the year ended 31 December 2020 *(continued)*

The amounts of fair value of the assets and liabilities at the date of acquisition are as follows:

	Pujiang RMB million	**Huayi** RMB million	**Jiangsu** RMB million	**Others** RMB million	**Total** RMB million
Non-current assets					
Property, plant and equipment	67	124	162	192	545
Intangible assets	163	54	335	161	713
Right-of-use assets	13	22	1	61	97
Current assets					
Inventories	4	3	–	7	14
Trade and other receivables	38	37	69	43	187
Contract assets	2	–	–	–	2
Cash and cash equivalents	38	1	7	34	80
Current liabilities					
Trade and other payables	(87)	(34)	(95)	(123)	(339)
Contract liabilities	(10)	(25)	(5)	(36)	(76)
Bank and other loans – due within one year	(50)	(2)	(23)	(15)	(90)
Non-current liabilities					
Deferred tax liabilities	(41)	(21)	(89)	(58)	(209)
Bank and other loans – due after one year	–	–	(30)	(41)	(71)
Net assets acquired	137	159	332	225	853
Capital injection by the Group	–	–	–	29	29
Net assets acquired including capital injection by the Group	137	159	332	254	882
Goodwill arising on acquisition					
Total consideration	155	180	284	235	854
Add: Non-controlling interests	9	–	100	67	176
Less: Fair value of identified net assets acquired including capital injection by the Group	(137)	(159)	(332)	(254)	(882)
Goodwill arising on acquisition (determined on a provisional basis)	27	21	52	48	148
Total consideration satisfied by:					
Cash	153	152	284	–	589
Consideration payables	2	28	–	206	236
Capital injection by the Group	–	–	–	29	29
	155	180	284	235	854
Net cash (outflow) inflow arising on acquisition:					
Cash consideration paid	(153)	(152)	(284)	–	(589)
Less: Cash and cash equivalents acquired	38	1	7	34	80
	(115)	(151)	(277)	34	(509)

48. ACQUISITION OF ASSETS THROUGH ACQUISITIONS OF SUBSIDIARIES

a. Acquisition of assets through acquisition of a subsidiary during the year ended 31 December 2021

To facilitate the Group's expansion, the Group will from time to time liaise with the local PRC governments and potential vendors to acquire the local rights of operation, gas assets and integrated energy related assets through acquisition of subsidiaries. During the year ended 31 December 2021, the Group has acquired assets through the acquisition of the following subsidiary:

Acquisition date	Company acquired	Registered capital acquired	Consideration RMB million
16 July 2021	河南新奧中裕燃氣管道有限公司	60.00%	343

The transaction was accounted for as acquisition of assets through acquisition of a subsidiary and the fair value of the consideration allocated to the assets and liabilities acquired are as follows:

	RMB million
Non-current assets	
Property, plant and equipment	572
Net assets acquired	572
Less: Non-controlling interests	(229)
Total consideration	343

	RMB million
Total consideration satisfied by:	
Cash	343
Net cash outflow arising on acquisition:	
Cash consideration paid	(343)

48. ACQUISITION OF ASSETS THROUGH ACQUISITIONS OF SUBSIDIARIES *(continued)*

b. Acquisition of assets through acquisitions of subsidiaries during the year ended 31 December 2020

To facilitate the Group's expansion, the Group will from time to time liaise with the local PRC governments and potential vendors to acquire the local rights of operation, gas assets and integrated energy related assets through acquisition of subsidiaries. During the year ended 31 December 2020, the Group has acquired assets through the acquisitions of the following subsidiaries:

Acquisition date	Company acquired	Registered capital acquired	Consideration
			RMB million
7 January 2020	澄城縣華興燃氣有限公司	80.00%	6
26 August 2020	雲南新奧售電有限公司 (Note a)	51.00%	14
4 November 2020	常山新奧燃氣有限公司 (Note b)	51.00%	2

Notes:

a. The Group acquired the remaining 51.00% of the equity interest of 雲南新奧售電有限公司, which then became a 100% owned subsidiary of the Group from a joint venture.

b. The Group acquired the remaining 51.00% of the equity interest of 常山新奧燃氣有限公司, which then became a 100% owned subsidiary of the Group from a joint venture.

The transaction was accounted for as acquisition of asset through acquisitions of subsidiaries and the fair value of the consideration allocated to the assets and liabilities acquired are as follows:

	RMB million
Non-current assets	
Property, plant and equipment	13
Intangible assets	11
Current assets	
Trade and other receivables	26
Cash and cash equivalents	5
Current liabilities	
Trade and other payables	(15)
Contract liabilities	(1)
Net assets acquired	39
Less: Non-controlling interests	(2)
Less: Fair value of previously held interest	(15)
Total consideration	22

	RMB million
Total consideration satisfied by:	
Cash	21
Consideration payables	1
	22
Net cash outflow arising acquisition:	
Cash consideration paid	(21)
Less: Deposit paid in the prior year	14
Less: Cash and cash equivalents acquired	5
	(2)

49. DISPOSAL OF SUBSIDIARIES

a. Disposal of subsidiaries during the year ended 31 December 2021

Disposal date	Company disposed	Registered capital disposed	Consideration RMB million
5 February 2021	東光縣新奧燃氣有限公司	100.00%	1
15 March 2021	滕州新奧能源發展有限公司	100.00%	14
8 July 2021	淮安新奧車用燃氣有限公司	100.00%	10
15 July 2021	衡水新奧車用燃氣有限公司	80.00%	1
6 August 2021	湛江新奧燃氣高壓管網有限公司	100.00%	109
8 September 2021	上海大眾九環化工儲運經營有限公司	60.00%	7
30 December 2021	廣州裕淮貿易有限公司	100.00%	54

	RMB million
Non-current assets	
Property, plant and equipment	**169**
Right-of-use assets	**35**
Current assets	
Inventories	**19**
Trade and other receivables	**33**
Cash and cash equivalents	**12**
Current liabilities	
Trade and other payables	**(46)**
Lease liabilities	**(4)**
Non-current liabilities	
Bank and other loans – due after one year	**(60)**
Net assets	**158**
Less: Non-controlling interests	**(4)**
Net assets attributable to the owners of the Company disposed of	**154**

The loss on disposal of subsidiaries recognised in profit or loss was calculated as below:

	RMB million
Fair value of interest in a joint venture	**109**
Consideration received	**32**
Consideration receivable	**55**
Less: Goodwill derecognised	**(1)**
Less: Net assets attributable to owners of the Company derecognised	**(154)**
Gain on disposal of subsidiaries	**41**
Net cash inflow arising from the disposal:	
Cash consideration received	**32**
Less: Deposit received in the prior year	**(1)**
Less: Cash and bank balance disposed of	**(12)**
	19

49. DISPOSAL OF SUBSIDIARIES *(continued)*

b. Disposal of subsidiaries during the year ended 31 December 2020

Disposal date	Company disposed	Registered capital disposed	Consideration
			RMB million
30 April 2020	溫縣新奧交通清潔能源有限公司	100.00%	2
5 June 2020	東莞市新奧車用燃氣發展有限公司	55.00%	55
10 June 2020	邢台新奧車用燃氣有限公司	98.18%	13
8 September 2020	合肥新奧中汽能源發展有限公司	51.00%	20
24 September 2020	巢湖市安燃燃氣發展有限公司	100.00%	9
29 September 2020	沁陽新奧交通清潔能源有限公司	100.00%	3
15 October 2020	山東新燃供氣有限公司	70.00%	10
26 October 2020	保定新奧新能源有限公司	100.00%	1
26 October 2020	元氏縣新奧車用燃氣有限公司	100.00%	1
5 November 2020	武陟新奧交通清潔能源有限公司	100.00%	18
20 November 2020	懷仁新奧燃氣有限公司	90.00%	164
9 December 2020	安陽新奧清潔能源有限公司	100.00%	3
16 December 2020	濟源新奧交通清潔能源有限公司	100.00%	2
16 December 2020	河北新奧清潔能源有限公司	100.00%	4
31 December 2020	淄博新奧燃氣有限公司	60.00%	1

The net assets at the dates of disposal were as follow:

	RMB million
Non-current assets	
Property, plant and equipment	377
Right-of-use assets	146
Intangible assets	210
Interest in a joint venture	33
Current assets	
Inventories	15
Trade and other receivables	56
Cash and cash equivalents	31
Current liabilities	
Trade and other payables	(79)
Bank and other loans – due within one year	(7)
Contract liabilities	(18)
Lease liabilities	(9)
Non-current liabilities	
Deferred tax liabilities	(56)
Deferred income	(7)
Lease liabilities	(101)
Net assets	591
Less: Non-controlling interests	(152)
Net assets attributable to the owners of the Company disposed of	439

49. DISPOSAL OF SUBSIDIARIES *(continued)*

b. Disposal of subsidiaries during the year ended 31 December 2020 *(continued)*

The loss on disposal of subsidiaries recognised in profit or loss was calculated as below:

	RMB million
Consideration received	277
Consideration receivable	29
Consideration payables derecognised	87
Less: Goodwill derecognised	(16)
Less: Net assets attributable to the owners of the Company derecognised	(439)
Loss on disposal of subsidiaries	(62)
Net cash inflow arising from the disposal:	
Cash consideration received	277
Less: Cash and bank balance disposed of	(31)
	246

50. COMMITMENTS

a. Capital commitments

	2021 RMB million	2020 RMB million
Capital expenditure in respect of acquisition of property, plant and equipment contracted for but not provided in the consolidated financial statements	**824**	899
Capital commitments in respect of		
– investments in joint ventures	**479**	518
– investments in associates	**445**	469
– other equity investments	**2**	2

b. Other commitments

The Group has entered into medium to long-term sale and purchase agreements to acquire LNG from three international suppliers. The Group is obliged to make "take-or-pay" payment to suppliers for the quantity contracted but not delivered.

In the opinion of the Directors, such agreements are entered into and continued to be held in accordance with the Group's expected LNG purchase requirements to meet the domestic gas demands of its customers. Accordingly, these agreements qualify for own use exemption, and hence are not considered as derivative financial instruments within the scope of financial instruments standards since initial recognition.

The LNG pricing under these agreements are linked to certain oil and gas price indexes and are denominated in USD, which are common in international practice. The Directors assessed the economic characteristics and risks of the embedded derivatives and concluded that they are closely related to the economic characteristics and risks of the relevant host contracts. Accordingly, the embedded derivatives are not split from these arrangements and not separately recognised as derivative financial instruments in the consolidated financial statements.

51. OPERATING LEASING ARRANGEMENTS

The Group as lessor

The Group's investment properties are held for rental purposes. Property rental income earned during the year was RMB7 million (2020: RMB10 million). All of the properties held have committed tenants for terms ranging from one to twenty years.

Undiscounted lease payments receivable on leases are as follow:

	2021 RMB million	2020 RMB million
Within one year	**27**	16
In the second year	**14**	12
In the third year	**12**	8
In the fourth year	**7**	5
In the fifth year	**5**	4
After five years	**35**	34
	100	79

52. PLEDGE OF ASSETS

At the end of the reporting period, the Group pledged certain assets as securities for bank and other loans, bill facilities and contracts granted to the Group, associates and joint ventures as follows:

	2021 RMB million	2020 RMB million
Carrying amount of:		
Property, plant and equipment	**28**	23
Restricted bank deposits	**542**	301
Right-of-use assets	**–**	4
Bills receivable	**390**	112
Intangible assets	**99**	52

In addition to the above, the Group has also pledged its rights to receive construction and installation and gas supply fee income of certain subsidiaries in favour of banks to secure banking facilities amounting to RMB400 million (2020: RMB400 million) granted to the Group, of which RMB100 million (2020: RMB400 million) has been utilised up to 31 December 2021.

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS

a. Capital risk management

The Group manages its capital to ensure that entities in the Group will be able to continue as a going concern, to maintain the confidence of creditors, to sustain future development of the entities and to maximise the return to the equity holders of the Company. The capital structure of the Group consists of net debt (borrowings disclosed in Notes 40, 41, 42 and 43, net of cash and cash equivalents) and total equity of the Group.

The Group manages its capital base through net gearing ratio. The Directors review the capital structure on a semi-annual basis. The Group has a target of net gearing ratio below 100% and will maintain the ratio within target by issue of new debts, repayment of debts, issue of new shares, repurchase of shares or payment of dividends. The Group's overall strategy remains unchanged from prior year. The Group repurchased certain senior notes in order to better manage its net gearing ratio. The net gearing ratio at the end of the reporting period was as follows:

	2021 RMB million	2020 RMB million
Bank and other loans	9,468	6,668
Corporate bonds	2,099	2,097
Senior notes	4,722	7,207
Unsecured bonds	3,601	3,712
	19,890	19,684
Less: Cash and cash equivalents	(8,684)	(8,630)
Net debt	11,206	11,054
Total equity	42,150	36,172

	2021 %	2020 %
Net debt to total equity ratio	26.6	30.6

b. Categories of financial instruments

The carrying amounts of each of the following categories of financial assets and financial liabilities at the end of the reporting period are set out as follows:

	2021 RMB million	2020 RMB million
Financial assets		
Financial assets at FVTPL	4,558	4,830
Derivative financial instruments	2,531	628
Equity instruments at FVTOCI	266	211
Financial assets at amortised cost	19,350	17,094
Financial liabilities		
Derivative financial instruments	1,762	927
Financial liabilities at amortised cost	33,239	30,791
Financial guarantee contracts	21	–

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies

The Group's activities expose it to a variety of financial risks: market risk (including currency risk, interest rate risks, and price risk), credit risk, liquidity risk and risks arising from the interest rate benchmark reform.

The Group's treasury department identifies, evaluates and monitors financial risks in close co-operation with the Group's operating units, focusing on the unpredictability of financial markets. The Group seeks to minimise the effects of financial risks by using different derivative financial instruments to manage these exposures. All derivative financial instruments are used for the financial risk management and not for speculative purposes.

The Board provides written principal for overall risk management. The Group has written policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, the use of derivative financial instruments and non-derivatives financial instruments and cash management. Exposure to foreign exchange rates, interest rates and prices risk movements are regularly reviewed and positions are amended in compliance with internal guidelines and limits.

The Group treasury department reports regularly or on demand basis to the Financial Risk Management Working Group, an independent body that monitor risks and policies implemented to mitigate risk exposures.

Foreign currency risk management

The functional currency of the Group's most entities is RMB in which most of the transactions are denominated. However, certain loans, senior notes and unsecured bonds issued by the Group, certain bank balances kept by the Group are denominated in foreign currencies.

To mitigate the foreign exchange exposure, the Group entered into various Foreign Currency Derivatives with certain financial institutions during the current and prior years as set out in Note 24. The management of the Group monitors foreign exchange exposure and designates all derivatives as hedging instruments for cash flow hedges. The foreign exchange forward contracts must be in the same currency as the hedged item. On this basis, the Group has entered into such forward contracts in relation to the foreign currency denominated monetary assets and monetary liabilities amounting to USD550 million (2020: USD750 million), equivalent to RMB3,507 million (2020: RMB4,894 million). It is the Group's policy to negotiate the terms of the hedge derivatives, to the extent possible, to match or approximate the terms of the hedged items to maximise hedge effectiveness (see Notes 24 and 44 for details).

The carrying amounts of the Group's foreign currency denominated monetary assets and monetary liabilities at the end of the reporting period are as follows:

	Assets		**Liabilities**	
	2021	2020	**2021**	2020
	RMB million	RMB million	**RMB million**	RMB million
Foreign currency:				
USD	**1,024**	578	**11,995**	12,549
HK$	**43**	101	**–**	–

The following table details the Group's sensitivity to a reasonable possible change in exchange rate of each foreign currency against RMB, while all other variables are held constant. The sensitivity adjusts their translations at the end of the reporting period for a change in foreign currency exchange rate as set out below:

	USD		**HK$**	
	2021	2020	**2021**	2020
	%	%	**%**	%
Possible change in foreign exchange rate	**5**	5	**5**	5

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Foreign currency risk management (continued)

	USD		HK$	
	2021	2020	**2021**	2020
	RMB million	RMB million	**RMB million**	RMB million
(Decrease) increase in profit after taxation for the year:				
– if RMB weakens against foreign currencies	**(460)**	(431)	**2**	5
– if RMB strengthens against foreign currencies	**477**	457	**(2)**	(5)
(Decrease) increase in other comprehensive income				
– if RMB weakens against foreign currencies	**–**	(2)	**–**	–
– if RMB strengthens against foreign currencies	**(4)**	(4)	**–**	–

In the opinion of the Directors, the sensitivity analysis is unrepresentative of the inherent foreign exchange risk as the year end exposure and does not reflect the exposure during the year, and some of the Group's foreign currency exposure has been reduced due to the offsetting effect of the Foreign Currency Derivatives.

Hedges of foreign currency risk

The Group designates cross currency swaps and foreign currency options as hedging instruments in cash flow hedges and does not separate the forward and spot element of a currency forward contract but instead designates the currency forward contract in its entirety in a hedging relationship. Correspondingly, the hedged item is measured based on the forward exchange rate. Foreign currency basis spread of financial instruments may be separated and excluded from the designated hedging instruments. As at 31 December 2021 and 2020, the notional profile of USD550 million and USD750 million, with maturity of less than 1 year and less than 5 years, respectively.

The Group applies a hedge ratio of 1:1 and determines the existence of an economic relationship between the foreign currency borrowings and Foreign Currency Derivatives based on their currency types, currency amounts and the timing of their respective cash flows.

The following table summarises the effect of the hedge accounting on financial position and performance of the Group for the reporting period:

	Average exchange rate	Notional value: USD USD million	Notional value: RMB RMB million	Carrying amount of the hedging instruments RMB million	Favourable/(Unfavourable) changes in fair value used for measuring ineffectiveness: Cumulative hedging instruments RMB million	Cumulative hedging items RMB million	Hedging losses recognised in cash flow hedge reserve RMB million	Hedge ineffectiveness recognised in profit or loss RMB million	Cost of hedging recognised in OCI RMB million	From cash flow hedge reserve due to hedged item affecting profit or loss RMB million	Amount reclassified from cost of hedging reserve to profit or loss RMB million	Line item in profit or loss in which hedge ineffectiveness is included	Line items in profit or loss affected by the reclassification	Balance in cash flow hedge reserve for continuing hedge RMB million
Cash flow hedges														
Cross currency swaps	6.64	250	1,660	(81)	(215)	220	94	(2)	(18)	(68)	16	Other gains and losses	Other gains	(2)
Foreign currency options*	6.73	300	2,019	(16)	(68)	14	4	12	16	(7)	(8)		and losses & Finance costs	3

*Note: The foreign currency options contain an average capped exchange rate at 7.26.

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Interest rate risk management

The Group does not have any specific interest rate hedging policy except that the Group would regularly review the market interest rates to capture the potential opportunities to reduce the cost of borrowings. Accordingly, the Group will enter into interest rate swap arrangement to mitigate the interest rate risk if appropriate.

Fair value interest rate risk

The Group's fair value interest rate risk relates primarily to non-current amounts due from associates and joint ventures, amounts due to associates and joint ventures, and fixed-rate bank and other loans, corporate bonds, senior notes and unsecured bonds (see Notes 29, 30, 40, 41, 42 and 43 for details of these amounts, loans, bonds and notes respectively).

The fair value interest rate risk on bank balance and deposits is insignificant as the terms of the fixed deposits are relatively short.

Cash flow interest rate risk

The Group's cash flow interest rate risk relates primarily to floating-rate bank loans (see Note 40 for details of these amounts). The Directors consider that the Group is not exposed to significant cash flow interest rate risk relating to bank deposits, which are primarily short-term in nature and basically carried at stable market interest rates.

A fundamental reform of major interest rate benchmarks is being undertaken globally, including the replacement of some interbank offered rates ("IBORs") with alternative nearly risk-free rates. Details of the impacts on the Group's risk management strategy arising from the interest rate benchmark reform and the progress towards implementation of alternative benchmark interest rates are set out under "Interest rate benchmark reform" in this note.

The Group's sensitivity to cash flow interest rate risk has been determined based on the exposure to interest rates for the floating-rate bank loans. The analysis is prepared assuming that the amount of liabilities outstanding at the end of the reporting period was outstanding for the whole year and excluding the interest expected to be capitalised.

	2021 **%**	2020 %
Possible change in interest rate	**50 basis points**	50 basis points

	2021 **RMB million**	2020 RMB million
(Decrease) increase in profit after taxation for the year		
– as a result of increase in interest rate	**(6)**	(9)
– as a result of decrease in interest rate	**6**	9

The possible change in the interest rate does not affect the equity of the Group in both years.

Commodity price risk

In the normal course of business, the Group imported LNG to satisfy the demands of downstream customers under long-term "take-or-pay" purchase agreements as set out in Note 50. Accordingly, the Group is exposed to fluctuations in prevalent crude oil/gas market prices, which are used for the determination of the price of LNG. This exposure is managed with the use of derivative financial instruments by the Group. The profit or loss generated from these derivatives is dependent on the combination of contracts which generate payoffs in any particular range of commodity prices.

Derivative financial instruments are used solely for financial risk management purposes and the Group does not hold or issue derivative financial statements for speculation purposes. The management of the Group monitors commodity price risk exposure regularly and designates certain derivatives as cash flow hedge of highly probable purchases.

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Commodity price risk (continued)

The following table summarises the commodity options designated as cash flow hedges outstanding at the end of the reporting period, which expires through December 2023, as well as the effect on financial position and performance of the Group for the reporting period. Commodity options are presented in the line 'Derivative financial instruments' within the consolidated statement of financial position (see Note 24 for further details):

					Favourable/(Unfavourable) changes in fair value used for measuring ineffectiveness					
	Strike price range	Remaining quantity	Carrying amount of the hedging instruments	Cumulative hedging instruments	Cumulative hedged items	Hedging losses recognised in cash flow hedge reserve	Hedge ineffectiveness recognised in profit or loss	Cost of hedging recognised in OCI	Line item in profit or loss in which hedge ineffectiveness is included	Amount from cash flow hedge reserve transferred to inventory
		bbl	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million		RMB million
Cash flow hedges										
Collar for Brent Oil	47.9 – 69	1,320,000	91	28	(5)	(139)	(14)	(56)	Other gains and losses	29

A increase of 20% (2020: decrease of 10%) in relevant commodity prices at the end of the year ended 31 December 2021 would have affected profit or loss for the years by amount shown below. As a result of the expected volatile oil market in 2022, the management adjusted the sensitivity rate from decrease of 10% to increase of 20% for the purpose of assessing commodity price risk. These amounts represent the change in fair value of commodity derivative contracts at the reporting date.

	2021 **RMB million**	2020 RMB million
Increase (decrease) in profit before taxation for the year	**56**	(40)
Increase (decrease) in other comprehensive income	**96**	(35)

Other price risk

The Group is mainly exposed to price risk through equity instruments measured at FVTPL and FVTOCI. The Directors do not implement specific measurements to mitigate the price risk.

If the market price of equity instruments measured at FVTPL and FVTOCI increased or decreased by 5%, the Group would recognise additional gains or losses of RMB220 million (2020: RMB238 million) and the OCI change of RMB13 million (2020:RMB11 million), respectively.

Credit risk and impairment assessment

Other than those financial assets whose carrying amounts best represent the maximum exposure to credit risk, the Group's maximum exposure to credit risk which will cause a financial loss to the Group arising from the amount of financial guarantees provided by the Group. The Group does not hold any collateral or other credit enhancements to cover its credit risks associated with its financial assets, except that the credit risks associated with loan receivables is mitigated because they are secured over equipment, receivables and certain entities' equities and settlement of certain trade receivables are backed by bills issued by reputable financial institutions.

Trade receivables and contract assets arising from contracts with customers

In order to minimise the credit risk, the management of the Group has delegated a team responsible for determination of credit limits and credit approvals. Other monitoring procedures are in place to ensure that follow-up action is taken to recover overdue debts. In addition, the Group performs impairment assessment under ECL model upon application of HKFRS 9 on trade balances based on individually assessment for significant balances and on provision matrix for the remaining.

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Credit risk and impairment assessment (continued)

Other receivables, amounts due from associates/joint ventures/related companies and cash and cash equivalents

In order to minimise the credit risk, the Group performs impairment assessment under ECL model upon application of HKFRS 9 on other receivables and on amounts due from associates/joint ventures/related companies individually. Other monitoring procedures are in place to ensure that follow-up action is taken to recover overdue debts.

The credit risks on cash and cash equivalents are limited because the counterparties are reputable international and PRC banks and other financial institutions with high credit ratings assigned by international credit-rating agencies regulated by the PRC government.

Other than concentration of credit risk on liquid funds which are deposited with several banks with high credit ratings, the Group does not have any other significant concentration of credit risk.

Financial guarantee contracts

At the end of the reporting period, the management has performed impairment assessment, and concluded that there has been no significant increase in credit risk since initial recognition of the financial guarantee contracts. Accordingly, the loss allowance for financial guarantee contracts issued by the Group is measured at an amount equal to 12-month ECL. No loss allowance was recognised in the profit or loss. Details of the financial guarantee contracts are set out in Note 55.

The tables below detail the credit risk exposures of the Group's financial assets, which are subject to ECL assessment:

	Notes	External credit rating	Internal credit rating	12-month or lifetime ECL	Gross carrying amount	
					2021	2020
					RMB million	RMB million
Financial assets at amortised cost						
Amounts due from associates*	29	N/A	(Note a)	12-month ECL	**590**	394
				Lifetime ECL (not credit impaired)	**599**	540
					1,189	934
Amounts due from joint ventures*	30	N/A	(Note a)	12-month ECL	**1,582**	1,400
				Lifetime ECL (not credit impaired)	**509**	746
					2,091	2,146
Amounts due from related companies*	31	N/A	(Note a)	12-month ECL	**74**	142
				Lifetime ECL (not credit impaired)	**220**	213
					294	355
Restricted bank deposits	34	AA	N/A	12-month ECL	**985**	766
Cash and cash equivalents	34	AA+	N/A	12-month ECL	**8,684**	8,630
Other receivables	23	N/A	(Note a)	12-month ECL	**664**	702
Loan receivables	23	N/A	(Note a)	12-month ECL	**566**	379
Trade receivables	23	N/A	(Note b)	Lifetime ECL (provision matrix)	**3,857**	2,350
				Lifetime ECL (not credit impaired)	**28**	30
				Credit-impaired	**187**	139
					4,072	2,519
Bills receivable	23	N/A	(Note a)	12-month ECL	**1,354**	1,441
Contract assets	28	N/A	(Note b)	Lifetime ECL (provision matrix)	**796**	751
				Credit-impaired	**3**	1
					799	752

* The gross carrying amounts disclosed above include both trade nature receivables and non-trade nature receivables. All trade nature receivables are applying lifetime ECL.

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Credit risk and impairment assessment (continued)

Notes:

a. For the purposes of internal credit risk management, the Group uses past due information to assess whether credit risk has increased significantly since initial recognition.

2021

	Past due RMB million	Not past due/ No fixed terms of repayment RMB million	Total RMB million
Amounts due from associates	–	1,189	1,189
Amounts due from joint ventures	–	2,091	2,091
Amounts due from related companies	–	294	294
Bills receivable	3	1,351	1,354
Other receivables	–	664	664
Loan receivables	–	566	566

2020

	Past due RMB million	Not past due/ No fixed terms of repayment RMB million	Total RMB million
Amounts due from associates	–	934	934
Amounts due from joint ventures	–	2,146	2,146
Amounts due from related companies	–	355	355
Bills receivable	–	1,441	1,441
Other receivables	–	702	702
Loan receivables	–	379	379

b. For trade receivables and contract assets, the Group has applied the simplified approach in HKFRS 9 to measure the loss allowance at lifetime ECL. Except for debtors with significant outstanding balances, the Group determines the ECL on these items by using a provision matrix, grouped by past due status.

As part of the Group's credit risk management, the Group uses debtors' aging to assess the impairment for its customers in relation to its operation because these customers consist of a large number of small customers with common risk characteristics that are representative of the customers' abilities to pay all amounts due in accordance with the contractual terms. The following table provides information about the exposure to credit risk for trade receivables and contract assets which are assessed based on provision matrix as at 31 December 2021 within lifetime ECL. A full provision was made for debtors that were credit-impaired.

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Credit risk and impairment assessment (continued)

Gross carrying amount

	2021		2020	
	Average loss rate	**Trade receivables and contract assets RMB million**	Average loss rate	Trade receivables and contract assets RMB million
0 to 3 months	**0.42%**	**3,333**	0.40%	2,012
4 to 6 months	**8.11%**	**421**	7.06%	414
7 to 9 months	**9.97%**	**281**	9.30%	237
10 to 12 months	**12.85%**	**155**	12.11%	42
1 to 2 years	**29.62%**	**329**	28.59%	297
2 to 3 years	**41.85%**	**134**	39.44%	99
		4,653		3,101

The estimated loss rates are estimated based on historical observed default rates over the expected life of the debtors and are adjusted for forward-looking information that is available without undue cost or effort. The grouping is regularly reviewed by management to ensure relevant information about specific debtors is updated.

As at 31 December 2021, the Group provided RMB229 million (2020: RMB170 million) and RMB21 million (2020: RMB19 million) impairment allowance for trade receivables and contract assets respectively, based on the provision matrix. Impairment allowance of RMB187 million (2020: RMB139 million) and RMB3 million (2020: RMB1 million) were made for trade receivables and contract assets respectively, based on debtors that were credit-impaired.

The following table shows reconciliation of loss allowances that have been recognised for trade receivables, contract assets, bills receivable, other receivables, amounts due from associates, joint ventures, related companies.

	12-month ECL RMB million	**Lifetime ECL (not credit-impaired)** RMB million	**Lifetime ECL (credit-impaired)** RMB million	**Total** RMB million
As at 1 January 2020	20	23	278	321
Changes due to financial instruments recognised				
– Transfer to credit-impaired	(2)	(26)	28	–
– Impairment losses recognised	62	100	32	194
– Impairment losses reversed	(28)	(36)	(1)	(65)
As at 31 December 2020	52	61	337	450
Changes due to financial instruments recognised				
– Transfer to credit-impaired	(2)	(41)	43	–
– Impairment losses recognised	74	100	51	225
– Impairment losses reversed	(58)	(43)	(1)	(102)
As at 31 December 2021	66	77	430	573

The Group writes off a trade receivable when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, e.g. when the debtor has been placed under liquidation or has entered into bankruptcy proceedings, whichever occurs earlier.

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Liquidity risk management

To manage the liquidity risk, the Group takes into account the continuity and availability of financial resources to the Group, including the cash flows generated from its principal operations, availability of banking facilities, the level of cash and cash equivalents and capital expansion plans as to meet its expected future working capital requirements and mitigate the fluctuation in cash flows level.

The Group also relies on various bonds and bank and other loans as a significant source of liquidity, detail of which are set out in Notes 40, 41, 42 and 43. The Group reviews the utilisation of borrowings and ensures the compliance of loan covenants regularly.

The following table details the Group's remaining contractual maturity for its financial liabilities based on the agreed repayment terms. The table has been drawn up based on the undiscounted cash flows of financial liabilities based on the earliest date on which the Group can be required to pay. The table includes both interest and principal cash flows. To the extent that interest flows are carried at floating rate, the undiscounted amount is derived from interest rate existed at the end of the reporting period.

	Weighted average interest rate %	Repayable on demand or within one year RMB million	Within the second year RMB million	Within the third year RMB million	Within the fourth year RMB million	Within the fifth year RMB million	Over five years RMB million	Total undiscounted cash flow RMB million	Carrying amount at end of the reporting period RMB million
At 31 December 2021									
Non-derivative financial liabilities									
Trade and other payables		10,172	–	–	–	–	–	10,172	10,172
Amounts due to associates	1.35	454	8	222	–	–	–	684	639
Amounts due to joint ventures	1.02	1,294	338	–	–	–	–	1,632	1,574
Amounts due to related companies		964	–	–	–	–	–	964	964
Bank and other loans									
– fixed rate	2.34	6,196	646	558	32	32	620	8,084	7,748
– variable rate	4.02	115	125	743	116	105	817	2,021	1,720
Lease liabilities	4.88	92	73	61	49	32	123	430	355
Corporate bonds	4.13	2,134	–	–	–	–	–	2,134	2,099
Senior notes	2.63	126	126	126	126	126	5,252	5,882	4,722
Unsecured bonds	3.25	3,673	–	–	–	–	–	3,673	3,601
Financial guarantee contracts		520	–	–	–	–	–	520	520
		25,740	1,316	1,710	323	295	6,812	36,196	34,114
Derivatives									
– inflow		(5,940)	(309)	(6)	–	–	–	(6,255)	
– outflow		5,442	74	2	–	–	–	5,518	

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Liquidity risk management (continued)

	Weighted average interest rate %	Repayable on demand or within one year RMB million	Within the second year RMB million	Within the third year RMB million	Within the fourth year RMB million	Within the fifth year RMB million	Over five years RMB million	Total undiscounted cash flow RMB million	Carrying amount at end of the reporting period RMB million
At 31 December 2020									
Non-derivative financial liabilities									
Trade and other payables		8,302	–	–	–	–	–	8,302	8,302
Amounts due to associates	0.64	320	–	–	–	–	–	320	319
Amounts due to joint ventures	0.11	977	585	–	–	–	–	1,562	1,561
Amounts due to related companies		925	–	–	–	–	–	925	925
Bank and other loans									
– fixed rate	3.28	3,678	49	529	55	12	582	4,905	4,715
– variable rate	3.16	1,043	91	41	251	36	768	2,230	1,953
Lease liabilities	5.02	109	81	60	48	37	154	489	399
Corporate bonds	4.13	91	2,131	–	–	–	–	2,222	2,097
Senior notes	3.74	2,573	128	128	128	128	5,504	8,589	7,207
Unsecured bonds	3.25	121	3,792	–	–	–	–	3,913	3,712
Financial guarantee contracts		775	–	–	–	–	–	775	–
		18,914	6,857	758	482	213	7,008	34,232	31,190
Derivatives									
– inflow		(2,114)	(3,984)	(40)	–	–	–	(6,138)	
– outflow		2,285	4,113	73	–	–	–	6,471	

The amounts included above for financial guarantee contracts are the maximum amounts the Group could be required to settle under the arrangement for the full guaranteed amount if that amount is claimed by the counterparty to the guarantees. Based on the expectations at the end of the reporting period, the Group considers that it is more likely than not that no amount will be payable under the arrangement. However, these estimates are subject to change depending on the probability of the counterparties claiming under the guarantees in case that the financial receivables held by the counterparties suffer credit losses.

The amounts included above for variable interest rate instruments for non-derivative financial liabilities is subject to change if changes in variable interest rates differ to those estimates of interest rates determined at the end of the reporting period.

The contractual expiry periods of financial guarantee contracts at the end of the reporting period are as follows:

	2021		2020	
	RMB million	**Expiry period**	RMB million	Expiry period
Guarantees issued to banks to secure loan facilities granted to an associate and joint ventures	**520**	**2029**	775	2029

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Interest rate benchmark reform

As listed in Note 40, several of the Group's LIBOR bank loans may be subject to the interest rate benchmark reform. The Group is closely monitoring the market and managing the transition to new benchmark interest rates, including announcements made by the relevant IBOR regulators.

LIBOR

The Financial Conduct Authority has confirmed all LIBOR settings will either cease to be provided by any administrator or no longer be representative:

- immediately after 31 December 2021, in the case of all sterling, euro, Swiss franc and Japanese yen settings, and the 1-week and 2-month US dollar settings; and
- immediately after 30 June 2023, in the case of the remaining US dollar settings.

(i) Risks arising from the interest rate benchmark reform

The following are the risks for the Group that may arise from the transition:

Interest rate related risks

For contracts which have not been transitioned to the relevant alternative benchmark rates and without detailed fallback clauses, if the bilateral negotiations with the Group's counterparties are not successfully concluded before the cessation of LIBORs, there are significant uncertainties with regard to the interest rate that would apply. This gives rise to additional interest rate risk that was not anticipated when the contracts were entered into.

There are fundamental differences between IBORs and the various alternative benchmark rates. IBORs are forward looking term rates published for a period (e.g. 3 months) at the beginning of that period and include an inter-bank credit spread, whereas alternative benchmark rates are typically risk-free overnight rates published at the end of the overnight period with no embedded credit spread. These differences will result in additional uncertainty regarding floating rate interest payments.

Liquidity risk

The additional uncertainty on various alternative rates which are typically published on overnight basis will require additional liquidity management. The Group's liquidity risk management policy has been updated to ensure sufficient liquid resources to accommodate unexpected increases in overnight rates.

Litigation risk

If no agreement is reached to implement the interest rate benchmark reform on contracts which have not been transitioned to the relevant alternative benchmark rates (e.g. arising from differing interpretation of existing fallback terms), there is a risk of prolonged disputes with counterparties which could give rise to additional legal and other costs. The Group is working closely with all counterparties to avoid this from occurring.

Interest rate basis risk

Interest rate basis risk may arise if a non-derivative instrument and the derivative instrument held to manage the interest risk on the non-derivative instrument transition to alternative benchmark rates at different times. This risk may also arise where back-to-back derivatives transition at different times. The Group will monitor this risk against its risk management policy which has been updated to allow for temporary mismatches of up to 12 months and transact additional basis interest rate swaps if required.

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

d. Fair value measurement of financial instruments

(i) Fair value of the Group's financial assets and financial liabilities that are measured at fair value on a recurring basis

The Group measures its following financial instruments at fair value at the end of the reporting period on a recurring basis:

	Fair value as at 31 December		Fair value hierarchy	Valuation technique and key input
	2021 RMB million	2020 RMB million		
Financial assets				
Derivative financial instruments	**2,531**	628	Level 2	Discounted cash flow for swaps Present value of estimated future cash flows are based on forward rates and contract rates, discounted at a rate that reflects the credit risk of the relevant counterparty or own credit risk, when applicable Black-Scholes Model for options Fair value estimated based on strike price, commodity price, time to expiration, volatility and risk-free interest rate
Listed equity securities, equity interest in Shanghai Utilities	**181**	244	Level 1	Fair values are derived from quoted bid prices in an active market
Unlisted wealth management products	**152**	70	Level 3	Discounted cash flow Future cash flows are estimated based on the recoverable amount expected, discounted at a rate that reflects the credit risk of the counterparty
1.13% equity interest in Sinopec Marketing	**4,170**	4,170	Level 3	Estimated based on the P/B ratio of comparable listed companies and a liquidity discount rate
Other unlisted equity securities – FVTPL	**55**	346	Level 3	Fair value are derived from price multiples of similar assets that have been traded in the market
Unlisted equity securities – FVTOCI	**153**	149	Level 3	Fair values are derived from the fair value of the underlying assets and liabilities held by the investee
Listed equity securities – FVTOCI	**113**	62	Level 1	Fair values are derived from quoted bid prices in an active market
Financial liabilities				
Derivative financial instruments	**1,762**	927	Level 2	Discounted cash flow for swaps Present value of estimated future cash flows are based on forward rates and contract rates, discounted at a rate that reflects the credit risk of the relevant counterparty or own credit risk, when applicable Black-Scholes Model for options Fair value estimated based on strike price, commodity price, time to expiration, volatility and risk-free interest rate

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

d. Fair value measurement of financial instruments *(continued)*

(i) Fair value of the Group's financial assets and financial liabilities that are measured at fair value on a recurring basis (continued)

The Group's 1.13% equity interest in Sinopec Marketing which is classified as financial assets at FVTPL under Level 3 hierarchy amounted to RMB4,170 million as at 31 December 2021 under HKFRS 9. The significant unobservable input is the liquidity discount rate. The higher liquidity discount rate, the lower fair value of the financial assets at fair value will be. A 5% increase/decrease in the liquidity discount rate, holding all other variables constant, the fair value of the investments would decrease/increase by RMB26 million as at 31 December 2021.

During the year ended 31 December 2021, additions and reductions to investment costs of unlisted wealth management products amounted to RMB152 million and RMB70 million, respectively. No fair value change on the said investments were noted during the year.

During the year ended 31 December 2021, reductions and disposal on investment costs of other unlisted equity securities – FVTPL amounted to RMB23 million and RMB287 million, respectively. Fair value change of RMB19 million on the said investments were noted.

During the year ended 31 December 2021, additions to investment costs of unlisted equity securities – FVTOCI amounted to RMB2 million. Fair value change of RMB2 million on the said investments were noted.

(ii) Fair value of the Group's financial assets and financial liabilities that are not measured at fair value on a recurring basis

Except as detailed in the following table, the Directors consider that the carrying amounts of financial liabilities recorded at amortised cost in the consolidated statement of financial position approximate their fair values:

	2021		2020	
	Carrying amount RMB million	**Fair value RMB million**	Carrying amount RMB million	Fair value RMB million
Fixed-rate bank and other loans	**7,748**	**7,505**	4,715	4,518
Senior notes	**4,722**	**4,877**	7,207	7,345
Unsecured bonds	**3,601**	**3,724**	3,712	3,823
Corporate bonds	**2,099**	**2,115**	2,097	2,115

In the above table, other than the fair values of bank and other loans disclosed which are under the fair value hierarchy of Level 3, the rest of the fair values disclosed are under the fair value hierarchy of Level 2. The fair values of the senior notes and unsecured bonds are derived from the quoted prices in an over-the-counter market, and the fair values of corporate bonds are derived from the inactive quoted prices in the Shanghai Stock Exchange. The fair values of the rest of the financial liabilities at amortised cost are derived from discount cash flow technique by reference to the market interest rate of the loans with comparable maturity and credit risk of the respective group entities at the end of the reporting period.

54. RECONCILIATION OF LIABILITIES ARISING FROM FINANCING ACTIVITIES

The table below details changes in the Group's liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flows were, or future cash flows will be classified in the consolidated statement of cash flows as cash flows from financing activities.

	Bank and other loans RMB million (Note 40)	**Lease liabilities RMB million (Note 35)**	**Corporate bonds RMB million (Note 41)**	**Unsecured bonds RMB million (Note 43)**	**Senior notes RMB million (Note 42)**	**Others RMB million (Note)**	**Total RMB million**
At 1 January 2021	**6,668**	**399**	**2,097**	**3,712**	**7,207**	**1,251**	**21,334**
Financing cash flows	**2,910**	**(98)**	**–**	**(34)**	**(2,372)**	**(3,344)**	**(2,938)**
Acquisition of subsidiaries	**5**	**–**	**–**	**–**	**–**	**–**	**5**
Loss on repurchase of unsecured bonds	**–**	**–**	**–**	**1**	**–**	**–**	**1**
Disposal of subsidiaries	**(60)**	**(4)**	**–**	**–**	**–**	**–**	**(64)**
Disposal of lease liabilities	**–**	**(34)**	**–**	**–**	**–**	**–**	**(34)**
Foreign exchange translation	**(55)**	**–**	**–**	**(83)**	**(123)**	**58**	**(203)**
New leases entered	**–**	**92**	**–**	**–**	**–**	**–**	**92**
Dividends paid to shareholders	**–**	**–**	**–**	**–**	**–**	**2,827**	**2,827**
Interest expense	**–**	**–**	**2**	**5**	**10**	**637**	**654**
At 31 December 2021	**9,468**	**355**	**2,099**	**3,601**	**4,722**	**1,429**	**21,674**

	Bank and other loans RMB million (Note 40)	Lease liabilities RMB million (Note 35)	Corporate bonds RMB million (Note 41)	Unsecured bonds RMB million (Note 43)	Senior notes RMB million (Note 42)	Others RMB million (Note)	Total RMB million
At 1 January 2020	10,343	550	2,094	4,169	2,539	1,222	20,917
Financing cash flows	(3,645)	(107)	–	(208)	5,065	(2,663)	(1,558)
Loss on repurchase of unsecured bonds	–	–	–	9	–	–	9
Acquisition of subsidiaries	161	–	–	–	–	–	161
Disposal of subsidiaries	(7)	(110)	–	–	–	–	(117)
Foreign exchange translation	(184)	–	–	(265)	(405)	249	(605)
New leases entered	–	66	–	–	–	–	66
Dividends paid to shareholders	–	–	–	–	–	1,719	1,719
Interest expense	–	–	3	7	8	724	742
At 31 December 2020	6,668	399	2,097	3,712	7,207	1,251	21,334

Note: The amounts include the interest payables, non-trade payables due to joint ventures, associates and related companies.

55. RELATED PARTY TRANSACTIONS

Apart from the related party balances as stated in Notes 29, 30 and 31 and the equity transactions as stated in Notes 47 and 48, the Group had the following transactions with certain related parties:

	2021 RMB million	2020 RMB million
Nature of transaction		
Associates:		
– Sales of gas to	2,391	928
– Sales of materials to	132	310
– Purchase of gas from	986	384
– Purchase of equipment from	2	3
– Loan interest received from	9	14
– Provision of gas transportation services to	2	1
– Provision of gas transportation services from	48	55
– Deposit interest paid to	2	2
– Provision of supporting services to	18	7
– Provision of supporting services from	–	1
– Provision of construction and installation services to	149	5
– Loan interest paid to	4	–
– Provision of training service to	2	2
Joint ventures:		
– Sales of gas to	3,634	2,537
– Sales of materials to	512	274
– Purchase of gas from	4,230	3,419
– Provision of gas transportation services to	439	373
– Loan interest received from	20	12
– Loan interest paid to	4	3
– Provision of supporting services to	35	42
– Purchase of equipment from	4	5
– Deposit interest paid to	1	2
– Provision of construction services by	8	25
– Provision of supporting services by	–	5
– Lease of vehicles to	2	3
– Provision of technology service by	–	6
– Provision of construction and installation services to	276	12
– Provision of gas transportation services from	41	19
– Provision of training service to	4	3
– Lease of premises to	1	–

55. RELATED PARTY TRANSACTIONS *(continued)*

The following related party transactions are also connected transactions under Chapter 14A of the Listing Rules:

	2021 RMB million	2020 RMB million
Nature of transaction – continued		
Companies controlled by Mr. Wang:		
Transactions exempt from shareholders' approval:		
– Purchase of equipment from	**153**	128
– Provision of construction services by	**1,161**	974
– Provision of information technology services by	**296**	195
– Purchase of natural gas from	**2,019**	136
– Provision of LNG terminal usage services by	**728**	644
– Provision of logistic service to	**28**	–
Transactions fully exempt from shareholders' approval, annual review and all disclosure requirement:		
– Sales of gas, gasoline and diesel to	**24**	64
– Sales of materials to	**50**	59
– Provision of construction and installation services to	**30**	14
– Provision of property management services by	**16**	16
– Provision of property management services to	**2**	4
– Lease of premises to	**4**	8
– Lease of premises from	**5**	3
– Provision of supporting services by	**58**	54
– Provision of supporting services to	**67**	40
– Provision of outsourcing services by	**38**	63
– Provision of electronic business services by	**17**	9
– Provision of technology services to	**69**	63
– Provision of energy efficiency technology services to	**24**	12
– Loan interest received from	**8**	3
– Provision of training service to	**19**	22
– Disposal of equity interest to	**5**	–
– Provision of logistic service to	**68**	–

The Company issued senior notes on 17 September 2020 and unsecured bonds on 24 July 2017. The terms and conditions of these debts require Mr. Wang and any affiliate of him to retain certain percentage of shareholding over the Company, failing which the Company would be required to repay or repurchase all outstanding debts at predetermined prices.

Compensation of key management personnel

The remuneration of the Directors who are also the members of key management personnel during the years ended 31 December 2021 and 2020 was disclosed in Note 12.

Financial guarantee contracts

As at 31 December 2021, the guaranteed facilities amount utilised by an associate and the joint ventures were RMB520 million (2020: RMB775 million).

During the year ended 31 December 2021, the fair value of a financial guarantee contract of the Group is RMB23 million with a carrying amount of RMB21 million. In addition, the Directors do not consider it probable that a claim will be made against the Group under any of these guarantees.

56. PARTICULAR OF PRINCIPAL SUBSIDIARIES

Name of Company	Place of incorporation/ establishment	Issued and fully paid share capital/ registered capital	Proportion of ownership interest/voting power held by the Group 2021	2020	Principal activities
ENN Gas Investment Group Limited ("ENN Gas")	British Virgin Islands	USD1,000	**100.00%**	100.00%	Investment holding
北京新奥華鼎貿易有限公司 Beijing Xinao Huading Trading Company Limited	PRC	USD23,800,000	**100.00%**	100.00%	Retail of gas pipelines, related materials and equipment
長沙新奥燃氣有限公司 Changsha Xinao Gas Company Limited	PRC	RMB120,000,000	**55.00%**	55.00%	Investment in gas pipeline infrastructure and sales of piped gas
常州新奥燃氣發展有限公司 Changzhou Xinao Gas Development Company Limited	PRC	USD600,000	**60.00%**	60.00%	Sales of piped gas
常州新奥燃氣工程有限公司 Changzhou Xinao Gas Engineering Company Limited	PRC	USD5,000,000	**60.00%**	60.00%	Investment in gas pipeline infrastructure
泉州市燃氣有限公司 Quanzhou City Gas Company Limited	PRC	RMB450,000,000	**60.00%**	60.00%	Investment in gas pipeline infrastructure and sales of piped gas
晉江新奥燃氣有限公司 Jinjiang Xinao Gas Company Limited	PRC	RMB60,000,000	**60.00%**	60.00%	Investment in gas pipeline infrastructure and sales of piped gas
洛陽新奥華油燃氣有限公司 Luoyang Xinao Huayou Gas Company Limited	PRC	RMB160,000,000	**70.00%**	70.00%	Investment in gas pipeline infrastructure and sales of piped gas
石家莊新奥燃氣有限公司 Shijiazhuang Xinao Gas Company Limited	PRC	RMB300,000,000	**60.00%**	60.00%	Investment in gas pipeline infrastructure and sales of piped gas
肇慶新奥燃氣有限公司 Zhaoqing Xinao Gas Company Limited	PRC	RMB52,700,000	**100.00%**	100.00%	Investment in gas pipeline infrastructure and sales of piped gas
蚌埠新奥燃氣發展有限公司 Bengbu Xinao Gas Development Company Limited	PRC	USD600,000	**70.00%**	70.00%	Sales of piped gas
青島新奥新城燃氣有限公司 Qingdao Xinao Xincheng Gas Company Limited	PRC	USD839,000,000	**90.00%**	90.00%	Sales of piped gas
浙江新奥智能裝備貿易有限公司 Zhejiang Xinao Intelligent Equipment Trading Company Limited	PRC	RMB10,000,000	**100.00%**	100.00%	Retail of gas pipelines and intelligent equipments
新奥泛能網絡科技有限公司 ENN Ubiquitous Energy Network Technology Company Limited	PRC	RMB103,000,000	**100.00%**	100.00%	Solutions and operating services of integrated energy
新奥能源物流有限公司 Xinao Energy Logistics Company Limited	PRC	USD22,230,000	**100.00%**	100.00%	Transportation of oil products and gas

56. PARTICULAR OF PRINCIPAL SUBSIDIARIES *(continued)*

Name of Company	Place of incorporation/ establishment	Issued and fully paid share capital/ registered capital	Proportion of ownership interest/voting power held by the Group 2021	2020	Principal activities
新奧能源貿易有限公司 Xinao Energy Sales Company Limited	PRC	USD30,200,000	**100.00%**	100.00%	Wholesale and retail of LNG and CNG, piped gas facilities, gas equipment, appliances and others
新奧液化天然氣貿易有限公司 ENN LNG Trading Company Limited (ENN LNG Trading)	Hong Kong	HK$1,000	**100.00%**	100.00%	Sourcing and sales of LNG
新奧財務 ENN Finance	PRC	RMB2,000,000,000	**100.00%**	100.00%	Provision of financial services in accordance to the Financial License granted by the China Banking Regulatory Commission
新奧燃氣發展有限公司 Xinao Gas Development Company Limited	PRC	USD620,000,000	**100.00%**	100.00%	Sourcing of compressed pipeline gas and investment in gas pipeline infrastructure and sales of piped gas
新奧新能源工程技術有限公司 Xinao New Energy Engineering Technology Company Limited	PRC	USD7,000,000	**100.00%**	100.00%	Investment in gas pipeline infrastructure
新奧(中國) Xinao (China)*	PRC	USD231,778,124	**100.00%**	100.00%	Investment holding
廊坊新奧燃氣有限公司 Langfang Xinao Gas Company Limited	PRC	USD9,333,900	**100.00%**	100.00%	Investment in gas pipeline infrastructure and sales of piped gas
廊坊新奧智能科技有限公司 Langfang Xinao Intelligent Technology Company Limited	PRC	USD15,000,000	**100.00%**	100.00%	Retail of gas pipelines and intelligent equipments
舟山新奧能源貿易有限公司 Zhoushan Xinao LNG Trading Company Limited	PRC	RMB50,000,000	**100.00%**	100.00%	Wholesale and retail of LNG and CNG, piped gas facilities, gas equipment, appliances and others
淮安新奧燃氣有限公司 Huaian Xinao Gas Company Limited	PRC	RMB35,000,000	**100.00%**	100.00%	Investment in gas pipeline infrastructure and sales of piped gas
寧波城際能源貿易有限公司 Ningbo Chengji Energy Trading Company Limited	PRC	RMB5,000,000	**100.00%**	100.00%	Sourcing and sales of LNG

* Foreign-invested enterprise

56. PARTICULAR OF PRINCIPAL SUBSIDIARIES *(continued)*

All of the above subsidiaries, except for ENN Gas, ENN LNG Trading and Xinao (China), are indirectly held by the Company.

All of the above subsidiaries operate principally in the places of their incorporation/establishment respectively, except that ENN Gas operates principally in Hong Kong. The above table lists the subsidiaries of the Company which, in the opinion of the Directors, principally affected the results or net assets of the Group. Giving the details of other subsidiaries would, in the opinion of the Directors, result in particulars of excessive length.

None of the subsidiaries issued any debt securities as at 31 December 2021 or at any time during the year except for Xinao (China) which has issued the following debt securities.

	2021 **RMB million**	2020 RMB million
Corporate bonds	**2,099**	2,097

There were no subsidiaries that have non-controlling interests that are material to the company as at 31 December 2021.

57. STATEMENT OF FINANCIAL POSITION OF THE COMPANY

	2021 **RMB million**	2020 RMB million
Non-current Assets		
Investments in subsidiaries	**10,864**	9,664
Investment in an associate	**–**	39
Financial assets at FVTPL	**–**	287
Amounts due from a subsidiary	**3,881**	4,444
	14,745	14,434
Current Assets		
Derivative financial instruments	**–**	2
Amounts due from subsidiaries	**4,089**	3,923
Cash and cash equivalents	**219**	152
	4,308	4,077
Current Liabilities		
Other payables	**90**	131
Taxation payables	**52**	112
Amounts due to subsidiaries	**4,355**	1,377
Bank loans – due within one year	**3,672**	652
Senior notes	**–**	2,380
Derivative financial instruments	**99**	92
Unsecured bonds	**3,601**	–
Share-based payment liabilities	**24**	–
	11,893	4,744
Net Current Liabilities	**(7,585)**	(667)
Total Assets less Current Liabilities	**7,160**	13,767
Capital and Reserves		
Share capital	**117**	117
Reserves	**2,172**	3,945
Total Equity	**2,289**	4,062
Non-current Liabilities		
Bank loans – due after one year	**–**	979
Senior notes	**4,722**	4,827
Unsecured bonds	**–**	3,712
Derivative financial instruments	**–**	43
Deferred tax liabilities	**144**	144
Share-based payment liabilities	**5**	–
	4,871	9,705
	7,160	13,767

57. STATEMENT OF FINANCIAL POSITION OF THE COMPANY *(continued)*

The statement of changes in equity is as follow:

	Share capital RMB million	Treasury stocks RMB million	Share premium RMB million	Hedging reserve RMB million	Share options reserve RMB million	Retained earnings RMB million	Total RMB million
At 1 January 2020	116	(151)	2,690	–	128	883	3,666
Profit and total comprehensive income for the year	–	–	–	36	–	1,913	1,949
Recognition of share-based payment expenses (Note 45)	–	–	–	–	70	–	70
Purchase of shares under Share Award Scheme	–	(17)	–	–	–	–	(17)
Issue of ordinary shares upon exercise of share options (Notes 39 & 45)	1	–	163	–	(51)	–	113
Dividends appropriation (Note 14)	–	–	(1,719)	–	–	–	(1,719)
At 31 December 2020	117	(168)	1,134	36	147	2,796	4,062
Profit and total comprehensive income for the year	–	–	–	(32)	–	976	944
Recognition of share-based payment expenses (Note 45)	–	–	–	–	20	–	20
Issue of ordinary shares upon exercise of share options (Notes 39 & 45)	–	–	119	–	(29)	–	90
Dividends appropriation (Note 14)	–	–	–	–	–	(2,827)	(2,827)
At 31 December 2021	117	(168)	1,253	4	138	945	2,289

INDEPENDENT AUDITOR'S REPORT

Deloitte. 德勤

TO THE SHAREHOLDERS OF ENN ENERGY HOLDINGS LIMITED
(incorporated in the Cayman Islands with limited liability)

Opinion

We have audited the consolidated financial statements of ENN Energy Holdings Limited (the "Company") and its subsidiaries (collectively referred to as the "Group") set out on pages 77 to 184, which comprise the consolidated statement of financial position as at 31 December 2020, and the consolidated statement of profit or loss and other comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year then ended, and notes to the consolidated financial statements, including a summary of significant accounting policies.

In our opinion, the consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2020, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Hong Kong Financial Reporting Standards ("HKFRSs") issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA") and have been properly prepared in compliance with the disclosure requirements of the Hong Kong Companies Ordinance.

Basis for Opinion

We conducted our audit in accordance with Hong Kong Standards on Auditing ("HKSAs") issued by the HKICPA. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the HKICPA's Code of Ethics for Professional Accountants ("the Code"), and we have fulfilled our other ethical responsibilities in accordance with the Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

Key audit matter	How our audit addressed the key audit matter
Impairment assessment of goodwill allocated to integrated energy business	
We identified the impairment assessment of goodwill attributable to integrated energy business (the "Integrated Energy CGU") as a key audit matter owing to the significance of the carrying amount of this goodwill and the significant estimates made by the management in determining the recoverable amounts of the Integrated Energy CGU and relevant inputs as disclosed in Note 5. As disclosed in Note 19 to the consolidated financial statements, the carrying amount of goodwill attributable to integrated energy business amounted to RMB2,028 million as at 31 December 2020.	Our audit procedures in relation to impairment assessment of goodwill allocated to the Integrated Energy CGU included: • Evaluating management's methodology for impairment assessment of goodwill and corroborating the discount rate used based on the market information with the assistance of internal valuation expert; • Evaluating the discounted cash flows prepared by the management in deriving the recoverable amounts of the Integrated Energy CGU for the impairment assessment by checking the mathematical accuracy of discounted cash flow calculation, assessing the reasonableness of the key assumptions adopted by the management in the model with reference to the Group's historical performances and external market data, and reviewing the budget of the underlying projects approved by the management on a sample basis.

Key Audit Matters *(continued)*

Key audit matter	How our audit addressed the key audit matter
Fair value measurement of commodity derivative contracts We identified the fair value measurement of commodity derivative contracts as disclosed in Note 24 to the consolidated financial statements as a key audit matter due to the judgement and estimation required in establishing the relevant valuation techniques and inputs. As further disclosed in Notes 5 and 53 to the consolidated financial statements, changes in these factors could affect the fair values of commodity derivative contracts.	Our audit procedures in relation to the fair value measurement of commodity derivative contracts included: • Understanding the design and implementation of key controls over the valuation of commodity derivative contracts; • Testing the completeness of commodity derivative contracts by arranging confirmation to the counterparties; and • With the assistance of internal valuation expert, performing the following procedures on sample base: – evaluating the appropriateness of management's valuation methodology; – checking the relevant inputs used by the management to our independently sourced market inputs; and – comparing the valuation based on our inputs with the management's results and investigating any differences.

Other Information

The directors of the Company are responsible for the other information. The other information comprises the information included in the annual report, but does not include the consolidated financial statements and our auditor's report thereon.

Our opinion on the consolidated financial statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the consolidated financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the consolidated financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of Directors and Those Charged with Governance for the Consolidated Financial Statements

The directors of the Company are responsible for the preparation of the consolidated financial statements that give a true and fair view in accordance with HKFRSs issued by the HKICPA and the disclosure requirements of Hong Kong Companies Ordinance, and for such internal control as the directors determine is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, the directors are responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the directors either intend to liquidate the Group or to cease operations, or have no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

INDEPENDENT
AUDITOR'S REPORT

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion solely to you, as a body, in accordance with our agreed terms of engagement, and for no other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with HKSAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with HKSAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the directors.
- Conclude on the appropriateness of the directors' use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group's audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

The engagement partner on the audit resulting in the independent auditor's report is Lam Kam Chiu.

Deloitte Touche Tohmatsu
Certified Public Accountants

Hong Kong
22 March 2021

CONSOLIDATED STATEMENT OF PROFIT OR LOSS AND OTHER COMPREHENSIVE INCOME

For the year ended 31 December 2020

	Notes	**2020** **RMB million**	2019 RMB million
Revenue	6	**71,617**	70,183
Cost of sales		**(59,285)**	(58,918)
Gross profit		**12,332**	11,265
Other income	8	**952**	861
Other gains and losses	9	**282**	644
Distribution and selling expenses		**(951)**	(976)
Administrative expenses		**(3,230)**	(3,099)
Share of results of associates		**306**	326
Share of results of joint ventures		**476**	547
Finance costs	10	**(609)**	(727)
Profit before tax	11	**9,558**	8,841
Income tax expense	13	**(2,227)**	(1,980)
Profit for the year		**7,331**	6,861
Other comprehensive income			
Items that will not be reclassified to profit or loss:			
Fair value change of equity instruments at fair value through other comprehensive income ("FVTOCI")		**65**	(1)
Fair value change of properties transferred from property, plant and equipment to investment properties		**–**	3
Income tax relating to items that will not be reclassified		**(16)**	–
		49	2
Items that have been reclassified or may be reclassified subsequently to profit or loss:			
Exchange differences arising on translating foreign operations		**1**	–
Reclassification of exchange reserve to profit or loss upon deregistration of a subsidiary		**–**	3
Fair value change of derivative financial instruments under hedge accounting		**(122)**	–
Income tax relating to items that may be reclassified		**14**	–
Other comprehensive income for the year		**(58)**	5
Total comprehensive income for the year		**7,273**	6,866
Profit for the year attributable to:			
Owners of the Company		**6,278**	5,670
Non-controlling interests		**1,053**	1,191
		7,331	6,861
Total comprehensive income for the year attributable to:			
Owners of the Company		**6,220**	5,674
Non-controlling interests		**1,053**	1,192
		7,273	6,866

		RMB	RMB
Earnings per share	15		
– Basic		**5.59**	5.05
– Diluted		**5.57**	5.04

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

At 31 December 2020

	Notes	**2020** **RMB million**	2019 RMB million
Non-current Assets			
Property, plant and equipment	16	**41,861**	37,955
Right-of-use assets	17	**2,129**	2,185
Investment properties	18	**261**	268
Goodwill	19	**2,511**	2,379
Intangible assets	20	**4,446**	4,175
Interests in associates	21	**3,619**	3,308
Interests in joint ventures	22	**4,141**	3,841
Other receivables	23	**73**	48
Derivative financial instruments	24	**292**	328
Financial assets at fair value through profit or loss ("FVTPL")	25	**4,760**	4,841
Equity instruments at FVTOCI	26	**211**	123
Amounts due from associates	29	**6**	345
Amounts due from joint ventures	30	**10**	12
Deferred tax assets	32	**1,370**	1,292
Deposits paid for investments		**1**	15
Prepayment and deposits paid for acquisition of property, plant and equipment, land use rights and right of operation		**134**	169
Restricted bank deposits	34	**650**	446
		66,475	61,730
Current Assets			
Inventories	33	**1,285**	1,169
Trade and other receivables	23	**9,053**	7,492
Contract assets	28	**732**	757
Derivative financial instruments	24	**336**	345
Financial assets at FVTPL	25	**70**	16
Amounts due from associates	29	**892**	575
Amounts due from joint ventures	30	**2,106**	1,058
Amounts due from related companies	31	**348**	164
Restricted bank deposits	34	**116**	566
Cash and cash equivalents	34	**8,630**	7,373
		23,568	19,515

	Notes	2020 RMB million	2019 RMB million
Current Liabilities			
Trade and other payables	36	**8,302**	7,635
Contract liabilities	37	**14,242**	12,613
Deferred income	38	**38**	33
Amounts due to associates	29	**319**	189
Amounts due to joint ventures	30	**976**	785
Amounts due to related companies	31	**925**	1,060
Taxation payables		**971**	962
Lease liabilities	35	**89**	100
Bank and other loans – due within one year	40	**4,590**	7,495
Senior notes	42	**2,380**	–
Derivative financial instruments	24	**401**	416
		33,233	31,288
Net Current Liabilities		**(9,665)**	(11,773)
Total Assets less Current Liabilities		**56,810**	49,957
Capital and Reserves			
Share capital	39	**117**	116
Reserves		**30,444**	25,752
Equity attributable to owners of the Company		**30,561**	25,868
Non-controlling interests		**5,611**	5,152
Total Equity		**36,172**	31,020
Non-current Liabilities			
Contract liabilities	37	**3,212**	3,302
Deferred income	38	**729**	650
Amounts due to joint ventures	30	**585**	735
Lease liabilities	35	**310**	450
Bank and other loans – due after one year	40	**2,078**	2,848
Corporate bonds	41	**2,097**	2,094
Senior notes	42	**4,827**	2,539
Unsecured bonds	43	**3,712**	4,169
Derivative financial instruments	24	**526**	330
Deferred tax liabilities	32	**2,562**	1,820
		20,638	18,937
		56,810	49,957

The consolidated financial statements on pages 77 to 184 were approved and authorised for issue by the Board of Directors on 22 March 2021 and are signed on its behalf by:

Wang Yusuo
DIRECTOR

Wang Dongzhi
DIRECTOR

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2020

	Equity attributable to owners of the Company													
	Share capital RMB million (Note 39)	Treasury stocks RMB million	Share premium RMB million	Special reserve RMB million (note a)	Revaluation reserve RMB million	Share options reserve RMB million	Exchange reserve RMB million	Surplus reserve fund RMB million (note b)	Hedging reserve RMB million (Note 44)	Designated safety fund RMB million (note c)	Retained earnings RMB million	Total RMB million	Non-controlling interests RMB million	Total equity RMB million
At 1 January 2019	116	–	2,614	(92)	22	78	(3)	2,414	–	60	16,176	21,385	4,169	25,554
Profit for the year	–	–	–	–	–	–	–	–	–	–	5,670	5,670	1,191	6,861
Other comprehensive income for the year	–	–	–	–	1	–	3	–	–	–	–	4	1	5
Total comprehensive income for the year	–	–	–	–	1	–	3	–	–	–	5,670	5,674	1,192	6,866
Recognition of equity-settled share-based payment (Note 45)	–	–	–	–	–	74	–	–	–	–	–	74	–	74
Issue of ordinary shares on exercise of share options (Notes 39 & 45)	–	–	76	–	–	(24)	–	–	–	–	–	52	–	52
Purchase of shares under Share Award Scheme	–	(151)	–	–	–	–	–	–	–	–	–	(151)	–	(151)
Acquisition of subsidiaries (Notes 47 & 48)	–	–	–	–	–	–	–	–	–	–	–	–	314	314
Disposal of subsidiaries (Note 49)	–	–	–	–	–	–	–	–	–	–	–	–	(2)	(2)
Acquisition of additional interests in subsidiaries	–	–	–	10	–	–	–	–	–	–	–	10	(110)	(100)
Capital contribution from non-controlling shareholders	–	–	–	–	–	–	–	–	–	–	–	–	148	148
Dividends appropriation (Note 14)	–	–	–	–	–	–	–	–	–	–	(1,176)	(1,176)	–	(1,176)
Dividends paid to non-controlling shareholders	–	–	–	–	–	–	–	–	–	–	–	–	(559)	(559)
Transfer to surplus reserve fund (note b)	–	–	–	–	–	–	–	234	–	–	(234)	–	–	–
Transfer from designated safety fund (note c)	–	–	–	–	–	–	–	–	–	(1)	1	–	–	–
At 31 December 2019	116	(151)	2,690	(82)	23	128	–	2,648	–	59	20,437	25,868	5,152	31,020
Profit for the year	–	–	–	–	–	–	–	–	–	–	6,278	6,278	1,053	7,331
Other comprehensive income for the year	–	–	–	–	49	–	1	–	(108)	–	–	(58)	–	(58)
Total comprehensive income for the year	–	–	–	–	49	–	1	–	(108)	–	6,278	6,220	1,053	7,273
Cumulative loss transferred to initial carrying value of hedged items (Note 44)	–	–	–	–	–	–	–	–	71	–	–	71	–	71
Recognition of equity-settled share-based payment (Note 45)	–	–	–	–	–	70	–	–	–	–	–	70	–	70
Issue of ordinary shares on exercise of share options (Notes 39 & 45)	1	–	163	–	–	(51)	–	–	–	–	–	113	–	113
Purchase of shares under Share Award Scheme	–	(17)	–	–	–	–	–	–	–	–	–	(17)	–	(17)
Acquisition of subsidiaries (Notes 47 & 48)	–	–	–	–	–	–	–	–	–	–	–	–	178	178
Disposal/deregistration of subsidiaries	–	–	–	–	–	–	–	–	–	–	–	–	(161)	(161)
Acquisition of additional interests in subsidiaries	–	–	–	(45)	-	–	–	–	–	–	–	(45)	(123)	(168)
Disposal of partial interest in a subsidiary	–	–	–	–	–	–	–	–	–	–	–	–	4	4
Capital contribution from non-controlling shareholders	–	–	–	–	–	–	–	–	–	–	–	–	97	97
Dividends appropriation (Note 14)	–	–	(1,719)	–	–	–	–	–	–	–	–	(1,719)	–	(1,719)
Dividends paid to non-controlling shareholders	–	–	–	–	–	–	–	–	–	–	–	–	(589)	(589)
Transfer to surplus reserve fund (note b)	–	–	–	–	–	–	–	478	–	–	(478)	–	–	–
Transfer to designated safety fund (note c)	–	–	–	–	–	–	–	–	–	8	(8)	–	–	–
At 31 December 2020	117	(168)	1,134	(127)	72	147	1	3,126	(37)	67	26,229	30,561	5,611	36,172

Notes:

a. The balance represents the difference between the fair values of consideration paid and the carrying values of net assets attributable to the additional interests of subsidiaries acquired or disposed of with no change in control.

b. In accordance with the People's Republic of China ("PRC") regulations, the surplus reserve fund retained by subsidiaries in the PRC is non-distributable.

c. Pursuant to relevant PRC regulation, the Group is required to transfer 1.5% on revenue generated from construction and installation, transportation of gas or other dangerous chemical into a designated fund. The fund will be used for installation and repair and maintenance of safety facilities. The movement during the year represents the difference between the amount provided and the amount utilised during the year.

CONSOLIDATED STATEMENT OF CASH FLOWS

For the year ended 31 December 2020

	Notes	2020 RMB million	2019 RMB million
OPERATING ACTIVITIES			
Profit before tax		**9,558**	8,841
Adjustments for:			
Share of results of associates		**(306)**	(326)
Share of results of joint ventures		**(476)**	(547)
Exchange differences		**(553)**	194
Net loss (gain) of financial assets at FVTPL		**45**	(5)
Net gain of derivative financial instruments		**(102)**	(915)
Bargain purchase gain on acquisition of subsidiaries	47	**–**	(15)
Impairment losses on receivables and contract assets, net of reversal		**129**	44
Impairment losses on property, plant and equipment		**70**	–
Loss on disposal of property, plant and equipment		**128**	77
Gain on disposal right-of-use assets		**(18)**	(29)
Loss on disposal of subsidiaries	49	**62**	2
Gain on disposal of joint ventures		**(4)**	(3)
Loss on disposal of associates		**–**	16
Gain on remeasurement of interest in joint ventures previously held		**–**	(11)
Loss on repurchase of unsecured bonds		**9**	–
Dividends income from financial assets at FVTPL		**(73)**	(139)
Dividends income from equity instruments at FVTOCI		**(1)**	(7)
Decrease (increase) in fair value of investment properties		**7**	(6)
Share-based payment expenses		**70**	74
Depreciation of property, plant and equipment		**1,603**	1,377
Depreciation of right-of-use assets		**174**	169
Amortisation of intangible assets		**304**	238
Interest income on bank deposits and loan receivables		**(204)**	(200)
Finance costs		**609**	727
		11,031	9,556
Movements in working capital:			
(Increase) decrease in inventories		**(117)**	216
(Increase) decrease in trade and other receivables		**(1,297)**	1,631
Decrease (increase) in contract assets		**36**	(148)
Increase in contract liabilities		**1,480**	2,185
Increase in amounts due from associates		**(57)**	(128)
Increase in amounts due from joint ventures		**(84)**	(198)
(Increase) decrease in amounts due from related companies		**(49)**	55
Increase (decrease) in trade and other payables		**348**	(445)
Increase (decrease) in amounts due to joint ventures		**201**	(51)
(Decrease) increase in amounts due to associates		**(13)**	68
Increase in deferred income		**91**	138
(Decrease) increase in amounts due to related companies		**(165)**	266
Cash generated from operations		**11,405**	13,145
PRC enterprise income tax paid		**(1,709)**	(1,455)
Net cash generated from operating activities		**9,696**	11,690

CONSOLIDATED STATEMENT OF CASH FLOWS

For the year ended 31 December 2020

	Notes	2020 RMB million	2019 RMB million
INVESTING ACTIVITIES			
Dividends received from joint ventures		**405**	404
Dividends received from associates		**208**	103
Dividends received from financial assets at FVTPL		**56**	139
Dividends received from equity instruments at FVTOCI		**1**	7
Settlement of derivative financial instruments		**10**	108
Option premium paid in relation to derivative financial instruments		**(7)**	(19)
Interest received		**204**	200
Purchases of property, plant and equipment		**(5,515)**	(7,146)
Acquisition of intangible assets		**(61)**	(39)
Proceeds from disposal of property, plant and equipment		**179**	234
Purchases of wealth management products		**(10,364)**	(20,480)
Redemptions of wealth management products		**10,310**	20,530
Addition of right-of-use assets		**(80)**	(197)
Deposits paid for investments		**–**	(14)
Deposits paid for acquisition of right-of use assets		**(13)**	(18)
Deposits paid for acquisition of property, plant and equipment		**–**	(126)
Net cash outflow on acquisition of subsidiaries	47&48	**(636)**	(1,175)
Net cash inflow on disposal of subsidiaries	49	**246**	42
Proceeds from refund of financial assets at FVTPL		**36**	282
Proceeds from disposal of joint ventures		**28**	17
Proceeds from disposal of associates		**12**	26
Proceeds from disposal of right-of-use assets		**31**	119
Purchases of equity instruments at FVTOCI		**(23)**	(12)
Investments in joint ventures		**(211)**	(74)
Investments in associates		**(225)**	(109)
Addition of restricted bank deposits		**(547)**	(606)
Release of restricted bank deposits		**793**	295
Amounts advanced to third parties		**(1,421)**	(320)
Amounts repaid by third parties		**1,233**	311
Amounts advanced to associates		**(105)**	(114)
Amounts repaid by associates		**166**	195
Amounts advanced to joint ventures		**(1,097)**	(83)
Amounts repaid by joint ventures		**34**	812
Amounts advanced to related companies		**(139)**	(2)
Amounts repaid by related companies		**1**	14
Net cash used in investing activities		**(6,491)**	(6,696)

	2020 RMB million	2019 RMB million
FINANCING ACTIVITIES		
Interest paid	**(756)**	(806)
Advanced from banks and other financial institutions by ENN Finance Company Limited ("ENN Finance")	**10,830**	8,854
Amounts repaid to banks and other financial institutions by ENN Finance	**(10,830)**	(8,854)
Purchase of shares under Share Award Scheme	**(17)**	(151)
Net proceeds from ordinary shares issued on exercise of share options	**113**	52
Proceeds from issuance of corporate bonds	**–**	2,093
Proceeds from issuance of Green Senior Notes	**5,065**	–
Capital contribution from non-controlling shareholders	**97**	142
Net cash outflow on acquisition of additional interest in subsidiaries	**(154)**	(100)
Net cash inflow on disposal of partial interest in a subsidiary	**6**	–
Dividends paid to non-controlling shareholders	**(589)**	(559)
Dividends paid to shareholders	**(1,719)**	(1,176)
New bank loans raised	**9,941**	9,900
Repayment of bank loans	**(13,586)**	(10,561)
Repayment of corporate bonds	**–**	(2,500)
Repayment of unsecured bonds	**(208)**	(459)
Repayment of lease liabilities	**(107)**	(101)
Advanced from associates	**144**	3
Amounts repaid to associates	**(1)**	(233)
Advanced from joint ventures	**214**	14
Amounts repaid to joint ventures	**(374)**	(1,106)
Advanced from related companies	**33**	31
Amounts repaid to related companies	**(3)**	(30)
Net cash used in financing activities	**(1,901)**	(5,547)
Net increase (decrease) in cash and cash equivalents	**1,304**	(553)
Effect of foreign exchange rate changes	**(47)**	3
Cash and cash equivalents at the beginning of the year	**7,373**	7,923
Cash and cash equivalents at the end of the year	**8,630**	7,373

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

For the year ended 31 December 2020

1. GENERAL INFORMATION

ENN Energy Holdings Limited (the "Company") is an exempted company incorporated in the Cayman Islands under the Companies Law and its shares are listed on the Main Board of The Stock Exchange of Hong Kong Limited (the "Stock Exchange"). The addresses of its registered office and principal place of business are disclosed in the section headed "Corporate Information" of the Company's Annual Report.

The consolidated financial statements of the Company and its subsidiaries (collectively referred to the "Group") are presented in Renminbi ("RMB"), which is the same as the functional currency of the Company.

The Company is an investment holding company. The activities of its principal subsidiaries are set out in Note 56.

2. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS

In preparing the consolidated financial statements, the directors of the Company (the "Directors") have given careful consideration of the Group's net current liabilities of approximately RMB9,665 million as at 31 December 2020. A wholly-owned subsidiary of the Company has been approved by the National Development and Reform Commission on 19 January 2020 to issue green bonds amounting to RMB5,000 million. Except for the unutilised issuance quota of the green bonds, the Group has unutilised credit facilities of approximately RMB12,001 million as at 31 December 2020, which are subject to renewal within twelve months from the end of the reporting period. The Directors are therefore satisfied that the Group will be able to meet in full its financial obligations when they fall due in the foreseeable future. Accordingly, the consolidated financial statements for the year ended 31 December 2020 have been prepared on a going concern basis.

3. APPLICATION OF AMENDMENTS TO HONG KONG FINANCIAL REPORTING STANDARDS ("HKFRSs")

Amendments to HKFRSs that are mandatorily effective for the current year

In the current year, The Group has applied the "Amendments to References to the Conceptual Framework in HKFRS Standards" and the following amendments to HKFRSs issued by the Hong Kong Institute of Certified Public Accountants ("HKICPA") for the first time, which are mandatorily effective for the annual period beginning on or after 1 January 2020 for the preparation of the consolidated financial statements:

Amendments to HKAS 1 and HKAS 8	Definition of Material
Amendments to HKFRS 3	Definition of a Business
Amendments to HKFRS 9, HKAS 39 and HKFRS 7	Interest Rate Benchmark Reform

The application of the "Amendments to References to the Conceptual Framework in HKFRS Standards" and amendments to HKFRSs in the current year had no material impact on the Group's financial positions and performance for the current and prior years and/or on the disclosures set out in these consolidated financial statements.

New and Amendments HKFRSs in issue but not yet effective

The Group has not early applied the following new and amendments to HKFRSs that have been issued but are not yet effective:

HKFRS 17	Insurance Contracts and the related Amendments[4]
Amendment to HKFRS 16	Covid-19-Related Rent Concessions[1]
Amendments to HKFRS 3	Reference to the Conceptual Framework[3]
Amendments to HKFRS 9, HKAS 39, HKFRS 7, HKFRS 4 and HKFRS 16	Interest Rate Benchmark Reform – Phase 2[2]
Amendments to HKFRS 10 and HKAS 28	Sale or Contribution of Assets between an Investor and its Associate or Joint Venture[5]
Amendments to HKAS 1	Classification of Liabilities as Current or Non-current and related amendments to Hong Kong Interpretation 5 (2020)[4]
Amendment to HKAS 16	Property, Plant and Equipment – Proceeds before Intended Use[3]
Amendment to HKAS 37	Onerous Contracts – Cost of Fulfilling a Contract[3]
Amendment to HKFRSs	Annual Improvements to HKFRSs 2018–2020[3]

[1] Effective for annual periods beginning on or after 1 June 2020

[2] Effective for annual periods beginning on or after 1 January 2021

[3] Effective for annual periods beginning on or after 1 January 2022

[4] Effective for annual periods beginning on or after 1 January 2023

[5] Effective for annual periods beginning on or after a date to be determined

The management anticipates that the application of the new and amendments to HKFRSs will have no material impact on the consolidated financial statements in the foreseeable future.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES

Basis of preparation of consolidated financial statements

The consolidated financial statements have been prepared in accordance with HKFRSs issued by the HKICPA. For the purpose of preparation of the consolidated financial statements, information is considered material if such information is reasonably expected to influence decisions made by primary users. In addition, the consolidated financial statements include applicable disclosures required by the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (the "Listing Rules") and by the Hong Kong Companies Ordinance.

The consolidated financial statements have been prepared on the historical cost basis, except for certain properties and financial instruments, which are measured at fair values at the end of each reporting period, as explained in the accounting policies set out below.

Historical cost is generally based on the fair value of the consideration given in exchange for goods and services.

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date, regardless of whether that price is directly observable or estimated using another valuation technique. In estimating the fair value of an asset or a liability, the Group takes into account the characteristics of the asset or liability if market participants would take those characteristics into account when pricing the asset or liability at the measurement date. Fair value for measurement and/or disclosure purposes in these consolidated financial statements is determined on such a basis, except for share-based payment transactions that are within the scope of HKFRS 2 "Share-based Payment", leasing transactions that are accounted for in accordance with HKFRS 16 "Leases", and measurements that have some similarities to fair value but are not fair value, such as net realisable value in HKAS 2 "Inventories" or value in use in HKAS 36 "Impairment of Assets".

A fair value measurement of a non-financial asset takes into account a market participant's ability to generate economic benefits by using the asset in its highest and best use or by selling it to another market participant that would use the asset in its highest and best use.

For financial instruments and investment properties which are transacted at fair value and a valuation technique that unobservable inputs is to be used to measure fair value in subsequent periods, the valuation technique is calibrated so that at initial recognition the results of the valuation technique equals the transaction price.

In addition, for financial reporting purposes, fair value measurements are categorised into Level 1, 2 or 3 based on the degree to which the inputs to the fair value measurements are observable and the significance of the inputs to the fair value measurement in its entirety, which are described as follows:

- Level 1 inputs are quoted prices (unadjusted) in active markets for identical assets or liabilities that the entity can access at the measurement date;
- Level 2 inputs are inputs, other than quoted prices included within Level 1, that are observable for the asset or liability, either directly or indirectly; and
- Level 3 inputs are unobservable inputs for the asset or liability.

The principal accounting policies are set out below.

Basis of consolidation

The consolidated financial statements incorporate the financial statements of the Company and entities controlled by the Company and its subsidiaries. Control is achieved where the Company:

- has power over the investee;
- is exposed, or has rights, to variable returns from its involvement with the investee; and
- has the ability to use its power to affect its returns.

The Group reassesses whether or not it controls an investee if facts and circumstances indicate that there are changes to one or more of the three elements of control listed above.

Consolidation of a subsidiary begins when the Group obtains control over the subsidiary and ceases when the Group loses control of the subsidiary. Specifically, income and expenses of a subsidiary acquired or disposed of during the year are included in the consolidated statement of profit or loss and other comprehensive income from the date the Group gains control until the date when the Group ceases to control the subsidiary.

Profit or loss and each item of other comprehensive income are attributed to the owners of the Company and to the non-controlling interests. Total comprehensive income of subsidiaries is attributed to the owners of the Company and to the non-controlling interests even if this results in the non-controlling interests having a deficit balance.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Basis of consolidation *(continued)*

When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies into line with the Group's accounting policies.

All intragroup assets and liabilities, equity, income, expenses and cash flows relating to transactions between members of the Group are eliminated in full on consolidation.

Changes in the Group's ownership interests in existing subsidiaries

Changes in the Group's interests in subsidiaries that do not result in the Group losing control over the subsidiaries are accounted for as equity transactions. The carrying amounts of the Group's relevant components of equity and the non-controlling interests are adjusted to reflect the changes in their relative interests in the subsidiaries, including re-attribution of relevant reserves between the Group and the non-controlling interests according to the Group's and the non-controlling interests' proportionate interests.

Any difference between the amount by which the non-controlling interests are adjusted, and the fair value of the consideration paid or received is recognised directly in equity and attributed to owners of the Company.

When the Group loses control of a subsidiary, the assets and liabilities of that subsidiary and non-controlling interests (if any) are derecognised. A gain or loss is recognised in profit or loss and is calculated as the difference between (i) the aggregate of the fair value of the consideration received and the fair value of any retained interest and (ii) the previous carrying amount of the assets (including goodwill), and liabilities attributable to the owners of the Company. All amounts previously recognised in other comprehensive income in relation to that subsidiary are accounted for as if the Group had directly disposed of the related assets or liabilities of the subsidiary (i.e. reclassified to profit or loss or transferred to another category of equity as specified/permitted by applicable HKFRSs). The fair value of any investment retained in the former subsidiary at the date when control is lost is regarded as the fair value on initial recognition for subsequent accounting under HKFRS 9 "Financial Instruments" or, when applicable, the cost on initial recognition of an investment in an associate or a joint venture.

Business combinations or asset acquisition

Business

A business is an integrated set of activities and assets that is capable of being conducted and managed for the purpose of providing goods or services to customers, generating investment income (such as dividends or interest) or generating other income from ordinary activities. To be considered a business, an acquired set of activities and assets must include, at a minimum, an input and a substantive process that together significantly contribute to the ability to create outputs.

Asset acquisitions

When the Group acquires a group of assets and liabilities that do not constitute a business, the Group identifies and recognises the individual identifiable assets acquired and liabilities assumed by allocating the purchase price first to financial assets/financial liabilities at the respective fair values, the remaining balance of the purchase price is then allocated to the other identifiable assets and liabilities on the basis of their relative fair values at the date of purchase. Such a transaction does not give rise to goodwill or bargain purchase gain.

Business combinations

Acquisitions of businesses are accounted for using the acquisition method. The consideration transferred in a business combination is measured at fair value, which is calculated as the sum of the acquisition-date fair values of the assets transferred by the Group, liabilities incurred by the Group to the former owners of the acquiree and the equity interests issued by the Group in exchange for control of the acquiree. Acquisition-related costs are generally recognised in profit or loss as incurred.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Business combinations or asset acquisition *(continued)*

Business combinations (continued)

Except for certain recognition exemptions, the identifiable assets acquired and liabilities assumed must meet the definitions of an asset and a liability in the "Framework for the Preparation and Presentation of Financial Statements (replaced by the Conceptual Framework for Financial Reporting" issued in October 2010).

At the acquisition date, the identifiable assets acquired and the liabilities assumed are recognised at their fair value, except that:

(a) deferred tax assets or liabilities, and liabilities or assets related to employee benefit arrangements are recognised and measured in accordance with HKAS 12 "Income Taxes" and HKAS 19 "Employee Benefits" respectively;

(b) liabilities or equity instruments related to share-based payment arrangements of the acquiree or share-based payment arrangements of the Group entered into to replace share-based payment arrangements of the acquiree are measured in accordance with HKFRS 2 "Share-based Payment" at the acquisition date;

(c) assets (or disposal groups) that are classified as held for sale in accordance with HKFRS 5 "Non-current Assets Held for Sale and Discontinued Operations" are measured in accordance with that standard; and

(d) lease liabilities are recognised and measured at the present value of the remaining lease payments (as defined in HKFRS 16) as if the acquired leases at the acquisition date, except for leases for which the lease term ends within 12 months of the acquisition date. Right-of-use assets are recognised and measured at the same amount as the relevant lease liabilities, adjusted to reflect favourable or unfavourable terms of the lease when compared with market terms.

Goodwill is measured as the excess of the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree, and the fair value of the acquirer's previously held equity interest in the acquiree (if any) over the net amount of the identifiable assets acquired and the liabilities assumed as at acquisition date. If, after assessment, the net of the acquisition date amounts of the identifiable assets acquired and liabilities assumed exceeds the sum of the consideration transferred, the amount of any non-controlling interests in the acquiree and the fair value of the acquirer's previously held interest in the acquiree (if any), the excess is recognised immediately in profit or loss as a bargain purchase gain.

Non-controlling interests that are present ownership interests and entitle their holders to a proportionate share of the relevant subsidiary's net assets in the event of liquidation are initially measured at the non-controlling interests' proportionate share of the recognised amounts of the acquiree's identifiable net assets or at fair value.

When a business combination is achieved in stages, the Group's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date, and the resulting gain or loss, if any, is recognised in profit or loss or other comprehensive income, as appropriate. Amounts arising from interests in the acquiree prior to the acquisition date that have been recognised in other comprehensive income and measured under HKFRS 9 would be accounted for on the same basis as would be required if the Group had disposed directly of the previously held equity interest.

If the initial accounting for a business combination is incomplete by the end of the reporting period in which the combination occurs, the Group reports provisional amounts for the items for which the accounting is incomplete. Those provisional amounts are adjusted retrospectively during the measurement period (which cannot exceed one year from the acquisition date), and additional assets or liabilities are recognised, to reflect new information obtained about facts and circumstances that existed at the acquisition date that, if known, would have affected the amounts recognised at that date.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Goodwill

Goodwill arising on an acquisition of a business is carried at cost less accumulated impairment losses, if any, and is presented separately in the consolidated statement of financial position.

For the purpose of impairment testing, goodwill is allocated to each of the Group's cash-generating units ("CGUs") (or groups of CGUs) that is expected to benefit from the synergies of the combination, which represent the lowest level at which the goodwill is monitored for internal management purposes.

A cash-generating unit (or group of CGUs) to which goodwill has been allocated are tested for impairment annually, or more frequently when there is an indication that the unit may be impaired. For goodwill arising on acquisition in a reporting period, the CGU (or group of CGUs) to which goodwill has been allocated is tested for impairment before the end of that reporting period. If the recoverable amount of the CGU is less than its carrying amount, the impairment loss is allocated first to reduce the carrying amount of any goodwill allocated to the unit and then to the other assets of the unit pro-rata basis based on the carrying amount of each asset in the unit (or group of CGUs). Any impairment loss for goodwill is recognised directly in profit or loss in the consolidated statement of profit or loss and other comprehensive income. An impairment loss recognised for goodwill is not reversed in subsequent periods.

On disposal of the relevant CGUs or any of the CGU within the group of CGUs, the attributable amount of goodwill is included in the determination of the amount of profit or loss on disposal. When the Group disposes of an operation within the CGU (or a CGU within a group of CGUs), the amount of goodwill disposed of is measured on the basis of the relative values of the operation (or the CGU) disposed of and the portion of the CGU (or the group of CGUs) retained.

The Group's policy for goodwill arising on the acquisition of an associate and joint venture is described below.

Investments in associates and joint ventures

An associate is an entity over which the Group has significant influence. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint arrangement. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

The results and assets and liabilities of associates or joint ventures are incorporated in these consolidated financial statements using the equity method of accounting, except when the investment, or a portion thereof, is classified as held for sale, in which case it is or the portion so classified is accounted for in accordance with HKFRS 5. Any retained portion of an investment in an associate or a joint venture that has not been classified as held for sale shall be accounted for using the equity method. The financial statements of associates and joint ventures used for equity accounting purposes are prepared using uniform accounting policies as those of the Group for like transactions and events in similar circumstances. Under the equity method, an investment in an associate or a joint venture is initially recognised in the consolidated statement of financial position at cost and adjusted thereafter to recognise the Group's share of the profit or loss and other comprehensive income of the associate or joint venture. Changes in net assets of the associate or joint venture other than profit or loss and other comprehensive income are not accounted for unless such changes resulted in changes in ownership interest held by the Group. When the Group's share of losses of an associate or a joint venture exceeds the Group's interest in that associate or joint venture (which includes any long-term interests that, in substance, form part of the Group's net investment in the associate or joint venture), the Group discontinues recognising its share of further losses. Additional losses are recognised only to the extent that the Group has incurred legal or constructive obligations or made payments on behalf of the associate or joint venture.

An investment in an associate or a joint venture is accounted for using the equity method from the date on which the investee becomes an associate or a joint venture. On acquisition of the investment in an associate or a joint venture, any excess of the cost of the investment over the Group's share of the net fair value of the identifiable assets and liabilities of the investee is recognised as goodwill, which is included within the carrying amount of the investment. Any excess of the Group's share of the net fair value of the identifiable assets and liabilities over the cost of the investment, after reassessment, is recognised immediately in profit or loss in the period in which the investment is acquired.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Investments in associates and joint ventures *(continued)*

The Group assesses whether there is an objective evidence that the interest in an associate or a joint venture may be impaired. When any objective evidence exists, the entire carrying amount of the investment (including goodwill) is tested for impairment in accordance with HKAS 36 "Impairment of Assets" as a single asset by comparing its recoverable amount (higher of value in use and fair value less costs of disposal) with its carrying amount. Any impairment loss recognised is not allocated to any assets, including goodwill that forms part of the carrying amount of the investment. Any reversal of that impairment loss is recognised in accordance with HKAS 36 to the extent that the recoverable amount of the investment subsequently increases.

When the Group ceases to have significant influence over an associate or joint control over a joint venture, it is accounted for as a disposal of the entire interest in the investee with a resulting gain or loss being recognised in profit or loss. When the Group retains an interest in the former associate or joint venture and the retained interest is a financial asset within the scope of HKFRS 9, the Group measures the retained interest at fair value at that date and the fair value is regarded as its fair value on initial recognition. The difference between the carrying amount of the associate or joint venture and the fair value of any retained interest and any proceeds from disposing of the relevant interest in the associate or joint venture is included in the determination of the gain or loss on disposal of the associate or joint venture. In addition, the Group accounts for all amounts previously recognised in other comprehensive income in relation to that associate or joint venture on the same basis as would be required if that associate or joint venture had directly disposed of the related assets or liabilities. Therefore, if a gain or loss previously recognised in other comprehensive income by that associate or joint venture would be reclassified to profit or loss on the disposal of the related assets or liabilities, the Group reclassifies the gain or loss from equity to profit or loss (as a reclassification adjustment) upon disposal/partial disposal of the relevant associate or joint venture.

The Group continues to use the equity method when an investment in an associate becomes an investment in a joint venture or an investment in a joint venture becomes an investment in an associate. There is no remeasurement to fair value upon such changes in ownership interests.

When a group entity transacts with an associate or a joint venture of the Group, profits or losses resulting from the transactions with the associate or joint venture are recognised in the consolidated financial statements only to the extent of interests in the associate or joint venture that are not related to the Group.

Revenue from contracts with customers

The Group recognises revenue when (or as) a performance obligation is satisfied, i.e. when "control" of the goods or services underlying the particular performance obligation is transferred to the customer.

A performance obligation represents a good or service (or a bundle of goods or services) that is distinct or a series of distinct goods or services that are substantially the same.

Control is transferred over time and revenue is recognised over time by reference to the progress towards complete satisfaction of the relevant performance obligation if one of the following criteria is met:

- the customer simultaneously receives and consumes the benefits provided by the Group's performance as the Group performs;
- the Group's performance creates or enhances an asset that the customer controls as the Group performs; or
- the Group's performance does not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

Otherwise, revenue is recognised at a point in time when the customer obtains control of the distinct good or service.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Revenue from contracts with customers *(continued)*

Performance obligations for contracts with customers

The Group recognises revenue from the following sources:

(1) Retail gas sales

The Group sells natural gas to customers through pipelines, including both residential households and commercial and industrial customers. Revenue is recognised when the piped natural gas is transferred to and consumed by customers of which the volume of gas sold is measured by gas meters installed at customer sites.

The Group also operates vehicle gas refuelling stations to refuel vehicles with liquefied natural gas ("LNG") and compressed natural gas ("CNG"). Revenue is recognised when the refuelling is completed at the refuelling stations, being the time when LNG or CNG is transferred to customers.

(2) Sales of integrated energy

The Group supplies various energy products, such as gas, electricity, cooling, heating and steam. Revenue from sales of integrated energy is recognised when the energy is transferred to and consumed by the customers.

(3) Construction and installation

The Group provides construction and installation service under construction contracts with its customers. Such contracts are entered into for customers to gain access to the Group's gas pipelines or supply of integrated energy. Revenue is recognised over time based on the completion status of respective construction. The construction period is typically less than one year. The management considers that this output method is an appropriate measure of the progress towards complete satisfaction of the performance obligation.

(4) Wholesale of gas

The Group supplies LNG to wholesale customers. Revenue is recognised when control of LNG has transferred, being when the LNG has been bulk delivered to the customers' specific location.

(5) Sales of gas appliances and material

The Group sells gas appliances such as cooking stoves, water boilers, range hoods and space heaters to residential customers. In addition, the Group also sells construction materials and other energy products to commercial and industrial customers. Revenue is recognised when control of goods has transferred, being at the point the customers purchase the goods.

A contract asset represents the Group's right to consideration in exchange for goods or services that the Group has transferred to a customer that is not yet unconditional. It is assessed for impairment in accordance with HKFRS 9. In contrast, a receivable represents the Group's unconditional right to consideration, i.e. only the passage of time is required before payment of that consideration is due.

A contract liability represents the Group's obligation to transfer goods or services to a customer for which the Group has received consideration (or an amount of consideration is due) from the customer.

A contract asset and a contract liability relating to the same contract are accounted for and presented on a net basis.

Contracts with multiple performance obligations (including allocation of transaction price)

For contracts that contain more than one performance obligation, the Group allocates the transaction price to each performance obligation on a relative stand-alone selling price basis.

The stand-alone selling price of the distinct good or service underlying each performance obligation is determined at contract inception. It represents the price at which the Group would sell a promised good or service separately to a customer. If a stand-alone selling price is not directly observable, the Group estimates it using appropriate techniques such that the transaction price ultimately allocated to any performance obligation reflects the amount of consideration to which the Group expects to be entitled in exchange for transferring the promised goods or services to the customer.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Revenue from contracts with customers *(continued)*

Over time revenue recognition: measurement of progress towards complete satisfaction of a performance obligation

The progress towards complete satisfaction of a performance obligation is measured based on output method, which is to recognise revenue on the basis of direct measurement of the value of the goods or services transferred to the customer to date relative to the remaining goods or services promised under the contract, that best depict the Group's performance in transferring control of goods or services.

Existence of significant financing component

In determining the transaction price, the Group adjusts the promised amount of consideration for the effects of the time value of money if the timing of payments agreed (either explicitly or implicitly) provides the customer or the Group with a significant benefit of financing the transfer of goods or services to the customer. In those circumstances, the contract contains a significant financing component. A significant financing component may exist regardless of whether the promise of financing is explicitly stated in the contract or implied by the payment terms agreed to by the parties to the contract.

For advance payments received from customers before the transfer of the associated goods or services in which the Group adjusts for the promised amount of considerations for a significant financing component, the Group applies a discount rate that would be reflected in a separate financing transaction between the Group and the customer at contract inception. The relevant interest expenses during the period between the advanced payments were received and the transfer of the associated goods and services are accounted for on the same basis as other borrowing costs.

Principal versus agent

When another party is involved in providing goods or services to a customer, the Group determines whether the nature of its promise is a performance obligation to provide the specified goods or services itself (i.e. the Group is a principal) or to arrange for those goods or services to be provided by the other party (i.e. the Group is an agent).

The Group is a principal if it controls the specified good or service before that good or service is transferred to a customer.

The Group is an agent if its performance obligation is to arrange for the provision of the specified good or service by another party. In this case, the Group does not control the specified good or service provided by another party before that good or service is transferred to the customer. When the Group acts as an agent, it recognises revenue in the amount of any fee or commission to which it expects to be entitled in exchange for arranging for the specified goods or services to be provided by the other party.

Lease

Definition of a lease

A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration.

For contracts entered into or modified on or after the date of initial application or arising from business combinations, the Group assesses whether a contract is or contains a lease based on the definition under HKFRS 16 at inception or modification date. Such contract will not be reassessed unless the terms and conditions of the contract are subsequently changed.

The Group as a lessee

Allocation of consideration to components of a contract

For a contract that contains a lease component and one or more additional lease or non-lease components, the Group allocates the consideration in the contract to each lease component on the basis of the relative stand-alone price of the lease component and the aggregate stand-alone price of the non-lease components.

The Group applies practical expedient not to separate non-lease components from lease component, and instead account for the lease component and any associated non-lease components as a single lease component.

As a practical expedient, leases with similar characteristics are accounted for on a portfolio basis when the Group reasonably expects that the effects on the consolidated financial statements would not differ materially from individual leases within the portfolio.

NOTES TO THE CONSOLIDATED
FINANCIAL STATEMENTS
For the year ended 31 December 2020

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Lease *(continued)*

The Group as a lessee (continued)

Short-term leases

The Group applies the short-term lease recognition exemption to leases of various offices, warehouses, equipment and vehicles that have a lease term of 12 months or less from the commencement date and do not contain a purchase option. Lease payments on short-term leases are recognised as expense on a straight-line basis over the lease term.

Right-of-use assets

The cost of right-of-use asset includes:

- the amount of the initial measurement of the lease liability;
- any lease payments made at or before the commencement date, less any lease incentives received; and
- any initial direct costs incurred by the Group.

Right-of-use assets are measured at cost, less any accumulated depreciation and impairment losses, and adjusted for any remeasurement of lease liabilities.

Right-of-use assets in which the Group is reasonably certain to obtain ownership of the underlying leased assets at the end of the lease term is depreciated from commencement date to the end of the useful life. Otherwise, right-of-use assets are depreciated on a straight-line basis over the shorter of its estimated useful life and the lease term.

The Group presents right-of-use assets that do not meet the definition of investment property as a separate line item on the consolidated statement of financial position.

Refundable rental deposits

Refundable rental deposits paid are accounted for under HKFRS 9 and initially measured at fair value. Adjustments to fair value at initial recognition are considered as additional lease payments and included in the cost of right-of-use assets.

Lease liabilities

At the commencement date of a lease, the Group recognises and measures the lease liability at the present value of lease payments that are unpaid at that date. In calculating the present value of lease payments, the Group uses the incremental borrowing rate at the lease commencement date if the interest rate implicit in the lease is not readily determinable.

The lease payments include:

- fixed payments less any lease incentives receivable;
- variable lease payments that depend on an index or a rate; and
- amounts expected to be paid under residual value guarantees.

After the commencement date, lease liabilities are adjusted by interest accretion and lease payments.

The Group remeasures lease liabilities (and makes a corresponding adjustment to the related right-of-use assets) whenever:

- the lease term has changed or there is a change in the assessment of exercise of a purchase option, in which case the related lease liability is remeasured by discounting the revised lease payments using a revised discount rate at the date of reassessment.
- the lease payments change due to changes in market rental rates following a market rent review, in which cases the related lease liability is remeasured by discounting the revised lease payments using the initial discount rate.

The Group presents lease liabilities as a separate line item on the consolidated statement of financial position.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Lease *(continued)*

The Group as a lessee (continued)

Lease modifications

The Group accounts for a lease modification as a separate lease if:

- the modification increases the scope of the lease by adding the right to use one or more underlying assets; and
- the consideration for the leases increases by an amount commensurate with the stand-alone price for the increase in scope and any appropriate adjustments to that stand-alone price to reflect the circumstances of the particular contract.

For a lease modification that is not accounted for as a separate lease, the Group remeasures the lease liability, based on the lease term of the modified lease by discounting the revised lease payments using a revised discount rate at the effective date of the modification.

The Group as a lessor

Classification and measurement of leases

Lease for which the Group is a lessor are classified as finance or operating leases. Whenever the terms of the lease transfer substantially all the risks and rewards incidental to ownership of an underlying asset to the lessee, the contract is classified as a finance lease. All other leases are classified as operating leases.

Amounts due from lessees under finance leases are recognised as receivables at commencement date at amounts equal to net investments in the leases, measured using the interest rate implicit in the respective lease. Initial direct costs (other than those incurred by manufacturer or dealer lessors) are included in the initial measurement of the net investments in the leases. Interest income is allocated to accounting periods so as to reflect a constant periodic rate of return on the Group's net investment outstanding in respect of the leases.

Rental income from operating leases is recognised in profit or loss on a straight-line basis over the term of the relevant lease. Initial direct costs incurred in negotiating and arranging an operating lease are added to the carrying amount of the leased asset, and such costs are recognised as an expense on a straight-line basis over the lease term except for investment properties measured under fair value model.

Allocation of consideration to components of a contract

When a contract includes both leases and non-lease components, the Group applies HKFRS 15 "Revenue from Contracts with Customers" to allocate consideration in a contract to lease and non-lease components. Non-lease components are separated from lease component on the basis of their relative stand-alone selling prices.

Refundable rental deposits

Refundable rental deposits received are accounted for under HKFRS 9 and initially measured at fair value. Adjustments to fair value at initial recognition are considered as additional lease payments from lessees.

Lease modification

Changes in considerations of lease contracts that were not part of the original terms and conditions are accounted for as lease modifications, including lease incentives provided through forgiveness or reduction of rentals.

The Group accounts for a modification to an operating lease as a new lease from the effective date of the modification, considering any prepaid or accrued lease payments relating to the original lease as part of the lease payments for the new lease.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Foreign currencies

In preparing the financial statements of each individual group entity, transactions in currencies other than the entity's functional currency (foreign currencies) are recognised at the rates of exchanges prevailing on the dates of the transactions. At the end of the reporting period, monetary items denominated in foreign currencies are retranslated at the rates prevailing at that date. Non-monetary items carried at fair value that are denominated in foreign currencies are retranslated at the rates prevailing on the date when the fair value was determined. Non-monetary items that are measured in terms of historical cost in a foreign currency are not retranslated.

Exchange differences are recognised in profit or loss in the period in which they arise except for:

- exchange differences on foreign currency borrowings relating to assets under construction for future productive use, which are included in the cost of those assets when they are regarded as an adjustment to interest costs on those foreign currency borrowings;
- exchange differences on transactions entered into to hedge certain foreign currency risks (see below under financial instruments/ hedge accounting); and
- exchange differences on monetary items receivable from or payable to a foreign operation for which settlement is neither planned nor likely to occur in the foreseeable future (therefore forming part of the net investment in the foreign operation), which are recognised initially in other comprehensive income and reclassified from equity to profit or loss on disposal or partial disposal of the net investment.

For the purposes of presenting consolidated financial statements, the assets and liabilities of the Group's foreign operations are translated into the presentation currency of the Group (i.e. RMB) using exchange rates prevailing at the end of each reporting period. Income and expense items are translated at the average exchange rates for the period, unless exchange rates fluctuate significantly during that period, in which case the exchange rates at the dates of the transactions are used. All resulting exchange differences are recognised in other comprehensive income and accumulated in equity under the heading of exchange reserve (attributed to non-controlling interests as appropriate). Such exchange differences are recognised in profit or loss in the period in which the foreign operation is disposed of.

On the disposal of a foreign operation (i.e. a disposal of the Group's entire interest in a foreign operation, or a disposal involving loss of control over a subsidiary that includes a foreign operation, or a partial disposal of an interest in a joint arrangement or an associate that includes a foreign operation of which the retained interest becomes a financial asset), all of the exchange differences accumulated in equity in respect of that operation attributable to the owners of the Company are reclassified to profit or loss.

Goodwill and fair value adjustments to identifiable assets acquired and liabilities assumed through acquisition of a foreign operation are treated as assets and liabilities of the foreign operation and translated at the rate of exchange prevailing at the end of each reporting period. Exchange differences arising are recognised in other comprehensive income.

Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which are assets that necessarily take a substantial period of time to get ready for their intended use or sale, are added to the cost of those assets, until such time as the assets are substantially ready for their intended use or sale.

To the extent that variable rate borrowings are used to finance a qualifying asset and are hedged in an effective cash flow hedge of interest rate risk, the effective portion of the derivative is recognised in other comprehensive income and reclassified to profit or loss when the qualifying asset impacts profit or loss.

Investment income earned on the temporary investment of specific borrowings pending their expenditure on qualifying assets is deducted from the borrowing costs eligible for capitalisation.

All other borrowing costs are recognised in the profit or loss in the period in which they are incurred.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Government grants

Government grants are not recognised until there is a reasonable assurance that the Group will comply with the conditions attaching to them and that the grants will be received.

Government grants are recognised in profit or loss on a systematic basis over the periods in which the Group recognises as expenses the related costs for which the grants are intended to compensate. Specifically, government grants whose primary condition is that the Group should purchase, construct or otherwise acquire non-current assets are recognised as deferred income in the consolidated statement of financial position and transferred to profit or loss on a systematic and rational basis over the useful lives of the related assets.

Government grants related to income that are receivable as compensation for expenses or losses already incurred or for the purpose of giving immediate financial support to the Group with no future related costs are recognised in profit or loss in the period in which they become receivable.

Retirement benefit scheme contribution

Payable to the Mandatory Provident Fund Scheme and the retirement funds scheme managed by local social security bureau in accordance with the government regulations of the PRC, are recognised as an expense when employees have rendered service entitling them to the contributions.

Short-term and other long-term employee benefit

Short-term employee benefits are recognised at the undiscounted amount of the benefits to be paid as and when employees rendered the service. All short-term employee benefits are recognised as expense unless another HKFRS requires or permits the inclusion of the benefit in the cost of an asset.

A liability is recognised for benefits accruing to employees in respect of wages and salaries, annual leave and sick leave after deducting any amount already paid.

Liabilities recognised in respect of other long-term employee benefits are measured at the present value of the estimated future cash outflows expected to be made by the Group in respect of services provided by employees up to the reporting date. Any changes in the liabilities' carrying amounts resulting from service cost, interest and remeasurements are recognised in profit or loss except to the extent that another HKFRS requires or permits their inclusions in the cost of an asset.

Share-based payment

Share options granted by the Company to employees (including directors) of the Group in an equity-settled share-based payment arrangement

Equity-settled share-based payments to employees and others providing similar services are measured at the fair value of the equity instruments at the grant date.

The fair value of the equity-settled share-based payments determined at the grant date without taking into consideration all non-market vesting conditions is expensed on a straight-line basis over the vesting period, based on the Group's estimate of equity instruments that will eventually vest, with a corresponding increase in equity (share options reserve). Vesting conditions, other than market condition, shall not be taken into account when estimating the fair value of the share options at the measurement date. Instead, vesting conditions, i.e. a specified service period with or without a performance target, shall be taken into account in estimating the number of equity instrument that will ultimately vest. At the end of each reporting period, the Group revises its estimate of the number of equity instruments expected to vest based on assessment of all relevant non-market vesting conditions. The impact of the revision of the original estimates, if any, is recognised in profit or loss such that the cumulative expense reflects the revised estimate, with a corresponding adjustment to the share options reserve.

When share options are exercised, the amount previously recognised in share options reserve will be transferred to share capital and share premium. When the share options are forfeited after the vesting date or are still not exercised at the expiry date, the amount previously recognised in share options reserve will be transferred to retained earnings.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Taxation

Income tax expense represents the sum of the tax currently payable and deferred tax.

The tax currently payable is based on taxable profit for the year. Taxable profit differs from profit before tax as reported in the consolidated statement of profit or loss and other comprehensive income because of income or expense that are taxable or deductible in other years and items that are never taxable or deductible. The Group's liability for current tax is calculated using tax rates that have been enacted or substantively enacted by the end of the reporting period.

Deferred tax is recognised on temporary differences between the carrying amounts of assets and liabilities in the consolidated financial statements and the corresponding tax base used in the computation of taxable profit. Deferred tax liabilities are generally recognised for all taxable temporary differences. Deferred tax assets are generally recognised for all deductible temporary difference to the extent that is probable that taxable profits will be available against which those deductible temporary differences can be utilised. Such deferred tax assets and liabilities are not recognised if the temporary difference arises from the initial recognition (other than in a business combination) of assets and liabilities in a transaction that affects neither the taxable profit nor the accounting profit. In addition, deferred tax liabilities are not recognised if the temporary difference arises from the initial recognition of goodwill.

Deferred tax liabilities are recognised for taxable temporary difference associated with investments in subsidiaries and interests in associates and joint ventures, except where the Group is able to control the reversal of the temporary difference and it is probable that the temporary difference will not reverse in the foreseeable future. Deferred tax assets arising from deductible temporary differences associated with such investments and interests are only recognised to the extent that it is probable that there will be sufficient taxable profits against which to utilise the benefits of the temporary differences and they are expected to reverse in the foreseeable future.

The carrying amount of deferred tax assets is reviewed at the end of the reporting period and reduced to the extent that it is no longer probable that sufficient taxable profits will be available to allow all or part of the asset to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset is realised, based on tax rates (and tax laws) that have been enacted or substantively enacted by the end of the reporting period.

The measurement of deferred tax liabilities and assets reflects the tax consequences that would follow from the manner in which the Group expects, at the end of the reporting period, to recover or settle the carrying amounts of its assets and liabilities.

For the purposes of measuring deferred tax for leasing transactions in which the Group recognises the right-of-use assets and the related lease liabilities, the Group first determines whether the tax deductions are attributable to the right-of-use assets or the lease liabilities.

For leasing transactions in which the tax deductions are attributable to the lease liabilities, the Group applies HKAS 12 "Income Taxes" requirements to right-of-use assets and lease liabilities separately. Temporary differences relating to right-of-use assets and lease liabilities are not recognised due to application of the initial recognition exemption. Temporary differences arising from subsequent revision to the carrying amounts of right-of-use assets and lease liabilities, resulting from remeasurement of lease liabilities and lease modifications, that are not subject to initial recognition exemption are recognised on the date of remeasurement or modification.

For the purposes of measuring deferred tax for investment properties that are measured using the fair value model, the carrying amounts of such properties are presumed to be recovered entirely through sale, unless the presumption is rebutted. The presumption is rebutted when the investment property is depreciable and is held within a business model whose objective is to consume substantially all of the economic benefits embodied in the investment property over time, rather than through sale, expect for freehold land, which is always presumed to be recovered entirely through sale.

Current and deferred tax are recognised in profit or loss, except when it relates to items that are recognised in other comprehensive income or directly in equity, in which case, the current and deferred tax are also recognised in other comprehensive income or directly in equity respectively. Where current tax or deferred tax arises from initial accounting for a business combination, the tax effect is included in the accounting for the business combination.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Property, plant and equipment

Property, plant and equipment are tangible assets included building and leasehold land (classified as finance lease) that are held for use in the production or supply of goods or services, or for administrative purposes (other than properties under construction as described below), are stated in the consolidated statement of financial position at cost or deemed cost for properties transferred from investment properties, less subsequent accumulated depreciation and accumulated impairment losses, if any.

Properties in the course of construction for production, supply or administrative purposes are carried at cost, less any recognised impairment loss. Costs include any costs directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and, for qualifying assets, borrowing costs capitalised in accordance with the Group's accounting policy. Depreciation of these assets, on the same basis as other property assets, commences when the assets are ready for their intended use.

Ownership interests in leasehold land and building

When the Group makes payments for ownership interests of properties which includes both leasehold land and building elements, the entire consideration is allocated between the leasehold land and the building elements in proportion to the relative fair values at initial recognition.

To the extent the allocation of the relevant payments can be made reliably, interest in leasehold land that is accounted for as an operating lease is presented as "right-of-use assets" in the consolidated statement of financial position except for those that are classified and accounted for as investment properties under the fair value model. When the consideration cannot be allocated reliably between non-lease building element and undivided interest in the underlying leasehold land, the entire properties are classified as property, plant and equipment.

Depreciation is recognised so as to write off the costs or deemed cost of assets (other than properties under construction) less their residual values over their estimated useful lives, using the straight-line method. The estimated useful lives, residual values and depreciation method are reviewed at the end of each reporting period, with the effect of any changes in estimate accounted for on a prospective basis.

If a property becomes an investment property because its use has changed as evidenced by end of owner-occupation, any difference between the carrying amount and the fair value of that item (including the relevant leasehold land classified as right-of-use) at the date of transfer is recognised in other comprehensive income and accumulated in revaluation reserve. On the subsequent sale or retirement of the property, the relevant revaluation reserve will be transferred directly to retained earnings.

An item of property, plant and equipment is derecognised upon disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the disposal or retirement of an item of property, plant and equipment is determined as the difference between the sales proceeds and the carrying amount of the asset and is recognised in the profit or loss.

Investment properties

Investment properties are properties held to earn rentals and/or for capital appreciation.

Investment properties are measured initially at cost, including any directly attributable expenditure. Subsequent to initial recognition, investment properties are measured at their fair values, adjusted to exclude any prepaid or accrue operating lease income.

Gains or losses arising from changes in the fair value of investment property are included in profit or loss for the period in which they arise.

An investment property is derecognised upon disposal or when the investment property is permanently withdrawn from use or no future economic benefits are expected from its disposals. Any gain or loss arising on derecognition of the property (calculated as the difference between the net disposal proceeds and the carrying amount of the asset) is included in the profit or loss in the period in which the property is derecognised.

For a transfer from investment property to property, plant and equipment, the investment property is measured at the fair value at the date of transfer. The fair value of the investment property will be recognised as the deemed cost of the property for subsequent accounting in accordance with the accounting policy of property, plant and equipment as set out above.

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4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES

(continued)

Intangible assets

Intangible assets acquired separately

Intangible assets with finite useful lives that are acquired separately are carried at costs less accumulated amortisation and any accumulated impairment losses (see the accounting policy in respect of impairment losses on tangible and intangible assets below). Amortisation is recognised on a straight-line basis over their estimated useful lives. The estimated useful life and amortisation method are reviewed at the end of each reporting period, with the effect of any changes in estimate being accounted for on a prospective basis.

Internally-generated intangible assets – research and development expenditure

Expenditure on research activities is recognised as an expense in the period in which it is incurred.

An internally-generated intangible asset arising from development or from the development phase of an internal project is recognised if, and only if, all of the following have been demonstrated:

- the technical feasibility of completing the intangible asset so that it will be available for use or sale;
- the intention to complete the intangible asset and use or sell it;
- the ability to use or sell the intangible asset;
- how the intangible asset will generate probable future economic benefits;
- the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset; and
- the ability to measure reliably the expenditure attributable to the intangible asset during its development.

The amount initially recognised for internally-generated intangible asset is the sum of the expenditure incurred from the date when the intangible asset first meets the recognition criteria listed above. Where no internally generated intangible asset can be recognised, development expenditure is charged to profit or loss in the period in which it is incurred.

Subsequent to initial recognition, internally-generated intangible asset is measured at cost less accumulated amortisation and accumulated impairment losses (if any), on the same basis as intangible assets that are acquired separately.

Intangible assets acquired in a business combination

Intangible assets that are acquired in a business combination are recognised separately from goodwill and are initially recognised at their fair value at the acquisition date (which is regarded as their cost).

Subsequent to initial recognition, intangible assets acquired in a business combination with finite useful lives are reported at costs less accumulated amortisation and any accumulated impairment losses, on the same basis as intangible assets that are acquired separately.

An intangible asset is derecognised on disposal, or when no future economic benefits are expected from use or disposal. Gains and losses arising from derecognition of an intangible asset are measured at the difference between the net disposal proceeds and the carrying amount of the asset and are recognised in the profit or loss in the period when the asset is derecognised.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Impairment losses on property, plant and equipment, right-of-use assets and intangible assets other than goodwill (see the accounting policy in respect of goodwill above)

At the end of the reporting period, the Group reviews the carrying amounts of its property, plant and equipment, right-of-use assets and intangible assets with finite useful lives to determine whether there is any indication that those assets have suffered an impairment loss. If any such indication exists, the recoverable amount of the relevant asset is estimated in order to determine the extent of the impairment loss, if any.

The recoverable amounts of property, plant and equipment, right-of-use assets and intangible assets are estimated individually. When it is not possible to estimate the recoverable amount of an individual asset, the Group estimates the recoverable amount of the CGU to which the asset belongs.

In testing a cash-generating unit for impairment, corporate assets are allocated to the relevant cash-generating unit when a reasonable and consistent basis of allocation can be established, or otherwise they are allocated to the smallest group of cash generating units for which a reasonable and consistent allocation basis can be established. The recoverable amount is determined for the cash-generating unit or group of cash-generating units to which the corporate asset belongs, and is compared with the carrying amount of the relevant cash-generating unit or group of cash-generating units.

Intangible assets not yet available for use are tested for impairment at least annually, and whenever there is an indication that they may be impaired.

Recoverable amount is the higher of fair value less costs of disposal and value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset for which the estimates of future cash flows have not been adjusted.

If the recoverable amount of an asset (or a CGU) is estimated to be less than its carrying amount, the carrying amount of the asset (or a CGU) is reduced to its recoverable amount. For corporate assets or portion of corporate assets which cannot be allocated on a reasonable and consistent basis to a CGU, the Group compares the carrying amount of a group of CGUs, including the carrying amounts of the corporate assets or portion of corporate assets allocated to that group of CGUs, with the recoverable amount of the group of CGUs. In allocating the impairment loss, the impairment loss is allocated first to reduce the carrying amount of any goodwill (if applicable) and then to the other assets on a pro-rata basis based on the carrying amount of each asset in the unit. The carrying amount of an asset is not reduced below the highest of its fair value less costs of disposal (if applicable), its value in use (if determinable) and zero. The amount of the impairment loss that would otherwise have been allocated to the asset is allocated pro-rata to the other assets of the unit. An impairment loss is recognised immediately in profit or loss.

Where an impairment loss subsequently reverses, the carrying amount of the asset (or a CGU) is increased to the revised estimate of its recoverable amount, but so that the increased carrying amount does not exceed the carrying amount that would have been determined had no impairment loss been recognised for the asset (or a CGU) in prior years. A reversal of an impairment loss is recognised immediately in profit or loss.

Inventories

Inventories, including construction materials, gas appliances, natural gas, other energy inventories, spare parts and consumables and integrated energy appliances are stated at the lower of cost and net realisable value. Costs of inventories are determined using weighted average cost formula. Net realisable value represents the estimated selling price for inventories less all estimated costs to completion and the costs necessary to make the sale.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Financial instruments

Financial assets and financial liabilities are recognised when a group entity becomes a party to the contractual provisions of the instrument. All regular way purchases or sales of financial assets are recognised and derecognised on a trade day basis. Regular way purchases or sales are purchases or sales of financial assets that require delivery of assets within the time frame established by regulation or convention in the market place.

Financial assets and financial liabilities are initially measured at fair value except for trade receivables arising from contracts with customers which are initially measured in accordance with HKFRS 15. Transaction costs that are directly attributable to the acquisition or issue of financial assets and financial liabilities (other than financial assets and financial liabilities at FVTPL) are added to or deducted from the fair value of the financial assets or financial liabilities, as appropriate, on initial recognition. Transaction costs directly attributable to the acquisition of financial assets or financial liabilities at FVTPL are recognised immediately in profit or loss.

The effective interest method is a method of calculating the amortised cost of a financial asset or financial liability and of allocating interest income and interest expense over the relevant period. The effective interest rate is the rate that exactly discounts estimated future cash receipts and payments (including all fees and points paid or received that form an integral part of the effective interest rate, transaction costs and other premiums or discounts) through the expected life of the financial asset or financial liability, or, where appropriate, a shorter period, to the net carrying amount on initial recognition.

Financial assets

Classification and subsequent measurement of financial assets

Financial assets that meet the following conditions are subsequently measured at amortised cost:

- the financial asset is held within a business model whose objective is to collect contractual cash flows; and
- the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

Financial assets that meet the following conditions are subsequently measured at FVTOCI:

- the financial asset is held within a business model whose objective is achieved by both selling and collecting contractual cash flows; and
- the contractual terms give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding.

All other financial assets are subsequently measured at FVTPL, except that at initial recognition of a financial asset the Group may irrevocably elect to present subsequent changes in fair value of an equity investment in other comprehensive income if that equity investment is neither held for trading nor contingent consideration recognised by an acquirer in a business combination to which HKFRS 3 “Business Combinations” applies.

A financial asset is held for trading if:

- it has been acquired principally for the purpose of selling in the near term; or
- on initial recognition it is a part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- it is a derivative that is not designated and effective as a hedging instrument.

In addition, the Group may irrevocably designate a financial asset that are required to be measured at the amortised cost or FVTOCI as measured at FVTPL if doing so eliminates or significantly reduces an accounting mismatch.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Financial instruments *(continued)*

Financial assets (continued)

Classification and subsequent measurement of financial assets *(continued)*

(i) Amortised cost and interest income

Interest income is recognised using the effective interest method for financial assets measured subsequently at amortised cost. Interest income is calculated by applying the effective interest rate to the gross carrying amount of a financial asset, except for financial assets that have subsequently become credit-impaired (see below). For financial assets that have subsequently become credit-impaired, interest income is recognised by applying the effective interest rate to the amortised cost of the financial asset from the next reporting period. If the credit risk on the credit impaired financial instrument improves so that the financial asset is no longer credit-impaired, interest income is recognised by applying the effective interest rate to the gross carrying amount of the financial asset from the beginning of the reporting period following the determination that the asset is no longer credit-impaired.

(ii) Equity instruments designated as at FVTOCI

Investments in equity instruments at FVTOCI are subsequently measured at fair value with gains and losses arising from changes in fair value recognised in other comprehensive income and accumulated in the revaluation reserve; and are not subject to impairment assessment. The cumulative gain or loss will not be reclassified to profit or loss on disposal of the equity investments, and will be transferred to retained earnings.

Dividends from these investments in equity instruments are recognised in profit or loss when the Group's right to receive the dividends is established, unless the dividends clearly represent a recovery of part of the cost of the investment. Dividends are included in the "other income" line item in profit or loss.

(iii) Financial assets at FVTPL

Financial assets that do not meet the criteria for being measured at amortised cost or FVTOCI or designated as FVTOCI are measured at FVTPL.

Financial assets at FVTPL are measured at fair value at the end of each reporting period, with any fair value gains or losses recognised in profit or loss to the extent they are not part of a designated hedging relationship (see hedge accounting policy). The net gain or loss recognised in profit or loss excludes any dividend or interest earned on the financial asset and is included in the "other gains and losses" line item.

Impairment of financial assets (and other items subject to impairment assessment under HKFRS 9)

The Group performs impairment assessment under expected credit loss ("ECL") model on financial assets (including trade receivables and part of other receivables, restricted bank deposits, bank balances, amounts due from associates/joint ventures/related companies) and other items (contract assets and financial guarantee contracts) which are subject to impairment assessment under HKFRS 9. The amount of ECL is updated at each reporting date to reflect changes in credit risk since initial recognition.

Lifetime ECL represents the ECL that will result from all possible default events over the expected life of the relevant instrument. In contrast, 12-month ECL represents the portion of lifetime ECL that is expected to result from default events that are possible within 12 months after the reporting date. Assessments are done based on the Group's historical credit loss experience, adjusted for factors that are specific to the debtors, general economic conditions and an assessment of both the current conditions at the reporting date as well as the forecast of future conditions.

The Group always recognises lifetime ECL for trade receivables, contract assets and amounts due from associates/joint ventures/related companies arising from contracts with customers. The ECL on these assets are assessed individually for debtors with significant balances and collectively using a provision matrix with appropriate groupings for the remaining.

For all other financial assets at amortised cost, the Group measures the loss allowance equal to 12-month ECL, unless there has been a significant increase in credit risk since initial recognition, in which the Group recognises lifetime ECL. The assessment of whether lifetime ECL should be recognised is based on significant increases in the likelihood or risk of a default occurring since initial recognition.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Financial instruments *(continued)*

Financial assets (continued)

Impairment of financial assets (and other items subject to impairment assessment under HKFRS 9) *(continued)*

(i) Significant increase in credit risk

In assessing whether the credit risk has increased significantly since initial recognition, the Group compares the risk of a default occurring on the financial instrument as at the reporting date with the risk of a default occurring on the financial instrument as at the date of initial recognition. In making this assessment, the Group considers both quantitative and qualitative information that is reasonable and supportable, including historical experience and forward-looking information that is available without undue cost or effort.

In particular, the following information is taken into account when assessing whether credit risk has increased significantly:

- an actual or expected significant deterioration in the financial instrument's external (if available) or internal credit rating;
- significant deterioration in external market indicators of credit risk, e.g. a significant increase in the credit spread, the credit default swap prices for the debtor;
- existing or forecast adverse changes in business, financial or economic conditions that are expected to cause a significant decrease in the debtor's ability to meet its debt obligations;
- an actual or expected significant deterioration in the operating results of the debtor; and
- an actual or expected significant adverse change in the regulatory, economic, or technological environment of the debtor that results in a significant decrease in the debtor's ability to meet its debt obligations.

Irrespective of the outcome of the above assessment, the Group presumes that the credit risk has increased significantly since initial recognition when contractual payments are more than 30 days past due, unless the Group has reasonable and supportable information that demonstrates otherwise.

Despite the foregoing, the Group assumes that the credit risk on a debt instrument has not increased significantly since initial recognition if the debt instrument is determined to have low credit risk at the reporting date. A debt instrument is determined to have low credit risk if i) it has a low risk of default, ii) the borrower has a strong capacity to meet its contractual cash flow obligations in the near term and iii) adverse changes in economic and business conditions in the longer term may, but will not necessarily, reduce the ability of the borrower to fulfil its contractual cash flow obligations. The Group considers a debt instrument to have low credit risk when it has an external credit rating of "investment grade" as per globally understood definitions.

The Group regularly monitors the effectiveness of the criteria used to identify whether there has been a significant increase in credit risk and revises them as appropriate to ensure that the criteria are capable of identifying significant increase in credit risk before the amount becomes past due.

(ii) Definition of default

For internal credit risk management, the Group considers an event of default occurs when information developed internally or obtained from external sources indicates that the debtor is unlikely to pay its creditors, including the Group, in full (without taking into account any collaterals held by the Group).

Default has been considered occurred when the instrument is more than 90 days past due unless the Group has reasonable and supportable information to demonstrate that a more lagging default criterion is more appropriate.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Financial instruments *(continued)*

Financial assets (continued)

Impairment of financial assets (and other items subject to impairment assessment under HKFRS 9) *(continued)*

(iii) Credit-impaired financial assets

A financial asset is credit-impaired when one or more events that have a detrimental impact on the estimated future cash flows of that financial asset have occurred. Evidence that a financial asset is credit-impaired includes observable data about the following events:

(a) significant financial difficulty of the issuer or the borrower;

(b) a breach of contract, such as a default or past due event;

(c) the lender(s) of the borrower, for economic or contractual reasons relating to the borrower's financial difficulty, having granted to the borrower a concession(s) that the lender(s) would not otherwise consider;

(d) it is becoming probable that the borrower will enter bankruptcy or other financial reorganisation; or

(e) the disappearance of an active market for that financial asset because of financial difficulties.

(iv) Write-off policy

The Group writes off a financial asset when there is information indicating that the counterparty is in severe financial difficulty and there is no realistic prospect of recovery, for example, when the counterparty has been placed under liquidation or has entered into bankruptcy proceedings, whichever occurs sooner. Financial assets written off may still be subject to enforcement activities under the Group's recovery procedures, taking into account legal advice where appropriate. A write-off constitutes a derecognition event. Any subsequent recoveries are recognised in profit or loss.

(v) Measurement and recognition of ECL

The measurement of ECL is a function of the probability of default, loss given default (i.e. the magnitude of the loss if there is a default) and the exposure at default. The assessment of the probability of default and loss given default is based on historical data adjusted by forward-looking information. Estimation of ECL reflects an unbiased and probability-weighted amount that is determined with the respective risks of default occurring as the weights.

Generally, the ECL is the difference between all contractual cash flows that are due to the Group in accordance with the contract and the cash flows that the Group expects to receive, discounted at the effective interest rate determined at initial recognition.

For a financial guarantee contract, the Group is required to make payments only in the event of a default by the debtor in accordance with the terms of the instrument that is guaranteed. Accordingly, the ECL is the present value of the expected payments to reimburse the holder for a credit loss that it incurs less any amounts that the Group expects to receive from the holder, the debtors or any other party.

For ECL on financial guarantee contracts for which the effective interest rate cannot be determined, the Group will apply a discount rate that reflects the current market assessment of the time value of money and the risks that are specific to the cash flows but only if, and to the extent that, the risks are taken into account by adjusting the discount rate instead of adjusting the cash shortfalls being discounted.

Lifetime ECL for trade receivables, contract assets and amounts due from associates/joint ventures/related companies arising from contracts with customers are considered on a collective basis taking into consideration past due information and relevant credit information such as forward looking macroeconomic information.

For collective assessment, the Group takes into consideration the following characteristics when formulating the grouping:

- Past-due status;
- Nature, size and industry of debtors; and
- External credit ratings where available.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Financial instruments *(continued)*

Financial assets (continued)

Impairment of financial assets (and other items subject to impairment assessment under HKFRS 9) *(continued)*

(v) *Measurement and recognition of ECL (continued)*

The grouping is regularly reviewed by management to ensure the constituents of each group continue to share similar credit risk characteristics.

Expect for financial guarantee contracts, the Group recognises an impairment gain or loss in profit or loss for all financial instruments by adjusting their carrying amount, with the exception of trade and other receivables, contract assets and amounts due from associate/joint ventures/related companies where the corresponding adjustment is recognised through a loss allowance account.

Financial liabilities and equity instruments

Debt and equity instruments issued by a group entity are classified as either financial liabilities or as equity in accordance with the substance of the contractual arrangements and the definitions of a financial liability and an equity instrument.

Equity instruments

An equity instrument is any contract that evidences a residual interest in the assets of an entity after deducting all of its liabilities. Equity instruments issued by the Company are recognised at the proceeds received, net of direct issue costs.

Repurchase of the Company's own equity instruments is recognised and deducted directly in equity. No gain or loss is recognised in profit or loss on the purchase, sale, issue or cancellation of the Company's own equity instruments.

Financial liabilities

All financial liabilities are measured subsequently at amortised cost using the effective interest method or at FVTPL.

However, financial liabilities that arise when a transfer of a financial asset does not qualify for derecognition or when the continuing involvement approach applies, and financial guarantee contracts issued by the Group, are measured in accordance with the specific accounting policies set out below.

Financial liabilities at FVTPL

Financial liabilities are classified as at FVTPL when the financial liability is (i) contingent consideration of an acquirer in a business combination, (ii) held for trading or (iii) it is designated as at FVTPL.

A financial liability is classified as held for trading if:

- it has been acquired principally for the purpose of repurchasing it in the near term; or
- on initial recognition it is part of a portfolio of identified financial instruments that the Group manages together and has a recent actual pattern of short-term profit-taking; or
- it is a derivative, except for a derivative that is a financial guarantee contract or a designated and effective hedging instrument.

Financial liabilities at FVTPL are measured at fair value, with any gains or losses arising on changes in fair value recognised in profit or loss to the extent that they are not part of a designated hedging relationship (see hedge accounting policy). The net gain or loss recognised in profit or loss incorporates any interest paid on the financial liability and is included in the "other gains and losses" line item in profit or loss.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Financial instruments *(continued)*

Financial liabilities and equity instruments (continued)

Financial liabilities at amortised cost

Financial liabilities (including trade and other payables, amounts due to associates/joint ventures/related companies, bank and other loans, corporate bonds, senior notes and unsecured bonds) that are not (i) contingent consideration of an acquirer in a business combination, (ii) held-for trading, or (iii) designated as at FVTPL, are measured subsequently at amortised cost, using the effective interest method.

Financial guarantee contracts

A financial guarantee contract is a contract that requires the issuer to make specified payments to reimburse the holder for a loss it incurs because a specified debtor fails to make payment when due in accordance with the original or modified terms of a debt instrument.

A financial guarantee contract issued by the Group is initially measured at its fair value and if not designated as at FVTPL, are subsequently measured at the higher of: (i) the amount of the loss allowance determined in accordance with HKFRS 9; and (ii) the amount initially recognised less, where appropriate, cumulative amortisation. Amount initially recognised is amortised over the duration of the guarantee using the straight-line method.

Derivative financial instruments

Derivatives are initially recognised at fair value at the date when derivative contracts are entered into and are subsequently remeasured to their fair value at the end of the reporting period. The resulting gain or loss is recognised in profit or loss immediately unless the derivative is designated and effective as a hedging instrument, in which event the timing of the recognition in profit or loss depends on the nature of the hedge relationship.

Embedded derivatives

Derivatives embedded in hybrid contracts that contain financial asset hosts within the scope of HKFRS 9 are not separated. The entire hybrid contract is classified and subsequently measured in its entirety as either amortised cost or fair value as appropriate.

Derivatives embedded in non-derivative host contracts that are not financial assets within the scope of HKFRS 9 are treated as separate derivatives when they meet the definition of a derivative, their risks and characteristics are not closely related to those of the host contracts and the host contracts are not measured at FVTPL.

Generally, multiple embedded derivatives in a single instrument that are separated from the host contracts are treated as a single compound embedded derivative unless those derivatives relate to different risk exposures and are readily separable and independent of each other.

Hedge accounting

The Group designates certain derivatives as hedging instruments for cash flow hedges.

At the inception of the hedging relationship, the Group documents the relationship between the hedging instrument and the hedged item, along with its strategy for undertaking various hedge transactions. Furthermore, at the inception of the hedge and on an ongoing basis, the Group documents whether the hedging instrument is highly effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk.

For the purpose of determining whether a forecast transaction (or a component thereof) is highly probable, the Group assumes that the interest rate benchmark on which the hedged cash flows (contractually or non-contractually specified) are based is not altered as a result of interest rate benchmark reform.

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4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Financial instruments *(continued)*

Hedge accounting (continued)

Assessment of hedging relationship and effectiveness

For hedge effectiveness assessment, the Group considers whether the hedging instrument is effective in offsetting changes in fair values or cash flows of the hedged item attributable to the hedged risk, which is when the hedging relationships meet all of the following hedge effectiveness requirements:

- there is an economic relationship between the hedged item and the hedging instrument;
- the effect of credit risk does not dominate the value changes that result from that economic relationship; and
- the hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the Group actually hedges and the quantity of the hedging instrument that the entity actually uses to hedge that quantity of hedged item.

The Group designates only the intrinsic value of option contracts as a hedged item, i.e. excluding the time value of the option. The changes in the fair value of the aligned time value of the option are recognised in other comprehensive income and accumulated in the cost of hedging reserve. If the hedged item is transaction-related, the time value is reclassified to profit or loss when the hedged item affects profit or loss. If the hedged item is time period related, the amount accumulated in the cost of hedging reserve is reclassified to profit or loss on a straight-line basis. Those reclassified amounts are recognised in profit or loss in the same line as the hedged item. If the hedged item is a non-financial item, then the amount accumulated in the cost of hedging reserve is removed directly from equity and included in the initial carrying amount of the recognised non-financial item. Furthermore, if the Group expects that some or all of the loss accumulated in cost of hedging reserve will not be recovered in the future, that amount is immediately reclassified to profit or loss.

In assessing the economic relationship between the hedged item and the hedging instrument, the Group reviews their critical terms.

Cash flow hedges

The effective portion of changes in the fair value of derivatives and other qualifying hedging instruments that are designated and qualify as cash flow hedges is recognised in other comprehensive income and accumulated under the heading of cash flow hedge reserve, limited to the cumulative change in fair value of the hedged item from inception of the hedge. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss, and is included in the 'other gains and losses' line item.

For the purpose of reclassifying the amount of gains and losses accumulated in the cash flow hedge reserve in order to determine whether the hedged future cash flows are expected to occur, the Group assumes the interest rate benchmark on which the hedged cash flows (contractually or non-contractually specified) are based is not altered as a result of interest rate benchmark reform.

Amounts previously recognised in other comprehensive income and accumulated in equity are reclassified to profit or loss in the periods when the hedged item affects profit or loss, in the same line as the recognised hedged item. However, when the hedged forecast transaction results in the recognition of a non-financial asset or a non-financial liability, the gains and losses previously recognised in other comprehensive income and accumulated in equity are removed from equity and included in the initial measurement of the cost of the non-financial asset or non-financial liability. This transfer does not affect other comprehensive income. Furthermore, if the Group expects that some or all of the loss accumulated in the cash flow hedge reserve will not be recovered in the future, that amount is immediately reclassified to profit or loss.

4. BASIS OF PREPARATION OF CONSOLIDATED FINANCIAL STATEMENTS AND SIGNIFICANT ACCOUNTING POLICIES *(continued)*

Financial instruments *(continued)*

Hedge accounting (continued)

Discontinuation of hedge accounting

The Group discontinues hedge accounting prospectively only when the hedging relationship (or a part thereof) ceases to meet the qualifying criteria (after rebalancing, if applicable). This includes instances when the hedging instrument expires or is sold, terminated or exercised. Discontinuing hedge accounting can either affect a hedging relationship in its entirety or only a part of it (in which case hedge accounting continues for the remainder of the hedging relationship).

For cash flow hedge, any gain or loss recognised in other comprehensive income and accumulated in equity at that time remains in equity and is recognised when the forecast transaction is ultimately recognised in profit or loss. When a forecast transaction is no longer expected to occur, the gain or loss accumulated in equity is recognised immediately in profit or loss.

Derecognition

The Group derecognises a financial asset only when the rights to receive cash flows from the assets expire or, when it transfers the financial assets and substantially all the risks and rewards of ownership of the assets to another entity. If the Group retains substantially all the risks and rewards of ownership of a transferred financial asset, the Group continues to recognise the financial asset and also recognises a collateralised borrowing for the proceeds received.

On derecognition of a financial asset, the difference between the asset's carrying amount and the consideration received and receivable is recognised in profit or loss.

The Group derecognises financial liabilities when, and only when, the Group's obligations are discharged, cancelled or have expired. The difference between the carrying amount of the financial liability derecognised and the consideration paid and payable is recognised in profit or loss.

5. KEY SOURCES OF ESTIMATION UNCERTAINTY

In the application of the Group's accounting policies, which are described in Note 4, the Directors are required to make estimates and assumptions about the carrying amounts of assets and liabilities that are not readily apparent from other sources. The estimates and underlying assumptions are based on historical experience and other factors that are considered to be relevant. Actual results may differ from these estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised in the reporting period in which the estimate is revised if the revision affects only that reporting period, or in the reporting period of the revision and future reporting periods if the revision affects both current and future reporting periods.

The following are the key assumptions concerning the future, and other key sources of estimation uncertainty at the end of the reporting period that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year.

5. KEY SOURCES OF ESTIMATION UNCERTAINTY *(continued)*

Recognition of intangible assets acquired in business acquisition

The Group accounts for acquisitions of businesses by using the acquisition method, and the consideration transferred for the business acquisition is allocated to the identifiable assets acquired and liabilities assumed based on their respective fair values as at acquisition date, including intangible assets. The Group usually determines the fair value of intangible assets using excess earning method, which requires a set of estimations and determination of key inputs, including the future cash flow, profit margins, revenue growth rates and discount rates. Any changes to these inputs may have significant impact on the fair value of intangible assets, and will consequently have further impact on the goodwill or the profit or loss in the case of a bargain purchase.

Impairment assessment of goodwill and intangible assets

Determining whether goodwill and intangible assets are impaired requires the estimation of the recoverable amount of the CGUs to which goodwill and intangible assets have been allocated which is the higher of the fair value less costs of disposal and its value in use. The value in use calculation requires the Group to estimate the future cash flows expected to arise from the CGU and a suitable inputs, including revenue growth rate, profit margins, capital expenditures, and discount rate in order to calculate the present value. Where the actual future cash flows are less than expected, or changes in facts and circumstances which results in downward revision of future cash flows or upward revision of discount rate, a material impairment loss or further impairment loss may arise.

As at 31 December 2020, the carrying amounts of goodwill and intangible assets are RMB2,511 million and RMB4,446 million (2019: RMB2,379 million and RMB4,175 million), respectively. Details of the calculation of the recoverable amounts are set out in Notes 19 and 20.

Fair value measurement of financial instruments

Certain of the Group's financial instruments, including unlisted equity securities and derivative financial instruments amounting to RMB3,871 million (2019: RMB4,097 million) as at 31 December 2020 are measured at fair values with fair values being determined based on various valuation techniques and unobserved inputs. Judgement and estimation are required in establishing the relevant valuation techniques and the relevant inputs such as liquidity discount, estimates of future prices, market price volatility and credit risk. Changes in these factors could affect the fair values of these instruments. Further disclosures are set out in Note 53.

Provision of ECL for trade receivables and contract assets

The Group uses provision matrix to calculate ECL for the trade receivables and contract assets. The provision rates are based on shared credit risk characteristic as groupings of various debtors that have similar loss patterns. The provision matrix is based on the debtors' historical default rates taking into consideration forward-looking information that is reasonable and supportable without undue costs or effort. At the end of the reporting period, the historical observed default rates are reassessed and changes in the forward-looking information are considered. In addition, trade receivables and contract assets with significant balances and credit impaired are assessed for ECL individually.

The provision of ECL is sensitive to changes in estimates. The information about the ECL and the Group's trade receivables and contract assets are disclosed in Notes 53, 23 and 28 respectively.

Depreciation of property, plant and equipment

Property, plant and equipment are depreciated on a straight-line basis over their estimated useful lives, after taking into account the estimated residual value. The Group assesses annually the residual value and the useful life of the property, plant and equipment and if the expectation differs from the original estimates, such differences from the original estimates will impact the depreciation charges in the year in which the estimates change. As at 31 December 2020, the carrying amount of property, plant and equipment is RMB41,861 million (2019: RMB37,955 million).

6. REVENUE

Revenue from contract with customers comprises the following:

	2020 RMB million	2019 RMB million
Sales of goods		
Retail gas sales business	**40,510**	40,049
Integrated energy business	**4,611**	2,365
Wholesale of gas	**17,936**	18,465
Valued added business	**1,471**	1,643
	64,528	62,522
Provision of services		
Construction and installation	**6,444**	6,932
Integrated energy business	**431**	384
Valued added business	**214**	345
	7,089	7,661
	71,617	70,183

Disaggregation of revenue from contracts with customers

	2020 Sales of goods RMB million	2020 Provision of services RMB million	2020 Total RMB million	2019 Sales of goods RMB million	2019 Provision of services RMB million	2019 Total RMB million
Types of goods or services						
Retail gas sales business	**40,510**	**–**	**40,510**	40,049	–	40,049
Integrated energy business	**4,611**	**431**	**5,042**	2,365	384	2,749
Wholesale of gas	**17,936**	**–**	**17,936**	18,465	–	18,465
Construction and installation	**–**	**6,444**	**6,444**	–	6,932	6,932
Valued added business	**1,471**	**214**	**1,685**	1,643	345	1,988
Total	**64,528**	**7,089**	**71,617**	62,522	7,661	70,183

The performance obligations of the Group are part of contracts mainly with an original expected duration of one year or less. As permitted under HKFRS 15, the transaction price allocated to these unsatisfied contracts is not disclosed.

7. SEGMENT INFORMATION

Information reported to the chief executive officer/joint vice chairman/vice chairman of the Company, being the chief operating decision maker (the "CODM"), for the purposes of resource allocation and performance assessment among segments focuses specifically on different type of goods and services.

Segment revenue and results

Segment profit represents the profit earned by each segment without allocation of central administrative costs, distribution and selling expenses, share of results of associates and joint ventures, other income, other gains and losses and finance costs. This is the measure reported to the CODM for the purposes of resource allocation and performance assessment.

Inter-segment sales are charged at prevailing market rates.

The following is an analysis of the Group's revenue and results by reportable segments which are also the operating segments for the year:

2020	**Retail gas sales business RMB million**	**Integrated energy business RMB million**	**Wholesale of gas RMB million**	**Construction and installation RMB million**	**Value added business RMB million**	**Total RMB million**
Segment revenue	**57,875**	**5,099**	**38,451**	**7,434**	**6,391**	**115,250**
Inter-segment sales	**(17,365)**	**(57)**	**(20,515)**	**(990)**	**(4,706)**	**(43,633)**
Revenue from external customers	**40,510**	**5,042**	**17,936**	**6,444**	**1,685**	**71,617**
Segment profit before depreciation and amortisation	**7,576**	**1,049**	**366**	**3,616**	**1,315**	**13,922**
Depreciation and amortisation	**(1,085)**	**(146)**	**(4)**	**(352)**	**(3)**	**(1,590)**
Segment profit	**6,491**	**903**	**362**	**3,264**	**1,312**	**12,332**

2019	Retail gas sales business RMB million	Integrated energy business RMB million	Wholesale of gas RMB million	Construction and installation RMB million	Value added business RMB million	Total RMB million
Segment revenue	54,515	3,020	33,686	8,404	7,255	106,880
Inter-segment sales	(14,466)	(271)	(15,221)	(1,472)	(5,267)	(36,697)
Revenue from external customers	40,049	2,749	18,465	6,932	1,988	70,183
Segment profit before depreciation and amortisation	6,669	600	171	3,991	1,239	12,670
Depreciation and amortisation	(998)	(127)	(5)	(272)	(3)	(1,405)
Segment profit	5,671	473	166	3,719	1,236	11,265

7. SEGMENT INFORMATION *(continued)*

Segment assets and liabilities

An analysis of the Group's total assets and liabilities by segments is as follows:

2020	**Retail gas sales business RMB million**	**Integrated energy business RMB million**	**Wholesale of gas RMB million**	**Construction and installation RMB million**	**Value added business RMB million**	**Total RMB million**
Assets:						
Segment assets	**34,274**	**7,997**	**2,649**	**9,364**	**2,998**	**57,282**
Interests in associates						**3,619**
Interests in joint ventures						**4,141**
Unallocated corporate assets						**25,001**
Consolidated total assets						**90,043**
Liabilities:						
Segment liabilities	**11,281**	**3,509**	**577**	**12,246**	**2,048**	**29,661**
Bank and other loans						**6,668**
Corporate bonds						**2,097**
Senior notes						**7,207**
Unsecured bonds						**3,712**
Unallocated corporate liabilities						**4,526**
Consolidated total liabilities						**53,871**

2019	Retail gas sales business RMB million	Integrated energy business RMB million	Wholesale of gas RMB million	Construction and installation RMB million	Value added business RMB million	Total RMB million
Assets:						
Segment assets	32,091	5,808	1,785	7,767	2,213	49,664
Interests in associates						3,308
Interests in joint ventures						3,841
Unallocated corporate assets						24,432
Consolidated total assets						81,245
Liabilities:						
Segment liabilities	9,154	2,825	471	10,512	1,694	24,656
Bank and other loans						10,343
Corporate bonds						2,094
Senior notes						2,539
Unsecured bonds						4,169
Unallocated corporate liabilities						6,424
Consolidated total liabilities						50,225

7. SEGMENT INFORMATION *(continued)*

Segment assets and liabilities *(continued)*

For the purposes of monitoring segment performances and allocating resources between segments:

- all assets are allocated to reportable segments other than unallocated corporate assets, mainly including unallocated property, plant and equipment, right-of-use assets, intangible assets, goodwill, investment properties, interests in associates, interests in joint ventures, deferred tax assets, certain other receivables, deposits, amounts due from associates, joint ventures and related companies, equity instruments at FVTOCI, financial assets at FVTPL, derivative financial instruments, restricted bank deposits and cash and cash equivalents. Assets used jointly by segments are allocated on the basis of the revenues earned by individual segments; and
- all liabilities are allocated to reportable segments other than unallocated corporate liabilities, mainly including certain other payables, amounts due to associates, joint ventures and related companies, taxation payables, lease liabilities, bank and other loans, corporate bonds, senior notes, derivative financial instruments, unsecured bonds and deferred tax liabilities. Liabilities for which segments are jointly liable are allocated in proportion to segments assets.

For the purposes of presenting segment revenue, results, assets and liabilities, the Group allocates certain property, plant and equipment, intangible assets and right-of-use assets to certain segments with the related depreciation and release of prepaid lease payments to those segments.

Other segment information

Amounts included in the measurement of segment profit and segment assets:

	Retail gas sales business RMB million	Integrated energy business RMB million	Wholesale of gas RMB million	Construction and installation RMB million	Value added business RMB million	Total RMB million
2020						
Additions to non-current assets (note b)	**4,938**	**1,497**	**105**	**874**	**22**	**7,436**
Depreciation and amortisation	**1,085**	**146**	**4**	**352**	**3**	**1,590**
Impairment losses on trade receivables recognised in profit or loss	**4**	**11**	**2**	**69**	**16**	**102**
Impairment losses on contract assets reversed in profit or loss	**–**	**(1)**	**–**	**(8)**	**–**	**(9)**
2019						
Additions to non-current assets (note b)	7,687	1,253	105	1,364	41	10,450
Depreciation and amortisation	998	127	5	272	3	1,405
Impairment losses on trade receivables (reversed) recognised in profit or loss	(7)	12	(2)	37	11	51
Impairment losses on contract assets recognised in profit or loss	–	1	–	2	–	3

7. SEGMENT INFORMATION *(continued)*

Other segment information *(continued)*

	Additions to non-current assets (note b)		Depreciation and amortisation	
	2020	2019	**2020**	2019
	RMB million	RMB million	**RMB million**	RMB million
Segment total	**7,436**	10,450	**1,590**	1,405
Adjustments (note a)	**62**	91	**491**	379
Total	**7,498**	10,541	**2,081**	1,784

Notes:

a. Adjustments represent amounts incurred for corporate headquarters and are not allocated to operating segments.

b. Non-current assets include property, plant and equipment, right-of-use assets, goodwill and intangible assets.

There is no single customer contribute more than 10% of the total revenue of the Group.

Substantially all of the Group's revenue and non-current assets are located in the PRC. For the year ended 31 December 2020, the revenues from the PRC and overseas were RMB71,450 million (2019: RMB70,021 million) and RMB167 million (2019: RMB 162 million), respectively. As of 31 December 2020, the non-current assets located in the PRC were RMB66,463 million (2019: RMB61,717 million) and overseas were RMB12 million (2019: RMB 13 million).

8. OTHER INCOME

	2020	2019
	RMB million	RMB million
Other income mainly includes:		
Incentive subsidies (note)	**350**	213
Dividends income from equity instruments at FVTOCI	**1**	7
Dividends income from financial assets at FVTPL	**73**	139
Interest income on bank deposits	**80**	104
Interest income on loan receivables from joint ventures and associates	**26**	66
Interest income on loan receivables from third parties	**98**	30
Rental income from investment properties	**10**	10
Rental income from equipments	**42**	40

Note: The amount mainly represents refunds of various taxes as incentives and other incentives related to the Group's operation by the government authorities in various cities of the PRC.

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
For the year ended 31 December 2020

9. OTHER GAINS AND LOSSES

	2020 RMB million	2019 RMB million
Net (loss) gain on disposal of:		
– Property, plant and equipment	**(128)**	(77)
– Right-of-use assets	**18**	29
– Subsidiaries (Note 49)	**(62)**	(2)
– Joint ventures	**4**	3
– Associates	**–**	(16)
Bargain purchase gain on acquisition of subsidiaries (Note 47)	**–**	15
Gain on remeasurement of interests in joint ventures previously held (Note 47)	**–**	11
(Decrease) increase in fair value of investment properties (Note 18)	**(7)**	6
Net (loss) gain of:		
– Financial assets at FVTPL (Note 25)	**(45)**	5
– Derivative financial instruments (Note 24)	**102**	915
Impairment losses under expected credit loss model, net of reversal		
– Trade and other receivables	**(106)**	(48)
– Contract assets	**9**	(3)
– Amounts due from associates/joint ventures/related companies	**(32)**	7
Impairment loss recognised in respect of property, plant and equipment	**(70)**	–
Loss on repurchase of unsecured bonds	**(9)**	–
Gain (loss) on foreign exchange, net (note)	**608**	(198)
Release of exchange reserve to profit or loss upon deregistration of a subsidiary	**–**	(3)
	282	644

Note: Included in the amount for the year ended 31 December 2020 is an exchange gain of approximately RMB605 million (2019: exchange loss of approximately RMB192 million) arising from the translation of senior notes, unsecured bonds and bank loans denominated in United States dollars ("USD") to RMB.

10. FINANCE COSTS

	2020 RMB million	2019 RMB million
Interest on:		
Bank and other loans	**288**	390
Senior notes	**198**	157
Corporate bonds	**90**	143
Unsecured bonds	**139**	153
Lease liabilities	**27**	34
	742	877
Less: Amount capitalised under construction in progress (note)	**(181)**	(150)
	561	727
Fair value loss reclassified from equity on foreign currency derivative designated as cash flow hedges for USD debts	**48**	–
	609	727

Note: Borrowing costs capitalised during both years were incurred on funds borrowed specifically and generally for the purpose of expenditure on qualifying assets. In respect of funds borrowed generally for the purpose of expenditure on qualifying assets, the amount of borrowing costs capitalised during the year was calculated by applying a capitalisation rate of 3.43% (2019: 3.89%) per annum.

11. PROFIT BEFORE TAX

	2020 RMB million	2019 RMB million
Profit before tax has been arrived at after charging (crediting):		
Share-based payment expenses, including directors' emoluments (included in administrative expenses)	**70**	74
Other staff costs, including directors' emoluments	**3,364**	3,199
Less: Amount of other staff costs capitalised under construction in progress	**(168)**	(165)
	3,266	3,108
Depreciation and amortisation:		
Property, plant and equipment	**1,603**	1,377
Intangible assets	**304**	238
Right-of-use assets	**174**	169
Total depreciation and amortisation (note)	**2,081**	1,784
Auditors' remuneration	**20**	21
Minimum lease payments under operating leases in respect of premises, equipment and vehicles recognised in profit or loss	**24**	35

Note: The amount of total staff costs and depreciation and amortisation included in cost of sales, distribution and selling expenses and administrative expenses are as follows:

	2020 RMB million	2019 RMB million
Staff costs included in:		
Cost of sales	**1,094**	1,003
Distribution and selling expenses	**656**	683
Administrative expenses	**1,516**	1,422
	3,266	3,108
Depreciation and amortisation included in:		
Cost of sales	**1,590**	1,405
Distribution and selling expenses	**96**	57
Administrative expenses	**395**	322
	2,081	1,784

12. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS

a. Directors' emoluments

Emoluments paid and payable to the Directors for the year were as follows:

	2020					
Name of director	**Fee RMB'000**	**Salaries and allowance RMB'000**	**Discretionary performance bonus RMB'000**	**Share-based payment RMB'000**	**Retirement benefit scheme contributions RMB'000**	**Total emoluments RMB'000**
Executive Directors: (note a)						
Wang Yusuo	–	2,850	–	2,817	–	5,667
Cheung Yip Sang***	–	450	–	824	7	1,281
Han Jishen****	–	2,409	–	1,771	106	4,286
Wang Dongzhi	–	1,900	1,100	1,877	–	4,877
Zhang Yuying	–	1,750	4,546	1,164	105	7,565
Zheng Hongtao*****	–	362	1,472	–	22	1,856
Sub-total	–	9,721	7,118	8,453	240	25,532
Non-executive Directors:						
Wang Zizheng******	396	368	–	2,062	16	2,842
Jin Yongshang*******	417	–	–	15	–	432
Sub-total	813	368	–	2,077	16	3,274
Independent Non-executive Directors: (note b)						
Ma Zhixiang	483	–	–	350	–	833
Yuen Po Kwong	483	–	–	350	–	833
Law Yee Kwan, Quinn	483	–	–	350	–	833
Yien Yu Yu, Catherine	483	–	–	322	–	805
Sub-total	1,932	–	–	1,372	–	3,304
Total	2,745	10,089	7,118	11,902	256	32,110

12. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS *(continued)*

a. Directors' emoluments *(continued)*

	2019					
Name of director	Fee RMB'000	Salaries and allowance RMB'000	Discretionary performance bonus RMB'000	Share-based payment RMB'000	Retirement benefit scheme contributions RMB'000	Total emoluments RMB'000
Executive Directors: (note a)						
Wang Yusuo	–	2,601	–	2,470	–	5,071
Cheung Yip Sang	–	1,600	–	1,923	16	3,539
Wang Zizheng	–	1,650	56	1,582	16	3,304
Han Jishen	–	3,150	4,419	1,843	143	9,555
Liu Min*	–	2,704	1,596	2,103	164	6,567
Wang Dongzhi	–	1,650	902	1,644	–	4,196
Zhang Yuying**	–	217	–	82	9	308
Sub-total	–	13,572	6,973	11,647	348	32,540
Independent Non-executive Directors: (note b)						
Ma Zhixiang	400	–	–	300	–	700
Yuen Po Kwong	400	–	–	300	–	700
Law Yee Kwan, Quinn	400	–	–	300	–	700
Yien Yu Yu, Catherine	400	–	–	388	–	788
Sub-total	1,600	–	–	1,288	–	2,888
Total	1,600	13,572	6,973	12,935	348	35,428

* Mr. Liu Min resigned on 4 December 2019.

** Mr. Zhang Yuying was appointed as an executive director of the Company on 4 December 2019.

*** Mr. Cheung Yip Sang retired on 13 May 2020.

**** Mr. Han Jishen resigned on 2 November 2020.

***** Mr. Zheng Hongtao was appointed as an executive director of the Company on 14 September 2020.

****** Mr. Wang Zizheng was re-designated as a non-executive director of the Company from an executive director of the Company since 16 March 2020.

******* Mr. Jin Yongsheng was appointed as a non-executive director of the Company on 16 March 2020.

Notes:

a. The executive directors' emoluments shown above were mainly for their services in connection with the management of the affairs of the Company and the Group.

b. The independent non-executive directors' emoluments shown above were mainly for their services as directors of the Company.

None of the Directors waived any emoluments during both years.

The discretionary performance bonus is determined by reference to the Group's performance during the year.

12. DIRECTORS', CHIEF EXECUTIVE'S AND EMPLOYEES' EMOLUMENTS *(continued)*

b. Five highest paid individuals

The five highest paid employees of the Group during the year included two (2019: three) directors, details of whose remuneration are set out in Note 12(a) above. Details of the remuneration for the year of the remaining three (2019: two) highest paid employees who are neither a director nor chief executive of the Company are as follows:

	2020 **RMB'000**	2019 RMB'000
Salaries and allowance	**5,800**	4,160
Discretionary performance bonus	**11,433**	5,826
Share-based payment	**2,878**	1,413
Retirement benefits scheme	**383**	239
	20,494	11,638

The number of the highest paid employees included the Directors whose remuneration fell within the following bands is as follows:

	2020 **Number of** **employees**	2019 Number of employees
HK$5,500,001 to HK$6,000,000	**–**	1
HK$6,000,001 to HK$6,500,000	**1**	1
HK$7,000,001 to HK$7,500,000	**1**	2
HK$7,500,001 to HK$8,000,000	**1**	–
HK$8,000,001 to HK$8,500,000	**1**	–
HK$8,500,001 to HK$9,000,000	**1**	–
HK$10,500,001 to HK$11,000,000	**–**	1
	5	5

13. INCOME TAX EXPENSE

	2020 RMB million	2019 RMB million
Current tax	**1,736**	1,565
(Overprovision) underprovision in prior years	**(10)**	1
Withholding tax	**63**	69
Overprovision of withholding tax in prior years	**(71)**	–
	1,718	1,635
Deferred tax (Note 32)	**509**	345
	2,227	1,980

The charge substantially represents PRC Enterprise Income Tax for both years.

Under the Law of the PRC on Enterprise Income Tax (the "EIT Law") and Implementation Regulation of the EIT Law, the tax rate applicable for PRC group entities is 25%.

Certain subsidiaries of the Company are qualified as "High and New Tech Enterprises", which are subject to PRC Enterprise Income Tax at the preferential rate of 15% of the estimated assessable profit as determined in accordance with relevant tax rules and regulations in the PRC. This preferential rate could be applied for three years and the subsidiaries are eligible to apply the tax concession again upon expiry of the three-year period.

Hong Kong Profits Tax is calculated at 16.5% of the estimated assessable profit.

Income tax charge for the year can be reconciled to the profit before tax per the consolidated statement of profit or loss and other comprehensive income as follows:

	2020 RMB million	2019 RMB million
Profit before tax	**9,558**	8,841
Tax at the PRC Enterprise Income Tax rate of 25% (2019: 25%)	**2,390**	2,210
Tax effects of share of results of associates	**(77)**	(81)
Tax effects of share of results of joint ventures	**(119)**	(137)
Tax effects of income not taxable for tax purpose	**(44)**	(288)
Tax effects of expenses not deductible for tax purpose	**107**	211
Tax effects of tax losses not recognised	**113**	173
Utilisation of tax losses previously not recognised	**(80)**	(80)
Utilisation of temporary differences not recognised	**(23)**	(16)
Tax concession and exemption granted to certain PRC subsidiaries	**(143)**	(121)
Effect of different tax rates of subsidiaries operating in Hong Kong	**(30)**	(10)
(Overprovision) underprovision in respect of prior years	**(10)**	1
Withholding tax on undistributed profit of PRC entities	**143**	118
Income tax charge for the year	**2,227**	1,980

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14. DIVIDENDS

	2020 RMB million	2019 RMB million
Final dividend paid in respect of previous financial year	**1,719**	1,176

Notes:

a. 2019 final dividend of HK$1.67 (equivalent to approximately RMB1.50) per ordinary share or approximately RMB1,719 million in aggregate was paid during the year ended 31 December 2020.

b. The proposed final dividend in respect of 2020 of HK$2.10 (equivalent to approximately RMB1.77) per ordinary share and a special dividend of HK$0.32 (equivalent to approximately RMB0.27) per ordinary share with total amount of HK$2,730 million (2019: HK$1,880 million) has been proposed by the Directors and is subject to approval by the shareholders in the forthcoming annual general meeting.

15. EARNINGS PER SHARE

The calculation of the basic and diluted earnings per share attributable to the owners of the Company is based on the following data:

Basic earnings per share

Basic earnings per share for the years ended 31 December 2020 and 2019 are calculated by dividing the profit attributable to the owners of the Company by the weighted average number of ordinary shares in issue during the year.

	2020	2019
Profit for the year attributable to the owners of the Company (RMB million)	**6,278**	5,670
Weighted average number of ordinary shares	**1,123,467,932**	1,122,968,436
Basic earnings per share (RMB)	**5.59**	5.05

Diluted earnings per share

Diluted earnings per share for the years ended 31 December 2020 and 2019 are calculated assuming all dilutive potential ordinary shares were converted.

	2020	2019
Earnings		
Earnings for the purpose of diluted earnings per share (RMB million)	**6,278**	5,670
Number of shares		
Weighted average number of ordinary shares for the purpose of basic earnings per share	**1,123,467,932**	1,122,968,436
Effect of dilutive potential ordinary shares:		
– share options	**2,714,693**	2,626,599
Weighted average number of ordinary shares for the purpose of diluted earnings per share	**1,126,182,625**	1,125,595,035
Diluted earnings per share (RMB)	**5.57**	5.04

16. PROPERTY, PLANT AND EQUIPMENT

	Leasehold land and buildings RMB million	Pipelines RMB million	Machinery and equipment RMB million	Motor vehicles RMB million	Office equipment RMB million	Properties under construction RMB million	Total RMB million
COST							
At 1 January 2019	4,133	24,286	2,642	444	1,679	4,691	37,875
Acquisition of subsidiaries (Notes 47 & 48)	221	586	90	6	2	321	1,226
Additions	16	351	290	64	304	6,325	7,350
Transfer from investment properties	7	–	–	–	–	–	7
Reclassification	355	4,364	385	2	51	(5,157)	–
Transfer to investment properties	(1)	–	–	–	–	–	(1)
Disposal of subsidiaries	(2)	(1)	(13)	–	–	–	(16)
Disposals	(85)	(178)	(133)	(44)	(76)	(5)	(521)
At 31 December 2019	4,644	29,408	3,261	472	1,960	6,175	45,920
Acquisition of subsidiaries (Notes 47 & 48)	127	317	81	6	1	26	558
Additions	37	70	226	75	252	5,048	5,708
Reclassification	487	4,383	557	–	73	(5,500)	–
Transfer to investment properties	(3)	–	–	–	–	–	(3)
Disposal of subsidiaries	(202)	(219)	(165)	(2)	(7)	(4)	(599)
Disposals	(140)	(222)	(146)	(86)	(32)	(7)	(633)
At 31 December 2020	4,950	33,737	3,814	465	2,247	5,738	50,951
DEPRECIATION AND IMPAIRMENT							
At 1 January 2019	653	4,288	707	245	909	–	6,802
Provided for the year	143	758	226	67	183	–	1,377
Disposal of subsidiaries	–	–	(4)	–	–	–	(4)
Eliminated on disposals	(13)	(35)	(59)	(39)	(64)	–	(210)
At 31 December 2019	783	5,011	870	273	1,028	–	7,965
Provided for the year	165	938	261	50	189	–	1,603
Impairment loss	17	–	53	–	–	–	70
Disposal of subsidiaries	(61)	(53)	(99)	(2)	(7)	–	(222)
Eliminated on disposals	(30)	(114)	(84)	(75)	(23)	–	(326)
At 31 December 2020	874	5,782	1,001	246	1,187	–	9,090
CARRYING VALUES							
At 31 December 2020	4,076	27,955	2,813	219	1,060	5,738	41,861
At 31 December 2019	3,861	24,397	2,391	199	932	6,175	37,955

16. PROPERTY, PLANT AND EQUIPMENT *(continued)*

The above items of property, plant and equipment, other than properties under construction, are depreciated on a straight-line basis as follows:

Leasehold land and buildings	Over the shorter of 30 years or the term of the leases
Pipelines	Over the shorter of 30 years or the term of the leases
Machinery and equipment	10 years
Motor vehicles	6 years
Office equipment	6 years

At the end of the reporting period, except for certain land and buildings with carrying value of RMB35 million (2019: RMB37 million) which are located in Hong Kong, the remaining land and buildings are located in the PRC.

At the end of the reporting period, the Group is in the process of applying for ownership certificates for its buildings in the PRC amounting to approximately RMB421 million (2019: RMB430 million).

17. RIGHT-OF-USE ASSETS

	Prepaid lease payments RMB million	**Leasehold land and buildings** RMB million	**Motor vehicles** RMB million	**Equipment** RMB million	**Total** RMB million
At 1 January 2019	1,440	580	48	4	2,072
Acquisition of subsidiaries (Note 47)	124	–	–	–	124
Additions	294	40	–	–	334
Disposal of subsidiaries (Note 49)	(65)	–	–	–	(65)
Disposals	(90)	(21)	–	–	(111)
Depreciation	(50)	(98)	(19)	(2)	(169)
At 31 December 2019	1,653	501	29	2	2,185
Acquisition of subsidiaries (Notes 47)	97	–	–	–	97
Additions	115	80	1	6	202
Disposal of subsidiaries (Note 49)	(41)	(105)	–	–	(146)
Disposals	(15)	(20)	–	–	(35)
Depreciation	(57)	(98)	(17)	(2)	(174)
At 31 December 2020	1,752	358	13	6	2,129
Expense relating to short-term lease and other leases with lease terms ended within 12 months of the date of initial application of HKFRS 16					24
Variable lease payments not included in the measurement of lease liabilities					6
Total cash outflow for leases					164

The Group leases various offices, warehouses, equipment and vehicles for its operations. Lease contracts are entered into for fixed term of 1 month to 50 years, but may have extension and termination options. Lease terms are negotiated on an individual basis and contain different terms and conditions. In determining the lease term and assessing the length of the non-cancellable period, the Group applies the definition of a contract and determines the period for which the contract is enforceable.

At the end of the reporting period, the Group is in the process of applying for the land use right certificates for the land in the PRC amounting to approximately RMB101 million (2019: RMB110 million). In the opinion of the Directors, the Group is not required to incur additional cost in obtaining the land use right certificates.

The Group entered into several short-term leases for various offices, warehouses, equipment and vehicles. As at 31 December 2020, the total outstanding commitments of such leases is RMB8 million.

18. INVESTMENT PROPERTIES

	RMB million
FAIR VALUE	
At 1 January 2019	265
Net increase in fair value recognised in profit or loss	6
Transfers from property, plant and equipment	4
Transfers to property, plant and equipment	(7)
At 31 December 2019	268
Exchange realignment	(3)
Net decrease in fair value recognised in profit or loss (Note 9)	(7)
Transfers from property, plant and equipment	3
At 31 December 2020	261

All of the Group's property interests held under operating leases to earn rentals or for capital appreciation purposes are measured using the fair value model and are classified and accounted for as investment properties. These investment properties include land and buildings which comprise operating leases in respect of properties situated in the PRC and Hong Kong.

The fair value of the Group's investment properties at 31 December 2020 and 2019 has been arrived at on the basis of a valuation carried out on those dates by Knight Frank Petty, a firm of independent valuers. The fair value was determined based on the income approach, where the market rentals of all lettable units of the properties are assessed and discounted at the market yield expected by investors for this type of properties. A significant increase in the market rent used would result in a significant increase in fair value, and vice versa. The Group's investment properties were classified in the Level 3 of fair value hierarchy as at 31 December 2020 and 2019.

In estimating the fair value of the properties, the highest and best use of the properties is their current use.

19. GOODWILL

	2020 **RMB million**	2019 RMB million
COST		
At 1 January	**2,430**	2,299
Acquisition of subsidiaries (Note 47)	**148**	131
Disposal of subsidiaries (Note 49)	**(16)**	–
At 31 December	**2,562**	2,430
IMPAIRMENT		
At 1 January and 31 December	**(51)**	(51)
CARRYING VALUES		
At 31 December	**2,511**	2,379

Note: The Group tests goodwill for impairment annually, or more frequently if there are indications that goodwill might be impaired.

19. GOODWILL *(continued)*

Note: *(continued)*

For the purposes of impairment testing, goodwill has been allocated to the following CGUs. At the end of the reporting period, the carrying value of goodwill mainly represents goodwill arising from the acquisition of:

	2020	2019
	RMB million	RMB million
Integrated energy business located in the PRC	**2,028**	1,998
Sale of piped gas business located in Xuancheng, the PRC	**100**	100
Sale of piped gas business located in Binzhou, the PRC	**–**	16
Sale of piped gas business located in Linyi, the PRC	**15**	15
Sale of piped gas business located in Gaofeng, the PRC	**27**	–
Sale of piped gas business located in Inner Mongolia, the PRC	**21**	–
Sale of piped gas business located in Jiangsu, the PRC	**52**	–
Sale of piped gas business located in Shuangcheng, the PRC	**18**	–
Other CGUs of sales of piped gas business, the PRC	**250**	250
	2,511	2,379

For the purpose of impairment testing, the recoverable amounts of the CGUs are determined from value in use calculations.

CGU of integrated energy business in the PRC

The Group prepares cash flow projection for integrated energy business in the PRC covering a 5-year (2019: 6-year) period and the cash flow beyond the 5-year (2019: 6-year) period was extrapolated using a steady growth rate of 3% (2019: 3%). For the 5-year (2019: 6-year) period, the first three years are based on financial budgets approved by management and based on the pattern consistent with the track record of the respective entity taking into account the stage of the development of the respective integrated energy projects. The revenues beyond the 3-year period but within the fifth (2019: sixth) year were estimated using an annualised growth rates of 8.83% (2019: 17.40%). The growth rates are based on the management's estimation on the respective entities projected market share and do not exceed average long-term growth rate for the relevant industry. The gross profit margin will be assumed the same beyond the 5-year (2019: 6-year) period.

The Directors estimate discount rate using pre-tax rate that reflect current market assessment of the time value of money and the risks specific to the CGU and determined the discount rate to be 15.23% (2019: 15.64%).

CGUs of sales of piped gas business in the PRC

For CGUs in the PRC, the Group prepares cash flow projection covering a 10-year period which is shorter than the contractual operating period. The cash flow projections for the first three years are based on financial budgets approved by management. The 3-year period financial budgets are prepared based on the pattern consistent with the track record of the respective entities taking into account the stage of the development of the respective gas projects. The cash flow beyond the 3-year period are extrapolated using an estimated growth pattern at an annualised growth rates of revenue for each CGU ranging from 3.97% to 8.13% (2019: 3.00% to 5.50%) and assuming the gross profit margin will be the same throughout the 10-year period.

The growth rates are based on the management's estimation on the respective entity's projected market share and will not exceed the growth rate of natural gas consumption projected by the relevant government authorities.

The Directors estimate discount rates using pre-tax rates that reflect current market assessments of the time value of money and the risks specific to the CGUs and determined the discount rate to be 14.56% to 16.40% (2019: 13.32% to 14.38%).

The Directors believe that any reasonably possible change in any of these assumptions would not cause the carrying amounts of goodwill to exceed the recoverable amount of respective CGUs.

20. INTANGIBLE ASSETS

	Right of operation RMB million	Customer base RMB million	Software RMB million	Technology RMB million	Development cost RMB million	Total RMB million
COST						
At 1 January 2019	3,073	51	126	549	25	3,824
Acquisition of subsidiaries (Notes 47 & 48)	1,337	–	–	–	–	1,337
Additions	–	–	7	–	32	39
Reclassification	–	–	46	–	(46)	–
At 31 December 2019	4,410	51	179	549	11	5,200
Acquisition of subsidiaries (Notes 47 & 48)	684	40	–	–	–	724
Additions	28	–	7	–	26	61
Reclassification	–	–	13	–	(13)	–
Disposal of subsidiaries (Note 49)	(221)	–	–	–	–	(221)
At 31 December 2020	4,901	91	199	549	24	5,764
AMORTISATION						
At 1 January 2019	738	22	8	19	–	787
Charge for the year	163	2	18	55	–	238
At 31 December 2019	901	24	26	74	–	1,025
Charge for the year	223	2	24	55	–	304
Disposal of subsidiaries (Note 49)	(11)	–	–	–	–	(11)
At 31 December 2020	1,113	26	50	129	–	1,318
CARRYING VALUES						
At 31 December 2020	3,788	65	149	420	24	4,446
At 31 December 2019	3,509	27	153	475	11	4,175

Right of operation and customer base are amortised on a straight-line method over the operation periods ranging from 10 to 50 years and from 15 to 50 years, respectively.

Software and technology is amortised on a straight-line method over the periods ranging from 1 to 10 years.

Development cost mainly represents expenditure incurred during the development phase of the Group's integrated energy service technologies and online LNG data platform.

21. INTERESTS IN ASSOCIATES

	2020 RMB million	2019 RMB million
Cost of investments	**2,500**	2,287
Share of post-acquisition profits, net of dividends received	**1,093**	995
	3,593	3,282
Deemed capital contribution		
Financial guarantee	**26**	26
	3,619	3,308

Included in the interests in associates is goodwill of approximately RMB47 million (2019: RMB47 million) arising on acquisitions.

In the opinion of the Directors, none of the associates principally affected the results or net assets of the Group. To give details of the associates of the Group would, in the opinion of the Directors, result in particulars of excessive length.

The associates are accounted for using the equity method in these consolidated financial statements.

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21. INTERESTS IN ASSOCIATES *(continued)*

Aggregate information of associates:

	2020 RMB million	2019 RMB million
Profit and total comprehensive income for the year	**575**	692
Group's share of profit and total comprehensive income from associates for the year	**306**	326
Aggregate carrying amount of the Group's interests in these associates	**3,619**	3,308

22. INTERESTS IN JOINT VENTURES

	2020 RMB million	2019 RMB million
Cost of investments	**2,612**	2,390
Share of post-acquisition profits, net of dividends received	**1,472**	1,394
	4,084	3,784
Deemed capital contribution		
Financial guarantee	**53**	53
Fair value adjustments on interest-free advances	**4**	4
	57	57
	4,141	3,841

Included in the interests in joint ventures is goodwill of approximately RMB192 million (2019: RMB192 million) arising on acquisitions.

The joint ventures are accounted for using the equity method in these consolidated financial statements.

Details of the Group's principal joint ventures as at 31 December 2020 and 2019 are as follows:

Name of company	Form of business structure	Place of establishment/ operation	Proportion of nominal value of registered capital held by the Group 2020	2019	Principal activities
東莞新奧燃氣有限公司 ("Dongguan Xinao") (note)	Incorporated	The PRC	**55%**	55%	Investment in gas pipeline infrastructure and sales of piped gas and gas appliances
煙台新奧燃氣發展有限公司 ("Yantai Xinao") (note)	Incorporated	The PRC	**50%**	50%	Sales of piped gas, integrated energy and services and provision of construction and installation services

Note: The Group holds 50% or more than 50% of the registered capital of these entities but it does not have the power to appoint sufficient number of directors to control these entities and the joint venture partners in each entity control jointly on the operational and financial policies of each entity. Accordingly, these entities are classified as joint ventures of the Group.

The table above lists the joint ventures of the Group which, in the opinion of the Directors, principally affected the results or net assets of the Group. To give details of other joint ventures of the Group would, in the opinion of the Directors, result in particulars of excessive length.

22. INTERESTS IN JOINT VENTURES *(continued)*

Summarised financial information of material joint ventures

Summarised financial information in respect of the Group's material joint ventures is set out below. The summarised financial information below represents amounts shown in the joint venture's financial statements prepared in accordance with HKFRSs.

Dongguan Xinao

	2020 RMB million	2019 RMB million
Current assets	**731**	798
Non-current assets	**3,390**	3,207
Current liabilities	**2,433**	2,406
Non-current liabilities	**77**	81
Non-controlling interests	**183**	166

The above amounts of assets and liabilities include the following:

	2020 RMB million	2019 RMB million
Cash and cash equivalents	**361**	299
Current financial liabilities (excluding trade and other payables)	**233**	627

	2020 RMB million	2019 RMB million
Revenue	**4,295**	4,182
Profit and total comprehensive income for the year	**218**	157
Dividends received from Dongguan Xinao during the year	**78**	154

The above profit for the year includes the following:

	2020 RMB million	2019 RMB million
Depreciation and amortisation	**143**	138
Interest income	**34**	41
Interest expense	**38**	52
Income tax expense	**87**	74

Reconciliation of the above summarised financial information to the carrying amount of the interest in Dongguan Xinao is recognised in the consolidated financial statements:

	2020 RMB million	2019 RMB million
Net assets of Dongguan Xinao	**1,428**	1,352
Proportion of the Group's ownership interest in Dongguan Xinao	**785**	743
Goodwill	**31**	31
Carrying amount of the Group's interest in Dongguan Xinao	**816**	774

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22. INTERESTS IN JOINT VENTURES *(continued)*

Summarised financial information of material joint ventures *(continued)*

Yantai Xinao

	2020 RMB million	2019 RMB million
Current assets	**613**	569
Non-current assets	**1,190**	1,173
Current liabilities	**840**	876
Non-current liabilities	**24**	19
Non-controlling interests	**2**	2

The above amounts of assets and liabilities include the following:

	2020 RMB million	2019 RMB million
Cash and cash equivalents	**357**	265
Current financial liabilities (excluding trade and other payables)	**160**	260

	2020 RMB million	2019 RMB million
Revenue	**1,603**	1,723
Profit and total comprehensive income for the year	**171**	163
Dividends received from Yantai Xinao during the year	**40**	35

The above profit for the year includes the following:

	2020 RMB million	2019 RMB million
Depreciation and amortisation	**58**	51
Interest income	**6**	2
Interest expense	**10**	15
Income tax expense	**61**	57

Reconciliation of the above summarised financial information to the carrying amount of the interest in Yantai Xinao is recognised in the consolidated financial statements:

	2020 RMB million	2019 RMB million
Net assets of Yantai Xinao	**937**	845
Proportion of the Group's ownership interest in Yantai Xinao	**469**	423
Goodwill	**7**	7
Capitalisation of financial guarantee	**1**	1
Carrying amount of the Group's interest in Yantai Xinao	**477**	431

Aggregate information of joint ventures that are not individually material:

	2020 RMB million	2019 RMB million
Profit and total comprehensive income for the year	**488**	727
Group's share of profit and total income from joint ventures for the year	**270**	378
Aggregate carrying amount of the Group's interests in these joint ventures	**2,848**	2,636

23. TRADE AND OTHER RECEIVABLES

	2020 RMB million	2019 RMB million
Trade receivables	**2,519**	2,595
Less: Allowance for credit losses	**(335)**	(233)
	2,184	2,362
Bills receivable (note)	**1,441**	1,413
Other receivables	**702**	472
Loan receivables	**379**	191
	2,522	2,076
Less: Allowance for credit losses	**(22)**	(18)
	2,500	2,058
Deductible input value added tax and prepayment of other taxes and charges	**1,499**	1,589
Advances to suppliers and prepayments	**2,943**	1,531
Total trade and other receivables	**9,126**	7,540
Analysed for reporting purpose as:		
Current portion	**9,053**	7,492
Non-current portion	**73**	48

Note: The bills receivable were endorsed by PRC banks for guarantee payments and the default risk is considered to be minimal.

The following is an aged analysis of trade receivables, net of allowance for credit losses presented based on invoice date at the end of the reporting period:

	2020 RMB million	2019 RMB million
0 to 3 months	**1,418**	1,792
4 to 6 months	**301**	76
7 to 9 months	**181**	192
10 to 12 months	**16**	55
More than one year	**268**	247
	2,184	2,362

As at 31 December 2020, total bills receivable amounting to RMB1,441 million (2019:RMB1,413 million) are with a maturity period of less than one year.

As at 31 December 2020, included in the Group's trade receivables balance are debtors with aggregate carrying amount of RMB779 million (2019: RMB719 million) which are past due at the end of the reporting period and is not considered as in default because the Group has assessed the historical payment pattern of the debtors and the credit quality of these customers.

Details of impairment assessment of trade and other receivables for the year ended 31 December 2020 are set out in Note 53.

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24. DERIVATIVE FINANCIAL INSTRUMENTS

	2020 RMB million	2019 RMB million
Derivative financial assets		
Derivatives designated as cash flow hedges:		
Foreign currency derivative contracts (note a)	2	–
Derivatives not designated in hedge accounting:		
Foreign currency derivative contracts (note a)	–	100
Commodity derivative contracts (note b)	626	573
	628	673
Derivative financial liabilities		
Derivatives designated as cash flow hedges:		
Foreign currency derivative contracts (note a)	135	–
Commodity derivative contracts (note b)	62	–
Derivatives not designated in hedge accounting:		
Commodity derivative contracts (note b)	730	746
	927	746
Analysed for reporting purpose as:		
Assets		
Current portion	336	345
Non-current portion	292	328
Liabilities		
Current portion	401	416
Non-current portion	526	330

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	Commodity Derivatives RMB million	Foreign Currency Derivatives RMB million	Total RMB million
Net unrealised gain (loss) included in other gains and losses			
Derivatives designated as cash flow hedges			
– ineffective portion	(13)	–	(13)
Derivatives not designated in hedge accounting	45	6	51
	32	6	38
Net realised gain (loss) included in other gains and losses			
Derivatives designated as cash flow hedges			
– ineffective portion	–	(55)	(55)
Derivatives not designated in hedge accounting	171	(52)	119
	171	(107)	64
	203	(101)	102

24. DERIVATIVE FINANCIAL INSTRUMENTS *(continued)*

For the year ended 31 December 2019

	Commodity Derivatives RMB million	Foreign Currency Derivatives RMB million	Total RMB million
Net unrealised gain included in other gains and losses			
Derivatives at FVTPL	633	161	794
Net realised gain (loss) included in other gains and losses			
Derivatives at FVTPL	178	(57)	121
	811	104	915

Notes:

a. The Group is exposed to exchange rate risk mainly arising from various bonds and bank loans denominated in USD. To manage and mitigate the foreign exchange exposure, the Group entered into various foreign currency derivative contracts (the "Foreign Currency Derivatives") with certain financial institutions. As at 31 December 2020, the Foreign Currency Derivatives have a total notional amount of USD750 million (2019: USD785 million), of which the maturity dates match to the maturity dates of certain debts denominated in USD. The Foreign Currency Derivatives will enable the Group to buy USD at the predetermined RMB/USD exchange rates on maturity dates. The Foreign Currency Derivatives are designated as hedging instruments and accounted for under hedge accounting from 1 January 2020.

b. Since the year ended 31 December 2016, the Group has commitments to acquire LNG from certain suppliers. The delivery of LNG under such arrangements commenced in 2018 and last for 5 to 10 years. The Group is obliged to make "take-or-pay" payment to suppliers for the quantity contracted but not delivered.

   In the opinion of the Directors, such LNG purchase arrangements are entered into and continued to be held for the purpose of the receipt of a non-financial item in accordance with the Group's expected purchase, sale and usage.

   In order to manage and mitigate the commodity price risk, the Group entered into various commodity derivative contracts (the "Commodity Derivatives") against the underlying LNG contracts with certain financial institutions in order to stabilise its future LNG purchase costs. Certain Commodity Derivatives are designated as hedging instruments under hedge accounting from 1 January 2020.

c. The derivative financial instruments were included in the "financial assets/liabilities at FVTPL" line items as at 31 December 2019 and re-presented as "derivative financial instruments" as at 31 December 2020.

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25. FINANCIAL ASSETS AT FVTPL

	2020 **RMB million**	2019 RMB million
Financial assets at FVTPL		
Listed equity interest in Shanghai Dazhong Public Utilities (Group) Co., Ltd (“Shanghai Utilities”) (note a)	**244**	287
1.13% equity interest in Sinopec Marketing Co., Ltd (note b)	**4,170**	4,170
Unlisted equity securities (note c)	**346**	384
Unlisted wealth management products	**70**	16
	4,830	4,857
Analysed for reporting purpose as:		
Assets		
Current portion	**70**	16
Non-current portion	**4,760**	4,841

	2020 **RMB million**	2019 RMB million
Net unrealised (loss) gain included in other gains and losses		
Listed equity interest in Shanghai Utilities (note a)	**(43)**	(22)
1.13% equity interest in Sinopec Marketing Co., Ltd (note b)	**–**	(7)
Unlisted equity securities (note c)	**(2)**	34
	(45)	5

Notes:

a. The above listed investment represents 4.38% of the total issued share capital of Shanghai Utilities (1635.HK). During the year ended 31 December 2020, the Group received dividend income of approximately RMB7 million (2019: RMB7 million) from Shanghai Utilities.

b. The above investment represents 1.13% unlisted equity interest in Sinopec Marketing Co., Ltd (“Sinopec Marketing”). During the year ended 31 December 2020, the Group received dividend income of approximately RMB66 million (2019: RMB128 million) from Sinopec Marketing.

c. The unlisted investments represent investments in unlisted equity securities issued by private entities incorporated in the PRC.

26. EQUITY INSTRUMENTS AT FVTOCI

	2020 **RMB million**	2019 RMB million
Listed equity securities	**62**	–
Unlisted equity securities	**149**	123
	211	123

The above unlisted investments represent investments in unlisted equity securities issued by private entities incorporated in the PRC. The Directors have elected to designate these investments as equity instruments at FVTOCI as they believe that the Group will hold these investments for strategic cooperation purpose and has no intention to dispose of these investments in the foreseeable future.

27. TRANSFER OF FINANCIAL ASSETS

The following were the Group's financial assets as at 31 December 2020 and 2019 that were transferred to banks or suppliers by discounting, pledging to banks or endorsing those receivables on a full recourse basis. As the Group has not transferred the significant risks and rewards relating to these receivables, it continues to recognise the full carrying amount of the receivables and the corresponding liabilities included in secured borrowings or trade payables respectively. These financial assets are carried at amortised cost in the Group's consolidated statement of financial position.

At 31 December 2020

	Bills receivable discounted or pledged to banks RMB million	**Bills receivable endorsed to suppliers RMB million**	**Total RMB million**
Carrying amount of transferred assets	**112**	**523**	**635**
Carrying amount of associated liabilities	**(112)**	**(523)**	**(635)**
	–	**–**	**–**

At 31 December 2019

	Bills receivable discounted or pledged to banks RMB million	Bills receivable endorsed to suppliers RMB million	Total RMB million
Carrying amount of transferred assets	49	675	724
Carrying amount of associated liabilities	(49)	(675)	(724)
	–	–	–

28. CONTRACT ASSETS

	2020 RMB million	2019 RMB million
Gas pipeline installation	**650**	643
Integrated energy construction contracts	**82**	114
	732	757

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29. AMOUNTS DUE FROM/TO ASSOCIATES

	2020 **RMB million**	2019 RMB million
Amounts due from associates:		
Current portion	**892**	575
Non-current portion	**6**	345
	898	920
Amounts due to associates:		
Current portion	**319**	189

Included in the amounts due from/to associates are trade receivables amounting to approximately RMB531 million (2019: RMB473 million) and trade payables amounting to approximately RMB71 million (2019: RMB84 million).

The aged analysis presented based on the invoice date at the end of the reporting period is as follows:

	2020 **RMB million**	2019 RMB million
Trade receivables due from associates		
0 to 3 months	**229**	189
4 to 6 months	**130**	94
7 to 9 months	**64**	88
10 to 12 months	**14**	26
More than one year	**94**	76
	531	473

There is no formal credit period applied and the balance was repayable on demand. Owing to the strategic relationship with the associates, the Directors are of the view that the balance is not considered as in default.

The amounts due from/to associates are unsecured, interest-free and repayable on demand except for the amounts due from/to associates detailed in the following table.

At 31 December 2020

	Maturity date	**Effective interest rate per annum**	**2020** **RMB million**
Loan receivables from associates			
Unsecured	28/03/2021–16/01/2023	4.35%–8.00%	**191**
Loan payables to associates			
Savings in ENN Finance		0.35%	**144**
Unsecured	20/12/2021	4.35%	**35**
			179

29. AMOUNTS DUE FROM/TO ASSOCIATES *(continued)*

At 31 December 2019

	Maturity date	Effective interest rate per annum	2019 RMB million
Loan receivables from associates			
Unsecured	17/01/2020–22/05/2022	4.35%–8.00%	277
Loan payables to associates			
Savings in ENN Finance		0.35%	66
Unsecured	20/12/2020	4.35%	35
			101

Details of impairment assessment of amounts due from associates are set out in Note 53.

30. AMOUNTS DUE FROM/TO JOINT VENTURES

	2020 RMB million	2019 RMB million
Amounts due from joint ventures:		
Current portion	**2,106**	1,058
Non-current portion	**10**	12
	2,116	1,070
Amounts due to joint ventures:		
Current portion	**976**	785
Non-current portion	**585**	735
	1,561	1,520

Included in the amounts due from joint ventures was approximately RMB245 million (2019: RMB194 million) arising from the deposits placed for purchases of gas by the Group from the joint ventures. The balance approximates its fair value and is repayable on demand.

Included in the amounts due from/to joint ventures are trade receivables amounting to approximately RMB735 million (2019: RMB653 million) and trade payables amounting to approximately RMB786 million (2019: RMB585 million) and the aged analysis presented based on invoice date is as follows:

	2020 RMB million	2019 RMB million
Trade receivables due from joint ventures		
0 to 3 months	**533**	430
4 to 6 months	**40**	35
7 to 9 months	**24**	60
10 to 12 months	**7**	31
More than one year	**131**	97
	735	653

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30. AMOUNTS DUE FROM/TO JOINT VENTURES *(continued)*

	2020 RMB million	2019 RMB million
Trade payables due to joint ventures		
0 to 3 months	**566**	500
4 to 6 months	**102**	35
7 to 9 months	**51**	6
10 to 12 months	**26**	3
More than one year	**41**	41
	786	585

There is no formal credit period applied and the balance was repayable on demand. Owing to the strategic relationship with the joint ventures, the Directors are of the view that the balance is not considered as in default.

The amounts due from/to joint ventures are unsecured, interest-free and repayable on demand except for the amounts due from/to joint ventures detailed in the following table:

At 31 December 2020

	Maturity date	**Effective interest rate per annum**	**2020 RMB million**
Loan receivables from joint ventures			
Unsecured	15/06/2021–26/09/2022	4.35%–6.00%	**532**
Loan payables to joint ventures			
Unsecured	12/02/2021–29/12/2022	0.35%–5.00%	**623**
Savings in ENN Finance		0.35%	**57**
			680

At 31 December 2019

	Maturity date	Effective interest rate per annum	2019 RMB million
Loan receivables from joint ventures			
Unsecured	05/06/2020–26/09/2022	4.35%–6.00%	179
Loan payables to joint ventures			
Unsecured	07/01/2020–30/06/2021	0.35%–5.00%	830
Savings in ENN Finance		0.35%	79
			909

Details of impairment assessment of amounts due from joint ventures are set out in Note 53.

31. AMOUNTS DUE FROM/TO RELATED COMPANIES

	2020 RMB million	2019 RMB million
Amounts due from companies controlled by a director and shareholder with significant influence	**348**	164
Amounts due to companies controlled by a director and shareholder with significant influence	**925**	1,060

The related companies are controlled by Mr. Wang Yusuo ("Mr. Wang") who is a director and shareholder of the Company with significant influence. The maximum amount outstanding during the year in respect of the amounts due from companies controlled by Mr. Wang is RMB510 million (2019: RMB646 million).

Included in the amounts due from/to related companies are trade receivables amounting to approximately RMB209 million (2019: RMB160 million) and trade payables amounting to approximately RMB861 million (2019: RMB1,026 million) and the aged analysis presented based on invoice date at the end of the reporting period is as follow:

	2020 RMB million	2019 RMB million
Trade receivables due from related companies		
0 to 3 months	**51**	38
4 to 6 months	**24**	16
7 to 9 months	**32**	13
10 to 12 months	**9**	26
More than one year	**93**	67
	209	160

	2020 RMB million	2019 RMB million
Trade payables due to related companies		
0 to 3 months	**577**	674
4 to 6 months	**98**	137
7 to 9 months	**53**	62
10 to 12 months	**34**	36
More than one year	**99**	117
	861	1,026

There is no formal credit period applied and the balance was repayable on demand. Owing to the strategic relationship with the related companies, the Directors are of the view that the balance is not considered as in default.

Details of impairment assessment of amounts due from related companies are set out in Note 53.

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32. DEFERRED TAXATION

	2020 RMB million	2019 RMB million
Deferred tax assets	**1,370**	1,292
Deferred tax liabilities	**(2,562)**	(1,820)
	(1,192)	(528)

The following are the major deferred tax assets and liabilities recognised and movements thereon during the years ended 31 December 2020 and 2019:

	Intangible assets RMB million	Capitalisation of interest in property, plant and equipment RMB million	Undistributed retained profits of PRC entities from 1 January 2008 RMB million (note)	Deferred income RMB million	Unrealised profits RMB million	Equipment for one time deduction from 1 January 2018 RMB million	Others RMB million	Total RMB million
At 1 January 2019	552	182	133	(1,016)	(245)	252	(16)	(158)
Acquisition of subsidiaries (Note 47)	341	–	–	–	–	–	–	341
(Credit) charge to profit or loss	(45)	30	49	(54)	(100)	475	(10)	345
At 31 December 2019	848	212	182	(1,070)	(345)	727	(26)	528
Acquisition of subsidiaries (Note 47)	209	–	–	–	–	–	–	209
(Credit) charge to profit or loss	(60)	36	151	9	(78)	483	(32)	509
Charge to other comprehensive income	–	–	–	–	–	–	2	2
Disposal of subsidiaries (Note 49)	(56)	–	–	–	–	–	–	(56)
At 31 December 2020	941	248	333	(1,061)	(423)	1,210	(56)	1,192

Note: The amount represents deferred taxation in respect of the temporary differences attributable to the undistributed retained profits earned after 1 January 2008 by the group entities registered in the PRC. The amount has been provided based on the amount of undistributed retained profit of certain PRC entities from 1 January 2008 attributable to non-PRC parent entities at a withholding tax rate of 10% or 5% as the Directors consider the amount will be probably reversed in the foreseeable future upon distribution of profit by the respective group entities.

Deferred taxation of approximately RMB930 million (2019: RMB809 million) has not been provided for in the consolidated financial statements in respect of temporary differences attributable to undistributed retained profit of certain PRC subsidiaries as the Group is able to control the timing of the reversal of the temporary differences and it is probable that the temporary differences will not reverse in the foreseeable future.

32. DEFERRED TAXATION *(continued)*

As at 31 December 2020, the Group has unused tax losses of approximately RMB1,774 million (2019: RMB1,651 million) available for offset against future profits. No deferred tax asset has been recognised in respect of the unused tax losses due to the uncertainty of future profit streams. The unrecognised tax losses will be expired in the following years ending 31 December:

	2020 **RMB million**	2019 RMB million
2020	**–**	120
2021	**80**	158
2022	**96**	147
2023	**446**	534
2024	**698**	692
2025	**454**	–
	1,774	1,651

As at 31 December 2020, the Group has other deductible temporary differences of approximately RMB403 million (2019: RMB496 million), which are mainly arising from impairment of trade and other receivables and unrealised profits within the Group. No deferred tax asset has been recognised in relation to such other deductible temporary differences as it is not probable that taxable profit will be available for offsetting against which the deductible temporary differences can be utilised.

33. INVENTORIES

	2020 **RMB million**	2019 RMB million
Construction materials	**787**	648
Gas appliances	**178**	218
Natural gas	**233**	214
Other energy inventories	**34**	30
Spare parts and consumables	**6**	4
Integrated energy appliances	**47**	55
	1,285	1,169

The cost of inventories recognised as an expense during the year was approximately RMB55,280 million (2019: RMB54,976 million).

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34. CASH AND CASH EQUIVALENTS/RESTRICTED BANK DEPOSITS

	2020 **RMB million**	2019 RMB million
Cash and cash equivalents	**8,630**	7,373
Restricted bank deposits		
Current portion	**116**	566
Non-current portion	**650**	446
	766	1,012
Bank deposits secured for:		
Letter of credit	**15**	45
Right of operation	**59**	30
Mandatory reserves in the People's Bank of China ("PBOC")	**465**	384
Energy supplies	**76**	83
Bills payable	**151**	370
Structured deposit	**–**	100
	766	1,012

Cash and cash equivalents include bank balances with original maturities less than three months carrying interest at market rates which range from 0.03% to 4.18% (2019: 0.3% to 3.71%) per annum as at 31 December 2020. The bank balances denominated in RMB are deposited with banks in the PRC.

At the end of the reporting period, the cash and cash equivalents denominated in foreign currencies other than the functional currency of respective group entities is RMB684 million (2019: RMB152 million), of which approximately RMB583 million (2019: RMB129 million) and approximately RMB101 million (2019: RMB23 million) are denominated in USD and HK$ respectively.

As at 31 December 2020, the restricted bank deposits carry fixed interest rate ranging from 0.03% to 3.71% (2019: from 0.3% to 3.71%) per annum. Except for the amount of mandatory reserves in the PBOC, other restricted bank deposits will be released upon the settlement of bank loans, the expiry of purchase contracts or right of operation. The mandatory reserves in the PBOC classified as non-current assets are deposits placed by ENN Finance and the reserves amount is subject to change with respect to the savings accepted by ENN Finance and the PBOC reserve rate is adjusted from time to time.

35. LEASE LIABILITIES

	2020 **RMB million**	2019 RMB million
Lease liabilities payables:		
Within one year	**89**	100
More than one year, but not more than two years	**66**	80
More than two years, but not more than five years	**116**	143
More than five years	**128**	227
	399	550
Less: Amounts due within one year shown under current liabilities	**(89)**	(100)
Amounts shown under non-current liabilities	**310**	450

The weighted average incremental borrowing rates applied to lease liabilities range from 3.04% to 5.23% (2019: from 4.43% to 5.23%).

36. TRADE AND OTHER PAYABLES

	2020 RMB million	2019 RMB million
Trade payables	**6,186**	5,698
Accrued charges and other payables	**2,116**	1,937
	8,302	7,635

The following is an aged analysis of trade payables presented based on the invoice date at the end of the reporting period.

	2020 RMB million	2019 RMB million
0 to 3 months	**3,472**	3,559
4 to 6 months	**1,094**	1,135
7 to 9 months	**535**	238
10 to 12 months	**236**	161
More than one year	**849**	605
	6,186	5,698

The average credit period on purchases of goods is 30 to 90 days.

37. CONTRACT LIABILITIES

	2020 RMB million	2019 RMB million
Deposit for gas charges and other sales (note a)	**7,082**	6,597
Deposit for construction and installation contracts (note b)	**6,893**	5,721
Deferred income (note c)	**3,479**	3,597
	17,454	15,915
Analysed for reporting purpose as:		
Current	**14,242**	12,613
Non-current	**3,212**	3,302
	17,454	15,915

Contract liabilities are classified as current and non-current based on the Group's earliest obligation to transfer goods or services to the customers.

The amount recognised in the current year relates to carried-forward contract liabilities were RMB10,431 million (2019: RMB8,910 million).

Notes:

a. The Group requires the customers to deposit gas charges into magnetic cards which connected to the gas meters. When the customers consume the natural gas, corresponding value of deposits will be recognised as revenue in line with the volume of gas consumed at pre-determined unit price. The deposit would be typically consumed within one year.

b. For construction and installation contracts, the Group normally receives a deposit before construction work commences. The Group continues to recognise revenue over time and apply output method in estimating the performance obligations satisfied throughout the construction and the installation period.

c. The deferred income represents fees received from certain customers for maintaining the ongoing deliverability to supply gas at the discretion of the customers. The period to supply gas would be consistent with the operating period as stated in the right of operation.

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38. DEFERRED INCOME

	Government grants RMB million
GROSS	
At 1 January 2019	594
Additions	164
At 31 December 2019	758
Additions	123
Disposal of subsidiaries	(11)
At 31 December 2020	870
RECOGNITION	
At 1 January 2019	49
Release to profit or loss	26
At 31 December 2019	75
Release to profit or loss	32
Disposal of subsidiaries	(4)
At 31 December 2020	103
CARRYING VALUES	
At 31 December 2020	767
At 31 December 2019	683

	2020 RMB million	2019 RMB million
Analysed for reporting purposes as:		
Current liabilities	**38**	33
Non-current liabilities	**729**	650
	767	683

39. SHARE CAPITAL

	2020 Number of shares	2019 Number of shares	**2020 HK$ million**	2019 HK$ million
Shares of HK$0.10 each				
Authorised:				
At beginning and end of the year	**3,000,000,000**	3,000,000,000	**300**	300
Issued and fully paid:				
At beginning of the year	**1,125,477,108**	1,124,002,858	**112**	112
Issue of shares on exercise of share options (note)	**2,888,000**	1,474,250	**1**	–
At end of the year	**1,128,365,108**	1,125,477,108	**113**	112

39. SHARE CAPITAL *(continued)*

	2020 RMB million	2019 RMB million
Presented in consolidated financial statements as:		
At beginning of the year	**116**	116
Issue of shares on exercise of share options	**1**	–
At end of the year	**117**	116

Note: During the year ended 31 December 2020, 200,000 shares were issued at the exercise price of HK$16.26 per ordinary share under Scheme 2002, 2,212,800 shares (2019: 1,474,250 shares) and 475,200 shares were issued at the exercise price of HK$40.34 and HK$76.36 per ordinary share under Scheme 2012, respectively, in relation to the exercise of outstanding share options. These shares rank pari passu with the then existing shares in all respects as set out in Note 45.

Save as disclosed above and in Note 45, none of the Company's subsidiaries purchased, sold or redeemed any of the Company's listed securities up to 31 December 2020.

40. BANK AND OTHER LOANS

	2020 RMB million	2019 RMB million
Bank loans		
Secured	**456**	187
Unsecured	**6,099**	10,015
	6,555	10,202
Other loans		
Secured	**16**	36
Unsecured	**97**	105
	113	141
	6,668	10,343
The bank and other loans are repayable:		
On demand or within one year	**4,590**	7,495
More than one year, but not exceeding two years	**64**	2,131
More than two years, but not exceeding five years	**753**	242
More than five years	**1,261**	475
	6,668	10,343
Less: Amounts due within one year shown under current liabilities	**(4,590)**	(7,495)
Amounts shown under non-current liabilities	**2,078**	2,848

As at 31 December 2020, all the bank and other loans are denominated in the functional currency of respective group entities except for approximately RMB1,631 million (2019: RMB4,994 million) and nil (2019: RMB1,380 million) which are denominated in USD and HK$ respectively.

The secured bank and other loans are secured by property, plant and equipment, rights to receive fee income of certain subsidiaries and joint ventures as set out in Note 52 and guarantees provided by related parties as set out in Note 55.

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40. BANK AND OTHER LOANS *(continued)*

Details of the terms of the Group's borrowings are set out below:

At 31 December 2020

	Maturity date	Effective interest rate per annum	Carrying amount RMB million
Fixed-rate borrowings			
Unsecured RMB bank loans	12/02/2021–21/12/2029	1.70%–4.80%	**3,494**
Unsecured RMB other loans	31/12/2021	3.79%	**97**
Secured RMB bank loan	23/02/2021–25/12/2024	3.40%–4.41%	**456**
Secured RMB other loan	23/08/2022	4.35%	**16**
Unsecured USD bank loans	22/01/2021–05/02/2021	2.40%–2.53%	**652**
Total fixed-rate borrowings			**4,715**
Floating-rate borrowings			
Unsecured RMB bank loans at PBOC base rate	30/01/2021–07/11/2032	4.30%–5.39%	**974**
Unsecured USD bank loan at London Interbank Offered Rate ("LIBOR")	30/11/2021	1.23%	**979**
Total floating-rate borrowings			**1,953**
Total borrowings			**6,668**

At 31 December 2019

	Maturity date	Effective interest rate per annum	Carrying amount RMB million
Fixed-rate borrowings			
Unsecured RMB bank loans	15/01/2020–25/12/2020	3.92%–7.50%	2,755
Unsecured RMB other loans	12/06/2020–31/12/2020	3.79%–4.35%	105
Secured RMB bank loan	31/07/2022	4.75%	100
Secured RMB other loan	31/12/2020	4.35%	36
Unsecured HK$ bank loans	06/01/2020–08/05/2020	2.43%–3.05%	1,380
Unsecured USD bank loans	06/01/2020–29/03/2020	2.32%–3.57%	2,901
Total fixed-rate borrowings			7,277
Floating-rate borrowings			
Secured RMB bank loans at PBOC base rate	30/03/2020–01/05/2027	4.56%–7.35%	87
Unsecured RMB bank loans at PBOC base rate	30/01/2020–07/11/2032	4.35%–5.39%	886
Unsecured USD bank loan at LIBOR	30/11/2021	2.99%–3.26%	2,093
Total floating-rate borrowings			3,066
Total borrowings			10,343

41. CORPORATE BONDS

Details of the terms of the three tranches' corporate bonds issued by Xinao (China) Gas Investment Company Limited ("Xinao (China)") are set out below:

Date of issuance	**22 January 2019**	**8 March 2019**	**11 November 2019**
Principal amount	**RMB500 million**	**RMB1,000 million**	**RMB600 million**
Interest rate	**4.19%**	**4.20%**	**3.98%**
Maturity date	**22 January 2022**	**8 March 2022**	**12 November 2022**
Net proceeds after deducting transaction costs	**RMB498 million**	**RMB996 million**	**RMB599 million**
Date of listing on the Shanghai Stock Exchange	**20 February 2019**	**29 March 2019**	**22 November 2019**
Effective interest rate after the adjustment for transaction costs	**4.36%**	**4.36%**	**4.04%**

The corporate bonds recognised in the consolidated statement of financial position are calculated cumulatively as follows:

	2020 **RMB million**	2019 RMB million
Nominal value of corporate bonds	**2,100**	2,100
Issue costs	**(7)**	(7)
Fair value at date of issuance	**2,093**	2,093
Cumulative effective interest recognised	**148**	58
Cumulative interest paid/payable	**(144)**	(57)
Carrying amount at 31 December	**2,097**	2,094

42. SENIOR NOTES

a. 2021 Senior Notes

On 13 May 2011, the Company issued 6% senior notes with an aggregated nominal value of USD750 million (equivalent to approximately RMB4,863 million) (the "2021 Senior Notes") at face value. The net proceeds, after deducting the issuance costs, amounted to USD735 million (equivalent to approximately RMB4,765 million). The 2021 Senior Notes will be matured on 13 May 2021. The 2021 Senior Notes are listed on the Singapore Exchange Securities Trading Limited (the "SGX-ST") and dealt in over-the-counter market though a financial institution as the principal agent.

According to the terms and conditions of the 2021 Senior Notes, at any time or from time to time prior to the maturity date, the Company may at its option to redeem the notes at a redemption price equaled to 100% of the principal amount thereof plus applicable premium and accrued and unpaid interest to such redemption date. The applicable premiums are the greater of (1) 1.0% of the principal amount and (2) the excess of (A) the present value at such redemption date of 100% of the principal amount, plus all required remaining scheduled interest payments due on the 2021 Senior Notes through the maturity date (but excluding accrued and unpaid interest to redemption date), computed using a discount rate equaled to the United States treasury rate plus 25 basis points, over (B) the principal amount on redemption date.

The fair value of the early redemption right is insignificant at initial recognition and at the end of the reporting periods. The effective interest rate is approximately 6.28% per annum after the adjustment for transaction costs.

42. SENIOR NOTES *(continued)*

a. 2021 Senior Notes *(continued)*

The 2021 Senior Notes recognised in the consolidated statement of financial position are calculated cumulatively as follows:

	2020 RMB million	2019 RMB million
Nominal value of 2021 Senior Notes	**4,863**	4,863
Issue costs	**(98)**	(98)
Fair value at date of issuance	**4,765**	4,765
Repurchased (note)	**(2,603)**	(2,603)
Cumulative effective interest recognised	**2,241**	2,083
Cumulative interest paid/payable	**(2,175)**	(2,023)
Exchange loss	**152**	317
Carrying amount at 31 December	**2,380**	2,539

Note: In September 2015 and December 2016, the Company repurchased in aggregate of principal amount of USD35,000,000 and USD349,457,000 (equivalent to approximately RMB222 million and RMB2,410 million) in the open market. The principal amount of USD366 million was outstanding as at 31 December 2020 and 2019.

b. Green Senior Notes

On 17 September 2020, the Company issued 2.63% green senior notes with an aggregated nominal value of USD750 million (equivalent to approximately RMB5,137 million) (the "Green Senior Notes") at face value. The net proceeds, after deducting the issuance costs, amounted to USD739 million (equivalent to approximately RMB5,065 million). The Green Senior Notes will be matured on 17 September 2030. The Green Senior Notes are listed on the Stock Exchange and dealt in over-the-counter market through a financial institution as the principal agent.

According to the terms of the Green Senior Notes, the Company may, at any time and from time to time redeem the Green Senior Notes. The applicable Green Senior Notes will be redeemable at: (A) prior to 17 June 2030, the greater of (1) 100% of the principal amount of the applicable Green Senior Notes to be redeemed and (2) the sum of the present values of the remaining scheduled payments of principal and interest on the applicable Green Senior Notes to be redeemed, discounted to the date of redemption on a semi-annual basis at the Adjusted Treasury Rate (as defined in the offering memorandum dated 10 September 2020) plus 50 basis points, plus accrued and unpaid interest on the applicable Green Senior Notes to be redeemed; or (B) on or after 17 June 2030, 100% of the principal amount of the Green Senior Notes to be redeemed, plus accrued and unpaid interest, if any.

The fair value of the early redemption right is insignificant at initial recognition and at the end of the reporting periods. The effective interest rate is approximately 2.81% per annum after the adjustment for transaction costs.

The Green Senior Notes recognised in the consolidated statement of financial position are calculated cumulatively as follows:

	2020 RMB million
Nominal value of Green Senior Notes	**5,137**
Discount cost	**(43)**
Issue costs	**(29)**
Fair value at date of issuance	**5,065**
Cumulative effective interest recognised	**40**
Cumulative interest paid/payable	**(38)**
Exchange gain	**(240)**
Carrying amount at 31 December	**4,827**

43. UNSECURED BONDS

On 23 October 2014, the Company issued 3.25% unsecured bonds with an aggregate nominal value of USD400 million (equivalent to approximately RMB2,460 million) (the "2019 Unsecured Bonds"). The net proceeds after discounting and deducting the issuance costs amounted to USD395 million (equivalent to approximately RMB2,429 million). The remaining balance of the 2019 Unsecured Bonds was fully repaid on 23 October 2019.

On 24 July 2017, the Company issued 3.25% unsecured bonds with an aggregate nominal value of USD600 million (equivalent to approximately RMB4,066 million) (the "2022 Unsecured Bonds"). The net proceeds after discounting and deducting the issuance costs amounted to USD596 million (equivalent to approximately RMB4,037 million). The 2022 Unsecured Bonds will mature on 24 July 2022. The 2022 Unsecured Bonds are listed on the Stock Exchange and dealt in over-the-counter market through a financial institution as the principal agent.

According to the terms and conditions of the 2019 Unsecured Bonds and 2022 Unsecured Bonds (the "Unsecured Bonds"), the Company may at any time and from time to time, on giving not less than 30 nor more than 60 days' notice to the holders of the Unsecured Bonds, redeem the Unsecured Bonds, in whole but not in part, at a make whole price as of, with an accrued and unpaid interest, if any, to (but excluding), the redemption date. The make whole price means, with respect to a bond at the option redemption date, the amount calculated by the quotation agent that is the greater of (1) the present value of the principal amount of the Unsecured Bonds, assuming a scheduled repayment thereof on the maturity date plus all required remaining scheduled interest repayments due on such bond through the maturity date (but excluding accrued and unpaid interest to the option redemption date), computed using a discount rate equalled to the adjusted treasury rate plus 50 basis points, and (2) the principal amount of such bonds.

The estimated fair value of the early redemption right is insignificant at initial recognition and at the end of the reporting periods. The effective interest rate is approximately 3.44% per annum after deducting the adjustment for transaction costs for 2022 Unsecured Bonds.

The Unsecured Bonds recognised in the consolidated statement of financial position are calculated cumulatively as follows:

	2020 **RMB million**	2019 RMB million
Nominal value of Unsecured Bonds	**4,066**	6,526
Discount cost	**(5)**	(17)
Issue costs	**(24)**	(43)
Fair value at date of issuance	**4,037**	6,466
Repurchased and cancelled in 2015	**–**	(2,107)
Repurchased and cancelled in 2020 (note)	**(199)**	–
Cumulative effective interest recognised	**474**	481
Cumulative interest paid/payable	**(455)**	(458)
Repayment	**–**	(459)
Exchange (gain) loss	**(145)**	246
Carrying amount at 31 December	**3,712**	4,169

Note: In October and November 2020, the Company repurchased in aggregate of principal amount of USD19,564,000 and USD10,100,000 (equivalent to approximately RMB132 million and RMB67 million) in the open market. The principal amount of USD570 million was outstanding as at 31 December 2020.

44. HEDGING RESERVE

The hedging reserve includes cash flow hedge reserve and cost of hedging reserve. The following table provides a reconciliation of the hedging reserve in respect of foreign exchange risk and commodity risk during the year.

	Foreign exchange risk RMB million	Commodity risk RMB million	Total RMB million
Cash flow hedge reserve			
At 1 January 2020	–	–	–
Loss arising on changes in fair value of hedging instruments	**(299)**	**(122)**	**(421)**
Gain reclassified to profit or loss – hedged item has affected profit or loss	**323**	–	**323**
Loss reclassified to profit or loss – forecast transaction no longer expected to occur	**(5)**	–	**(5)**
Cumulative loss transferred to initial carrying amount of hedged items	–	**71**	**71**
Income tax relating to items that may be reclassified subsequently	–	**8**	**8**
At 31 December 2020	**19**	**(43)**	**(24)**
Of which:			
Balance related to continuing cash flow hedges	**(24)**		
Balance related to discontinued cash flow hedges	–		

	Foreign exchange risk RMB million	Commodity risk RMB million	Total RMB million
Cost of hedging reserve			
At 1 January 2020	–	–	–
Changes in fair value of time value/foreign currency basis component of time period related hedged items	**45**	–	**45**
Changes in fair value of time value of transaction related hedged items	–	**(36)**	**(36)**
Amortisation to profit or loss of changes in fair value in relation to time period related hedged items	**(26)**	–	**(26)**
Gain arising on changes in fair value in relation to reclassified to profit or loss – forecast transaction no longer expected to occur	**(2)**	–	**(2)**
Income tax relating to items that may be reclassified subsequently	–	**6**	**6**
At 31 December 2020	**17**	**(30)**	**(13)**
	36	**(73)**	**(37)**

The changes in fair value of the time value of options and foreign currency basis spread of hedging instruments are accumulated in the cost of hedging reserve and will be reclassified to profit or loss only when the hedged transaction affects profit or loss, or included as a basis adjustment to the non-financial hedged item.

45. SHARE BASED PAYMENT TRANSACTIONS

The Company has adopted a share award scheme pursuant to the board resolution of the Company dated 30 November 2018 (the "Share Award Scheme").

The Company has adopted share option schemes pursuant to an ordinary resolution passed at an extraordinary general meeting of the Company held on 21 May 2002 (the "Scheme 2002") and an annual general meeting of the Company held on 26 June 2012 (the "Scheme 2012").

a. Share Award Scheme

Pursuant to the Share Award Scheme, the Company had contracted with a trustee to establish a trust (the "Trust") on 12 March 2019. The board of directors (the "Board") may from time to time during the effective period of the Share Award Scheme (a term of 10 years commencing on the adoption of this scheme or early terminated) contribute funds to the Trust and instruct the trustee to purchase shares of the Company on the Stock Exchange or in off-market transactions. Shares purchased and held by the Trust are non-transferrable and have no voting rights. Shares will be granted to selected employees of any members of the Group pursuant to the terms and trust deed of the Share Award Scheme. Vesting of the shares granted to selected employees is conditional upon the fulfilment of service and/or performance as specified by the Board.

During the year ended 31 December 2020, the trustee purchased a total of 270,000 shares (2019: 2,415,100 shares). The cost of the shares purchased was recognised in equity as treasury stocks. During the year ended 31 December 2020, 62,000 shares had been nominally granted to two outperformed employees with awarded price being HK$76.36 and will be settled by cash upon vesting of shares. Vesting of the notional gain from these awarded shares is conditional upon the fulfilment of respective performance target. 2,685,100 shares including the granted shares (2019: 2,415,100 shares) were held by the trustee as at 31 December 2020.

b. Scheme 2012

On 9 December 2015, the Company granted share options to the Directors and certain employees (the "2015 Grantees") to subscribe for a total of 12,000,000 ordinary shares of the Company under the Scheme 2012. Among the share options granted, 2,659,000 share options were granted to the Directors and the remaining were granted to certain employees of the Group. Vesting of the share options is conditional upon the fulfilment of certain vesting conditions as set out in the respective offer letters of the 2015 Grantees, which may involve fulfilment of performance rating.

On 28 March 2019, the Company granted share options to Directors and certain employees of the Company, and business consultants who contribute to the success of the Company (the "2019 Grantees") to subscribe for a total of 12,328,000 ordinary shares of the Company under the Scheme 2012. Among the share options granted above, 2,480,000 share options were granted to the Directors and the remaining were granted to certain employees of the Group and business consultants. Vesting of the share options is conditional upon the fulfilment of certain vesting conditions as set out in the respective offer letters of the 2019 Grantees, which may involve fulfilment of performance rating.

2015 Grantees and 2019 Grantees should continue in office and achieve the designated vesting conditions from the date of grant till the exercisable date. Thus, the vesting period of the share options is from the date of the grant until the commencement of the exercise period.

45. SHARE BASED PAYMENT TRANSACTIONS *(continued)*

b. Scheme 2012 *(continued)*

The following tables disclose details of the Company's share options held by the grantees and movements in such holdings under the share option scheme during the current year:

		Date of grant	Exercise period	Exercise price (HK$)	Outstanding at 1.1.2020	Number of options Exercised during the year	Forfeited during the year	Reclassified during the year	Outstanding at 31.12.2020
Scheme 2012- batch 1									
Directors	Tranche 1	9.12.2015	1.4.2017 to 8.12.2025	40.34	230,500	(106,000)	–	35,500	160,000
	Tranche 2	9.12.2015	1.4.2018 to 8.12.2025	40.34	442,575	(167,700)	–	(114,875)	160,000
	Tranche 3	9.12.2015	1.4.2019 to 8.12.2025	40.34	538,775	(176,025)	–	(202,750)	160,000
	Tranche 4	9.12.2015	1.4.2020 to 8.12.2025	40.34	581,250	(217,975)	(96,575)	(106,175)	160,525
Employees	Tranche 1	9.12.2015	1.4.2017 to 8.12.2025	40.34	205,250	(38,650)	–	(35,500)	131,100
	Tranche 2	9.12.2015	1.4.2018 to 8.12.2025	40.34	366,261	(329,212)	–	114,875	151,924
	Tranche 3	9.12.2015	1.4.2019 to 8.12.2025	40.34	560,474	(514,924)	(17,750)	202,750	230,550
	Tranche 4	9.12.2015	1.4.2020 to 8.12.2025	40.34	1,425,000	(662,314)	(426,950)	106,175	441,911
Subtotal					4,350,085	(2,212,800)	(541,275)	–	1,596,010
Exercisable at the end of the year									1,596,010
Weighted average exercise price									HK$40.34

		Date of grant	Exercise period	Exercise price (HK$)	Outstanding at 1.1.2020	Number of options Exercised during the year	Forfeited during the year	Reclassified during the year	Outstanding at 31.12.2020
Scheme 2012- batch 2									
Directors	Tranche 1	28.3.2019	1.4.2020 to 27.3.2029	76.36	15,000	–	–	–	15,000
	Tranche 2	28.3.2019	1.4.2021 to 27.3.2029	76.36	768,200	–	–	(240,000)	528,200
	Tranche 3	28.3.2019	1.4.2022 to 27.3.2029	76.36	768,400	–	–	(240,000)	528,400
	Tranche 4	28.3.2019	1.4.2023 to 27.3.2029	76.36	768,400	–	–	(240,000)	528,400
Employees	Tranche 1	28.3.2019	1.4.2020 to 27.3.2029	76.36	1,061,300	(365,700)	(246,000)	–	449,600
	Tranche 2	28.3.2019	1.4.2021 to 27.3.2029	76.36	2,539,900	–	(31,500)	240,000	2,748,400
	Tranche 3	28.3.2019	1.4.2022 to 27.3.2029	76.36	2,541,400	–	(31,500)	240,000	2,749,900
	Tranche 4	28.3.2019	1.4.2023 to 27.3.2029	76.36	2,541,400	–	(31,500)	240,000	2,749,900
Business Consultants	Tranche 1	28.3.2019	1.4.2020 to 27.3.2029	76.36	201,000	(109,500)	–	–	91,500
	Tranche 2	28.3.2019	1.4.2021 to 27.3.2029	76.36	201,000	–	(22,500)	–	178,500
	Tranche 3	28.3.2019	1.4.2022 to 27.3.2029	76.36	201,000	–	(22,500)	–	178,500
	Tranche 4	28.3.2019	1.4.2023 to 27.3.2029	76.36	201,000	–	(22,500)	–	178,500
Subtotal					11,808,000	(475,200)	(408,000)	–	10,924,800
Exercisable at the end of the year									556,100
Weighted average exercise price									HK$76.36
Total					16,158,085	(2,688,000)	(949,275)	–	12,520,810

45. SHARE BASED PAYMENT TRANSACTIONS *(continued)*

b. Scheme 2012 *(continued)*

The following tables disclose details of the Company's share options held by the grantees and movements in such holdings under the share option scheme during the prior year:

		Date of grant	Exercise period	Exercise price (HK$)	Outstanding at 1.1.2019	Number of options Granted during the year	Exercised during the year	Forfeited during the year	Reclassified during the year	Outstanding at 31.12.2019
Scheme 2012- batch 1										
Directors	Tranche 1	9.12.2015	1.4.2017 to 8.12.2025	40.34	230,750	–	(250)	–	–	230,500
	Tranche 2	9.12.2015	1.4.2018 to 8.12.2025	40.34	538,750	–	(73,550)	(22,625)	–	442,575
	Tranche 3	9.12.2015	1.4.2019 to 8.12.2025	40.34	538,750	–	–	–	25	538,775
	Tranche 4	9.12.2015	1.4.2020 to 8.12.2025	40.34	538,750	–	–	–	42,500	581,250
Employees	Tranche 1	9.12.2015	1.4.2017 to 8.12.2025	40.34	406,900	–	(201,650)	–	–	205,250
	Tranche 2	9.12.2015	1.4.2018 to 8.12.2025	40.34	1,030,850	–	(539,287)	(125,302)	–	366,261
	Tranche 3	9.12.2015	1.4.2019 to 8.12.2025	40.34	1,727,750	–	(659,513)	(507,738)	(25)	560,474
	Tranche 4	9.12.2015	1.4.2020 to 8.12.2025	40.34	1,727,750	–	–	(260,250)	(42,500)	1,425,000
Subtotal					6,740,250	–	(1,474,250)	(915,915)	–	4,350,085
Exercisable at the end of the year										2,343,835
Weighted average exercise price										HK$40.34

		Date of grant	Exercise period	Exercise price (HK$)	Outstanding at 1.1.2019	Number of options Granted during the year	Exercised during the year	Forfeited during the year	Reclassified during the year	Outstanding at 31.12.2019
Scheme 2012- batch 2										
Directors	Tranche 1	28.3.2019	1.4.2020 to 27.3.2029	76.36	–	105,000	–	(90,000)	–	15,000
	Tranche 2	28.3.2019	1.4.2021 to 27.3.2029	76.36	–	791,600	–	(90,000)	66,600	768,200
	Tranche 3	28.3.2019	1.4.2022 to 27.3.2029	76.36	–	791,700	–	(90,000)	66,700	768,400
	Tranche 4	28.3.2019	1.4.2023 to 27.3.2029	76.36	–	791,700	–	(90,000)	66,700	768,400
Employees	Tranche 1	28.3.2019	1.4.2020 to 27.3.2029	76.36	–	1,061,300	–	–	–	1,061,300
	Tranche 2	28.3.2019	1.4.2021 to 27.3.2029	76.36	–	2,606,500	–	–	(66,600)	2,539,900
	Tranche 3	28.3.2019	1.4.2022 to 27.3.2029	76.36	–	2,608,100	–	–	(66,700)	2,541,400
	Tranche 4	28.3.2019	1.4.2023 to 27.3.2029	76.36	–	2,608,100	–	–	(66,700)	2,541,400
Business Consultants	Tranche 1	28.3.2019	1.4.2020 to 27.3.2029	76.36	–	241,000	–	(40,000)	–	201,000
	Tranche 2	28.3.2019	1.4.2021 to 27.3.2029	76.36	–	241,000	–	(40,000)	–	201,000
	Tranche 3	28.3.2019	1.4.2022 to 27.3.2029	76.36	–	241,000	–	(40,000)	–	201,000
	Tranche 4	28.3.2019	1.4.2023 to 27.3.2029	76.36	–	241,000	–	(40,000)	–	201,000
Subtotal					–	12,328,000	–	(520,000)	–	11,808,000
Exercisable at the end of the year										–
Weighted average exercise price										HK$76.36
Total					6,740,250	12,328,000	(1,474,250)	(1,435,915)	–	16,158,085

45. SHARE BASED PAYMENT TRANSACTIONS *(continued)*

b. Scheme 2012 *(continued)*

Exercise price of the share options granted on 9 December 2015 is HK$40.34 per share, which represents the highest of (i) the closing price of HK$39.00 per share as stated in the daily quotations sheet of the Stock Exchange on 9 December 2015, being the date of grant; (ii) the average closing price of HK$40.34 per share as stated in the daily quotations sheets of the Stock Exchange for the five trading days immediately preceding the date of grant; and (iii) the nominal value of the share.

The total fair value of the options granted on 9 December 2015 calculated by using the binomial model was HK$194 million.

Exercise price of the share options granted on 28 March 2019 is HK$76.36 per share, which represents the highest of (i) the closing price of HK$74.10 per share as stated in the daily quotations sheet of the Stock Exchange on 28 March 2019, being the date of grant; (ii) the average closing price of HK$76.36 per share as stated in the daily quotations sheets of the Stock Exchange for the five trading days immediately preceding the date of grant; and (iii) the nominal value of the share.

The total fair value of the options granted on 28 March 2019 calculated by using the binomial model was HK$336 million.

During the year ended 31 December 2020, no (2019: 12,328,000) share options were granted, 2,688,000 (2019: 1,474,250) share options were exercised and 949,275 (2019: 1,435,915) share options were forfeited. As at 31 December 2020, the number of outstanding share options is 12,520,810 (2019: 16,158,085). During the year, the Group recognised share-based payment expenses of RMB70 million (2019: RMB74 million) and RMB51 million (2019: RMB24 million) was transferred from share options reserve to share premium upon exercise of share options.

c. Scheme 2002

On 14 June 2010, the Company granted share options to the Directors and certain employees (“Grantees”) to subscribe for a total of 33,490,000 ordinary shares of HK$0.1 each in the share capital of the Company under the share option scheme adopted by the Company on 21 May 2002, subject to acceptance by the Grantees.

Among the share options granted above, 14,810,000 share options were granted to the Directors to subscribe for a total of 14,810,000 shares of the Company and 18,680,000 share options were granted to certain employees of the Group to subscribe for 18,680,000 shares of the Company.

As at 31 December 2020, no share option granted was outstanding (2019: 200,000).

During the current and prior year, the Group recognised no share-based payment expenses as all the share options have been fully vested.

46. RETIREMENT BENEFITS SCHEME

	2020 RMB million	2019 RMB million
Retirement benefit scheme contribution made during the year	27	220

According to the relevant laws and regulations in the PRC, the PRC subsidiaries within the Group are required to contribute a certain percentage of the payrolls of their employees to the retirement benefits scheme to fund the retirement benefits of their employees. The Group operates a Mandatory Provident Fund Scheme (the "MPF Scheme") for all qualifying employees in Hong Kong. The assets of the schemes are held separately from those of the Group, in funds under the control of trustees. The Group contributes 5% of relevant payroll costs to the MPF Scheme, contribution of which is matched by employees. The maximum monthly amount of contribution is limited to HK$1,500 per employee.

47. ACQUISITION OF BUSINESSES THROUGH ACQUISITIONS OF SUBSIDIARIES

a. Acquisition of businesses during the year ended 31 December 2020

Acquisition date	Company acquired	Registered capital acquired	Consideration RMB million	Nature of business
26 March 2020	浙江省浦江高峰管道燃氣有限公司 ("Gaofeng")	90.00%	155	Retail gas sales business
31 March 2020	內蒙古華億能源股份有限公司 ("Huayi")	100.00%	180	Retail gas sales business
10 August 2020	興化東方燃氣有限公司 ("Xinghua")	65.00%	29	Retail gas sales business
17 August 2020	江蘇能源控股有限公司 ("Jiangsu")	70.00%	284	Retail gas sales business
29 December 2020	雙城中慶燃氣有限公司 ("Shuangcheng")	100.00%	121	Retail gas sales business
29 December 2020	上海中芬熱電有限公司 ("Zhongfen")	51.00%	85	Sales of integrated energy and services

Gaofeng, Huayi, Xinghua, Jiangsu, Shuangcheng and Zhongfen were acquired (collectively referred to as "2020 Companies Acquired") with the objective of expansion in market coverage of the Group's business.

47. ACQUISITION OF BUSINESSES THROUGH ACQUISITIONS OF SUBSIDIARIES *(continued)*

a. Acquisition of businesses during the year ended 31 December 2020 *(continued)*

The amounts of fair value of the assets and liabilities at the date of acquisition are as follows:

	Gaofeng RMB million	Huayi RMB million	Jiangsu RMB million	Others RMB million	Total RMB million
Non-current assets					
Property, plant and equipment	67	124	162	192	545
Intangible assets	163	54	335	161	713
Right-of-use assets	13	22	1	61	97
Current assets					
Inventories	4	3	–	7	14
Trade and other receivables	38	37	69	43	187
Contract assets	2	–	–	–	2
Cash and cash equivalents	38	1	7	34	80
Current liabilities					
Trade and other payables	(87)	(34)	(95)	(123)	(339)
Contract liabilities	(10)	(25)	(5)	(36)	(76)
Bank and other loans – due within one year	(50)	(2)	(23)	(15)	(90)
Non-current liabilities					
Deferred tax liabilities	(41)	(21)	(89)	(58)	(209)
Bank and other loans – due after one year	–	–	(30)	(41)	(71)
Net assets acquired	137	159	332	225	853
Capital injection by the Group	–	–	–	29	29
Net assets acquired including capital injection by the Group	137	159	332	254	882
Goodwill arising on acquisition					
Total consideration	155	180	284	235	854
Add: Non-controlling interests	9	–	100	67	176
Less: Fair value of identified net assets acquired including capital injection by the Group	(137)	(159)	(332)	(254)	(882)
Goodwill arising on acquisition (determined on a provisional basis)	27	21	52	48	148
Total consideration satisfied by:					
Cash	153	152	284	–	589
Consideration payables	2	28	–	206	236
Capital injection by the Group	–	–	–	29	29
	155	180	284	235	854
Net cash (outflow) inflow arising on acquisition:					
Cash consideration paid	(153)	(152)	(284)	–	(589)
Less: Cash and cash equivalents acquired	38	1	7	34	80
	(115)	(151)	(277)	34	(509)

47. ACQUISITION OF BUSINESSES THROUGH ACQUISITIONS OF SUBSIDIARIES *(continued)*

a. Acquisition of businesses during the year ended 31 December 2020 *(continued)*

The fair value of property, plant and equipment and intangible assets at the date of acquisition was provisional and pending for the valuation carried out by an independent firm of professional valuer.

Included in the profit for the year ended 31 December 2020 was RMB7 million of profit attributable to the additional businesses generated by 2020 Companies Acquired. Revenue for the year ended 31 December 2020 includes RMB312 million generated from 2020 Companies Acquired.

Had the acquisitions of 2020 Companies Acquired been completed on 1 January 2020, the revenue of the Group for the year ended 31 December 2020 would have been approximately RMB72,111 million, and the profit for the year would have been approximately RMB7,281 million. The pro forma information is for illustrative purposes only and is not necessarily an indication of revenue and results of operations of the Group that actually would have been achieved had the acquisitions been completed on 1 January 2020, nor is intended to be a projection of future results.

In determining the "pro-forma" revenue and profit of the Group, had 2020 Companies Acquired been acquired on 1 January 2020, the Directors have calculated the depreciation and amortisation of property, plant and equipment and intangible assets acquired on the basis of the fair values rather than the carrying amounts recognised in the pre-acquisition financial statements.

b. Acquisition of businesses during the year ended 31 December 2019

Acquisition date	Company acquired	Registered Capital acquired	Consideration RMB million	Nature of business
12 February 2019	福建省閩昇燃氣有限公司 ("Minsheng")	80.00%	40	Retail gas sales business
18 March 2019	滄州市南大港管理區盛德燃氣有公司 ("Nandagang") (note a)	65.00%	38	Retail gas sales business
29 March 2019	萊蕪金鴻管道天然氣有限公司, 寧陽金鴻天然氣有限公司, 壽光樂義華璽天然氣利用有限公司 and 綏化市中油金鴻燃氣供應管理有限公司 (collectively referred to as "Jinhong")	100.00%	258	Retail gas sales business
2 April 2019	孟村回族自治縣盛德燃氣有限公司 ("Mengcun") (note b)	65.00%	71	Retail gas sales business
18 April 2019	臨沂華油眾德燃氣有限公司 ("Linyi")	70.00%	66	Retail gas sales business
8 May 2019	龍游中機新奧智慧能源有限公司 ("Longyou") (note c)	55.00%	31	Sales of integrated energy and services
21 August 2019	隆昌中歐油氣能源有限公司 ("Longchang")	60.00%	69	Retail gas sales business
3 September 2019	文安縣昱通燃氣有限公司 ("Wenan")	100.00%	24	Retail gas sales business
19 September 2019	宣燃天然氣股份有限公司 ("Xuanran")	97.67%	988	Retail gas sales business
21 October 2019	蚌埠眾德燃氣有限公司 ("Bengbu")	100.00%	29	Retail gas sales business
28 October 2019	臨城國源燃氣有限公司 ("Lincheng")	80.00%	47	Retail gas sales business
28 November 2019	台玻安徽能源有限公司 ("Taibo")	80.00%	14	Retail gas sales business
4 December 2019	唐山市蘭天燃氣有限公司 ("Tangshan")	100.00%	45	Retail gas sales business
26 December 2019	山東新燃供氣有限公司 ("Xinran")	70.00%	97	Retail gas sales business
1 January 2019	合肥新奥中汽能源發展有限公司 ("Hefeizhongqi") (note d)	N/A	N/A	Retail gas sales business

47. ACQUISITION OF BUSINESSES THROUGH ACQUISITIONS OF SUBSIDIARIES *(continued)*

b. Acquisition of businesses during the year ended 31 December 2019 *(continued)*

Notes:

a. The Group acquired Nandagang by contributing capital to Nandagang, which was contingent on the net profit of Nandagang for the next three years and estimated to be approximately RMB38 million.

b. The Group acquired Mengcun by contributing capital to Mengcun, which was contingent on the net profit of Mengcun for the next three years and estimated to be approximately RMB71 million.

c. The Group acquired further 55% of the registered capital of Longyou, which then became a wholly owned subsidiary of the Group from a joint venture.

d. A joint venture of the Group, Hefeizhongqi amended its articles of association, which then became a subsidiary of the Group from a joint venture with no consideration.

Minsheng, Jinhong, Nandagang, Mengcun, Linyi, Longyou, Longchang, Wenan, Xuanran, Bengbu, Lincheng, Taibo, Tangshan, Xinran and Hefeizhongqi were acquired with the objective of expansion in market coverage of the Group's business.

The amounts of fair value of the assets and liabilities at the date of acquisition are as follows:

	Jinhong RMB million	Mengcun & Nandagang RMB million	Xuanran RMB million	Others RMB million	Total RMB million
Non-current assets					
Property, plant and equipment	313	56	367	268	1,004
Intangible assets – right of operation	58	80	678	467	1,283
Right-of-use assets	18	7	23	30	78
Interest in joint ventures	–	–	33	20	53
Long term receivables	–	–	–	1	1
Current assets					
Inventories	2	5	37	10	54
Trade and other receivables	236	29	23	133	421
Cash and cash equivalents	50	2	163	17	232
Current liabilities					
Trade and other payables	(372)	(99)	(65)	(108)	(644)
Contract liabilities	–	–	(140)	(57)	(197)
Bank and other loans – due within one year	(17)	(2)	(25)	(87)	(131)
Non-current liabilities					
Deferred tax liabilities	(15)	(20)	(185)	(121)	(341)
Net assets acquired	273	58	909	573	1,813
Capital injection by the Group (contingent value)	–	109	–	50	159
Net assets acquired including capital injection by the Group	273	167	909	623	1,972

47. ACQUISITION OF BUSINESSES THROUGH ACQUISITIONS OF SUBSIDIARIES *(continued)*

b. Acquisition of businesses during the year ended 31 December 2019 *(continued)*

	Jinhong RMB million	Mengcun & Nandagang RMB million	Xuanran RMB million	Others RMB million	Total RMB million
Goodwill (bargain purchase gain) arising on acquisition					
Total consideration	258	109	988	462	1,817
Add: Non-controlling interests	–	58	21	147	226
Add: Fair value of previously held interest	–	–	–	45	45
Less: Fair value of identified net assets acquired including capital injection by the Group	(273)	(167)	(909)	(623)	(1,972)
	(15)	–	100	31	116
Gain on remeasurement of the investments in joint ventures previously held by the Group					
Fair value of previously held interest	–	–	–	45	45
Less: Carrying amount of the equity interest	–	–	–	(34)	(34)
	–	–	–	11	11
Total consideration satisfied by:					
Cash	258	–	904	277	1,439
Consideration payables	–	–	84	135	219
Capital injection by the Group	–	109	–	50	159
	258	109	988	462	1,817
Net cash (outflow) inflow arising on acquisition:					
Cash consideration paid	(258)	–	(904)	(277)	(1,439)
Less: Deposit paid in the prior year	133	–	–	9	142
Less: Cash and cash equivalents acquired	50	2	163	17	232
	(75)	2	(741)	(251)	(1,065)

48. ACQUISITION OF ASSETS THROUGH ACQUISITIONS OF SUBSIDIARIES

a. Acquisition of assets through acquisitions of subsidiaries during the year ended 31 December 2020

To facilitate the Group's expansion, the Group will from time to time liaise with the local PRC governments and potential vendors to acquire the local rights of operation, gas assets and integrated energy related assets through acquisition of subsidiaries. During the year ended 31 December 2020, the Group has acquired assets through the acquisitions of the following subsidiary:

Acquisition date	Company acquired	Registered capital acquired	Consideration RMB million
7 January 2020	澄城縣華興燃氣有限公司	80.00%	6
26 August 2020	雲南新奧售電有限公司 (note a)	51.00%	14
4 November 2020	常山新奧燃氣有限公司 (note b)	51.00%	2

Notes:

a. The Group acquired the remaining 51.00% of the equity interest of 雲南新奧售電有限公司, which then became a 100% owned subsidiary of the Group from a joint venture.

b. The Group acquired the remaining 51.00% of the equity interest of 常山新奧燃氣有限公司, which then became a 100% owned subsidiary of the Group from a joint venture.

The transaction was accounted for as acquisition of asset through acquisitions of subsidiaries and the fair value of the consideration allocated to the assets and liabilities acquired are as follows:

	RMB million
Non-current assets	
Property, plant and equipment	**13**
Intangible assets	**11**
Current assets	
Trade and other receivables	**26**
Cash and cash equivalents	**5**
Current liabilities	
Trade and other payables	**(15)**
Contract liabilities	**(1)**
Net assets acquired	**39**
Less: Non-controlling interests	**(2)**
Less: Fair value of previously held interest	**(15)**
Total consideration	**22**

48. ACQUISITION OF ASSETS THROUGH ACQUISITIONS OF SUBSIDIARIES *(continued)*

a. Acquisition of assets through acquisitions of subsidiaries during the year ended 31 December 2020 *(continued)*

	RMB million
Total consideration satisfied by:	
Cash	**21**
Consideration payables	**1**
	22
Net cash outflow arising acquisition:	
Cash consideration paid	**(21)**
Less: Deposit paid in the prior year	**14**
Less: Cash and cash equivalents acquired	**5**
	(2)

b. Acquisition of assets through acquisitions of subsidiaries during the year ended 31 December 2019

To facilitate the Group's expansion, the Group will from time to time liaise with the local PRC governments and potential vendors to acquire the local rights of operation, gas assets and integrated energy related assets through acquisition of subsidiaries. During the year ended 31 December 2019, the Group has acquired assets through the acquisitions of the following subsidiaries:

Acquisition date	Company acquired	Registered capital acquired	Consideration RMB million
2 January 2019	安徽池州瑞恩能源有限公司	90.00%	43
8 January 2019	南豐縣中氣天然氣有限公司	100.00%	10
10 January 2019	日照中能燃氣有限公司	100.00%	26
18 January 2019	壽寧縣中氣新能源有限公司	100.00%	5
22 January 2019	霞浦縣中氣新能源有限公司	100.00%	10
22 January 2019	古田縣中氣新能源有限公司	100.00%	15
15 April 2019	大慶高新博源熱電有限公司 (note)	18.15%	22
8 November 2019	內蒙古德昱生物質能熱電有限公司	51.00%	31
15 November 2019	安慶市濱江能源有限公司	82.55%	18

Note: The Group acquired further 18.15% of the equity interest of 大慶高新博源熱電有限公司, which then became a 51% owned subsidiary of the Group from an associate.

48. ACQUISITION OF ASSETS THROUGH ACQUISITIONS OF SUBSIDIARIES *(continued)*

b. Acquisition of assets through acquisitions of subsidiaries during the year ended 31 December 2019 *(continued)*

The transactions were accounted for as acquisition of assets through acquisitions of subsidiaries and the fair value of the considerations allocated to the assets and liabilities acquired are as follows:

	RMB million
Non-current assets	
Property, plant and equipment	222
Intangible assets	54
Right-of-use assets	46
Current assets	
Trade and other receivables	85
Cash and cash equivalents	33
Current liabilities	
Trade and other payables	(67)
Bank and other loans – due within one year	(84)
Net assets acquired	289
Capital injection by the Group	31
Net assets acquired including capital injection by the Group	320
Less: Non-controlling interests	(88)
Less: Fair value of previously held interest	(52)
Total consideration	180
Total consideration satisfied by:	
Cash	107
Consideration payables	42
Capital injection by the Group	31
	180
Net cash outflow arising on acquisition:	
Cash consideration paid	(107)
Less: Deposit paid in the prior year	37
Less: Cash and cash equivalents acquired	33
	(37)

49. DISPOSAL OF SUBSIDIARIES

a. Disposal of subsidiaries during the year ended 31 December 2020

Disposal date	Company disposed	Registered capital acquired	Consideration RMB million
30 April 2020	溫縣新奧交通清潔能源有限公司	100.00%	2
5 June 2020	東莞市新奧車用燃氣發展有限公司	55.00%	55
10 June 2020	邢台新奧車用燃氣有限公司	98.18%	13
8 September 2020	合肥新奧中汽能源發展有限公司	51.00%	20
24 September 2020	巢湖市安燃燃氣發展有限公司	100.00%	9
29 September 2020	沁陽新奧交通清潔能源有限公司	100.00%	3
15 October 2020	山東新燃供氣有限公司	70.00%	10
26 October 2020	保定新奧新能源有限公司	100.00%	1
26 October 2020	元氏縣新奧車用燃氣有限公司	100.00%	1
5 November 2020	武陟新奧交通清潔能源有限公司	100.00%	18
20 November 2020	懷仁新奧燃氣有限公司	90.00%	164
9 December 2020	安陽新奧清潔能源有限公司	100.00%	3
16 December 2020	濟源新奧交通清潔能源有限公司	100.00%	2
16 December 2020	河北新奧清潔能源有限公司	100.00%	4
31 December 2020	淄博新奧燃氣有限公司	60.00%	1

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For the year ended 31 December 2020

49. DISPOSAL OF SUBSIDIARIES *(continued)*

a. Disposal of subsidiaries during the year ended 31 December 2020 *(continued)*

The net assets at the dates of disposal were as follow:

	RMB million
Non-current assets	
Property, plant & equipment	377
Right-of-use assets	146
Intangible assets	210
Interest in a joint venture	33
Current assets	
Inventories	15
Trade and other receivables	56
Cash and cash equivalents	31
Current liabilities	
Trade and other payables	(79)
Bank and other loans – due within one year	(7)
Contract liabilities	(18)
Lease liabilities	(9)
Non-current liabilities	
Deferred tax liabilities	(56)
Deferred income	(7)
Lease liabilities	(101)
Net assets	591
Less: Non-controlling interests	(152)
Net assets attributable to the owners of the Company disposed of	439

The loss on disposal of subsidiaries recognised in profit or loss was calculated as below:

	RMB million
Consideration received	277
Consideration receivable	29
Consideration payables derecognised	87
Less: Goodwill derecognised	(16)
Less: Net assets attributable to owners of the Company derecognised	(439)
Loss on disposal of subsidiaries	(62)
Net cash inflow arising from the disposal:	
Cash consideration received	277
Less: Cash and bank balance disposed of	(31)
	246

49. DISPOSAL OF SUBSIDIARIES *(continued)*

b. Disposal of subsidiaries during the year ended 31 December 2019

On 15 March 2019, a subsidiary of the Group, 長沙新奧金滿地清潔能源有限公司 amended its articles of association, which then became a 48.42% owned joint venture of the Group.

On 22 March 2019, the Group disposed of 70% equity interest in 惠州新鑫新能源有限公司 at a cash consideration of RMB45 million.

On 22 November 2019, the Group disposed of 80% equity interest in 三河市新奧天龍車用燃氣有限公司 at a cash consideration of RMB3 million.

The net assets at the dates of disposal were as follow:

	RMB million
Non-current assets	
Property, plant and equipment	12
Right-of-use assets	65
Current assets	
Cash and cash equivalents	3
Current liabilities	
Trade and other payables	(8)
Net assets	72
Less: Non-controlling interests	(2)
Net assets attributable to the owners of the Company disposed of	70

The loss on disposal of subsidiaries recognised in profit or loss was calculated as below:

	RMB million
Fair value of the residual interests	20
Consideration received	45
Consideration receivable	3
Less: Net assets attributable to owners of the Company derecognised	(70)
Loss on disposal of subsidiaries	(2)
Net cash inflow arising from the disposal:	
Cash consideration received	45
Less: Cash and cash equivalents disposed of	(3)
	42

50. COMMITMENTS

a. Capital commitments

	2020 RMB million	2019 RMB million
Capital expenditure in respect of acquisition of property, plant and equipment contracted for but not provided in the consolidated financial statements	**899**	1,021
Capital commitments in respect of		
– investments in joint ventures	**518**	495
– investments in associates	**469**	518
– other equity investments	**2**	259

50. COMMITMENTS *(continued)*

b. Other commitments

The Group has commitments to acquire LNG from certain suppliers. The delivery of LNG under such arrangements last for 5 to 10 years. The Group is obliged to make "take-or-pay" payment to suppliers for the quantity contracted but not delivered.

In the opinion of the Directors, these LNG will be utilised to satisfy the demand of domestic natural gas consumption from both the Group's piped gas customers and wholesale customers. The Directors determined that such LNG purchase arrangements are entered into and continued to be held for the purpose of the receipt of a non-financial item in accordance with the Group's expected purchase, sale and usage. Accordingly, the LNG purchase arrangements are not considered as derivatives financial instruments within the scope of HKFRS 9 since the initial recognition.

The relevant purchase prices of these arrangements will be determined by reference to certain variables, such as petroleum price indexes prevailing at the market, and are denominated in USD. The Directors assessed the economic characteristics and risks of the embedded derivatives and concluded that they are closely related to the economic risks and characteristics of the relevant host contracts. Accordingly, the embedded derivatives are not separated from the LNG purchase arrangements as derivative financial instruments recognised in the consolidated financial statements.

51. OPERATING LEASING ARRANGEMENTS

The Group as lessor

The Group's investment properties are held for rental purposes. Property rental income earned during the year was RMB10 million (2019: RMB10 million). All of the properties held have committed tenants for terms ranging from one to twenty years.

At the end of the reporting period, the Group had contracted with tenants for the following future minimum lease payments:

	2020 RMB million	2019 RMB million
Within one year	**16**	17
In the second to fifth year inclusive	**29**	37
Over five years	**34**	34
	79	88

52. PLEDGE OF ASSETS

At the end of the reporting period, the Group pledged certain assets as securities for bank and other loans, bill facilities and contracts granted to the Group, associates and joint ventures as follows:

	2020 RMB million	2019 RMB million
Carrying amount of:		
Property, plant and equipment	**87**	106
Restricted bank deposits	**301**	628
Right-of-use assets	**4**	7
Bills receivable	**112**	49
Intangible assets	**52**	–

In addition to the above, the Group has also pledged its rights to receive construction and installation and gas supply fee income of certain subsidiaries in favour of banks to secure banking facilities amounting to RMB400 million (2019: RMB868 million) granted to the Group, of which RMB400 million (2019: RMB187 million) has been utilised up to 31 December 2020.

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS

a. Capital risk management

The Group manages its capital to ensure that entities in the Group will be able to continue as a going concern, to maintain the confidence of creditors, to sustain future development of the entities and to maximise the return to the equity holders of the Company. The capital structure of the Group consists of net debt (borrowings disclosed in Notes 40, 41, 42 and 43, net of cash and cash equivalents) and total equity of the Group.

The Group manages its capital base through net gearing ratio. The Directors review the capital structure on a semi-annual basis. The Group has a target of net gearing ratio below 100% and will maintain the ratio within target by issue of new debts, repayment of debts, issue of new shares, repurchase of shares or payment of dividends. The Group's overall strategy remains unchanged from prior year. The Group repurchased certain senior notes in order to better manage its net gearing ratio. The net gearing ratio at the end of the reporting period was as follows:

	2020 RMB million	2019 RMB million
Bank and other loans	**6,668**	10,343
Corporate bonds	**2,097**	2,094
Senior notes	**7,207**	2,539
Unsecured bonds	**3,712**	4,169
	19,684	19,145
Less: Cash and cash equivalents	**(8,630)**	(7,373)
Net debt	**11,054**	11,772
Total equity	**36,172**	31,020

	2020 %	2019 %
Net debt to total equity ratio	**30.6**	37.9

b. Categories of financial instruments

The carrying amounts of each of the following categories of financial assets and financial liabilities at the end of the reporting period are set out as follows:

	2020 RMB million	2019 RMB million
Financial assets		
Financial assets at FVTPL	**4,830**	4,857
Derivative financial instruments	**628**	673
Equity instruments at FVTOCI	**211**	123
Financial assets at amortised cost	**17,094**	14,954
Financial liabilities		
Derivative financial instruments	**927**	746
Financial liabilities at amortised cost	**30,791**	29,548

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies

The Group's activities expose it to a variety of financial risks: market risk (including currency risk, interest rate risks, and price risk), credit risk and liquidity risk.

The Group's treasury department identifies, evaluates and monitors financial risks in close co-operation with the Group's operating units, focusing on the unpredictability of financial markets. The Group seeks to minimise the effects of financial risks by using different derivative financial instruments to manage these exposures. All derivative financial instruments are used for the financial risk management and not for speculative purposes.

The Board provides written principal for overall risk management. The Group has written policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, the use of derivative financial instruments and non-derivatives financial instruments and cash management. Exposure to foreign exchange rates, interest rates and prices risk movements are regularly reviewed and positions are amended in compliance with internal guidelines and limits.

The Group treasury department reports regularly or on demand basis to the Financial Risk Management Working Group, an independent body that monitor risks and policies implemented to mitigate risk exposures.

Foreign currency risk management

The functional currency of the Group's most entities is RMB in which most of the transactions are denominated. However, certain loans, senior notes and unsecured bonds issued by the Group, receivables and payables and certain bank balances kept by the Group are denominated in foreign currencies.

To mitigate the foreign exchange exposure, the Group entered into various Foreign Currency Derivatives with certain financial institutions during the current and prior years as set out in Note 24. The management of the Group monitors foreign exchange exposure and designates all derivatives as hedging instruments for cash flow hedges. The foreign exchange forward contracts must be in the same currency as the hedged item. On this basis, the Group has entered into such forward contracts in relation to the foreign currency denominated monetary assets and monetary liabilities amounting to USD750 million, equivalent to RMB4,894 million. It is the Group's policy to negotiate the terms of the hedge derivatives, to the extent possible, to match or approximate the terms of the hedged items to maximise hedge effectiveness (see Note 24 and Note 44 for details).

The carrying amounts of the Group's foreign currency denominated monetary assets and monetary liabilities at the end of the reporting period are as follows:

	Assets		**Liabilities**	
	2020	2019	**2020**	2019
	RMB million	RMB million	**RMB million**	RMB million
Foreign currency:				
USD	**578**	129	**12,549**	11,702
HK$	**101**	23	**–**	1,380

The following table details the Group's sensitivity to a reasonable possible change in exchange rate of each foreign currency against RMB, while all other variables are held constant. The sensitivity adjusts their translations at the end of the reporting period for a change in foreign currency exchange rate as set out below:

	USD		**HK$**	
	2020	2019	**2020**	2019
	%	%	**%**	%
Possible change in foreign exchange rate	**5**	5	**5**	5

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Foreign currency risk management (continued)

	2020 RMB million	2019 RMB million	**2020 RMB million**	2019 RMB million
(Decrease) increase in profit after taxation for the year:				
– if RMB weakens against foreign currencies	**(431)**	(580)	**5**	(68)
– if RMB strengthens against foreign currencies	**457**	580	**(5)**	68
(Decrease) increase in other comprehensive income				
– if RMB weakens against foreign currencies	**(2)**	–	**–**	–
– if RMB strengthens against foreign currencies	**(4)**	–	**–**	–

In the opinion of the Directors, the sensitivity analysis is unrepresentative of the inherent foreign exchange risk as the year end exposure and does not reflect the exposure during the year, and some of the Group's foreign currency exposure has been reduced due to the offsetting effect of the Foreign Currency Derivatives.

Hedges of foreign currency risk

The Group designates cross currency swaps and foreign currency options as hedging instruments in cash flow hedges and does not separate the forward and spot element of a currency forward contract but instead designates the currency forward contract in its entirety in a hedging relationship. Correspondingly, the hedged item is measured based on the forward exchange rate. Foreign currency basis spread of financial instruments may be separated and excluded from the designated hedging instruments. As at 31 December 2020, the notional profile of USD200 million is less than 1 year, and the remaining USD550 million is between 2 to 5 years.

The Group applies a hedge ratio of 1:1 and determines the existence of an economic relationship between the foreign currency borrowings and Foreign Currency Derivatives based on their currency types, currency amounts and the timing of their respective cash flows.

The following table summarise the effect of the hedge accounting on financial position and performance of the Group for the reporting period:

	Average exchange rate	Notional value USD USD million	Notional value RMB RMB million	Carrying amount of the hedging instruments RMB million	Favourable/(Unfavourable) changes in fair value used for measuring ineffectiveness: Hedging instruments RMB million	Favourable/(Unfavourable) changes in fair value used for measuring ineffectiveness: Hedged items RMB million	Hedging losses recognised in cash flow hedge reserve RMB million	Hedge ineffectiveness recognised in profit or loss RMB million	Cost of hedging recognised in OCI RMB million	From cash flow hedge reserve due to hedged item affecting profit or loss RMB million	Amount reclassified from cost of hedging reserve to profit or loss RMB million	Line item in profit or loss in which hedge ineffectiveness is included	Line items in profit or loss affected by the reclassification	Balance in cash flow hedge reserve for continuing hedge
Cash flow hedges														
Cross currency swaps	6.83	400	2,731	(127)	(234)	236	234	(3)	(33)	(259)	26	Other gains and losses	Other gains	(26)
Foreign currency options*	6.71	350	2,349	(6)	(83)	11	11	54	(2)	(4)	(8)		and losses & Finance costs	7

*Note: The foreign currency options contain an average capped exchange rate at 7.26.

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Interest rate risk management

The Group does not have any specific interest rate hedging policy except that the Group would regularly review the market interest rates to capture the potential opportunities to reduce the cost of borrowings. Accordingly, the Group will enter into interest rate swap arrangement to mitigate the interest rate risk if appropriate.

Fair value interest rate risk

The Group's fair value interest rate risk relates primarily to non-current amounts due from associates and joint ventures, amounts due to associates and joint ventures, and fixed-rate bank and other loans, corporate bonds, senior notes and unsecured bonds (see Notes 29, 30, 40, 41, 42 and 43 for details of these amounts, loans, bonds and notes respectively).

The fair value interest rate risk on bank balance and deposits is insignificant as the terms of the fixed deposits are relatively short.

Cash flow interest rate risk

The Group's cash flow interest rate risk relates primarily to floating-rate bank loans (see Note 40 for details of these amounts). The Directors consider that the Group is not exposed to significant cash flow interest rate risk relating to bank deposits, which are primarily short term in nature and basically carried at stable market interest rates.

The Group's sensitivity to cash flow interest rate risk has been determined based on the exposure to interest rates for the floating-rate bank loans. The analysis is prepared assuming that the amount of liabilities outstanding at the end of the reporting period was outstanding for the whole year and excluding the interest expected to be capitalised.

	2020 **%**	2019 %
Possible change in interest rate	**50 basis points**	50 basis points

	2020 **RMB million**	2019 RMB million
(Decrease) increase in profit after taxation for the year		
– as a result of increase in interest rate	**(9)**	(14)
– as a result of decrease in interest rate	**9**	14

The possible change in the interest rate does not affect the equity of the Group in both years.

Commodity price risk

In the normal course of business, the Group imported LNG to satisfy the demands of downstream customers under long-term "take-or-pay" purchase agreements as set out in Note 50. Accordingly, the Group is exposed to fluctuations in prevalent crude oil/gas market prices, which are used for the determination of the price of LNG. This exposure is managed with the use of derivative financial instruments by the Group. The profit or loss generated from these derivatives is dependent on the combination of contracts which generate payoffs in any particular range of commodity prices.

Derivative financial instruments are used solely for financial risk management purposes and the Group does not hold or issue derivative financial statements for speculation purposes. The management of the Group monitors commodity price risk exposure regularly and designates certain derivatives as cash flow hedge of highly probable purchases.

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Commodity price risk (continued)

The following table summarises the commodity options designated as cash flow hedges outstanding at the end of the reporting period, which expires through December 2023, as well as the effect on financial position and performance of the Group for the reporting period. Commodity options are presented in the line 'Derivative financial instruments' within the consolidated statement of financial position (see Note 24 for further details):

	Strike price range	Remaining quantity	Carrying amount of the hedging instruments	Favourable/(Unfavourable) changes in fair value used for measuring ineffectiveness: Hedging instruments	Hedged items	Hedging losses recognised in cash flow hedge reserve	Hedge ineffectiveness recognised in profit or loss	Cost of hedging recognised in OCI	Line item in profit or loss in which hedge ineffectiveness is included	Amount from cash flow hedge reserve transferred to inventory
		bbl	RMB million	RMB million	RMB million	RMB million	RMB million	RMB million		RMB million
Cash flow hedges										
Collar for Brent Oil	47.9 – 69	1,920,000	(62)	(122)	193	122	13	36	Other gains and losses	71

A decrease of 10% (2019: 5%) in relevant commodity prices at the end of the year ended 31 December 2020 would have affected profit or loss for the years by amount shown below. As a result of the expected volatile oil market in 2021, the management adjusted the sensitivity rate from 5% to 10% for the purpose of assessing commodity price risk. These amounts represent the change in fair value of commodity derivative contracts at the reporting date.

	2020 **RMB million**	2019 RMB million
Decrease in profit before taxation for the year	**(40)**	(7)
Decrease in other comprehensive income	**(35)**	–

Other price risk

The Group is mainly exposed to price risk through equity instrument measured at FVTPL and FVTOCI. The Directors do not implement specific measurements to mitigate the price risk.

If the market price of equity instrument measured at FVTPL and FVTOCI increased or decreased by 5%, the Group would recognise additional gains or losses of RMB249 million (2019: RMB 248 million) respectively.

Credit risk and impairment assessment

Other than those financial assets whose carrying amounts best represent the maximum exposure to credit risk, the Group's maximum exposure to credit risk which will cause a financial loss to the Group arising from the amount of financial guarantees provided by the Group. The Group does not hold any collateral or other credit enhancements to cover its credit risks associated with its financial assets, except that the credit risks associated with loan receivables is mitigated because they are secured over equipment, receivables and certain entities' equities and settlement of certain trade receivables are backed by bills issued by reputable financial institutions.

Trade receivables and contract assets arising from contracts with customers

In order to minimise the credit risk, the management of the Group has delegated a team responsible for determination of credit limits and credit approvals. Other monitoring procedures are in place to ensure that follow-up action is taken to recover overdue debts. In addition, the Group performs impairment assessment under ECL model upon application of HKFRS 9 on trade balances based on provision matrix.

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Credit risk and impairment assessment (continued)

Other receivables, amounts due from associates/joint ventures/related companies and bank balances

In order to minimise the credit risk, the Group performs impairment assessment under ECL model upon application of HKFRS 9 on other receivables, amounts due from associates/joint ventures/related companies individually. Other monitoring procedures are in place to ensure that follow-up action is taken to recover overdue debts.

The credit risks on bank balances are limited because the counterparties are reputable international and PRC banks and other financial institutions with high credit ratings assigned by international credit-rating agencies regulated by the PRC government.

Other than concentration of credit risk on liquid funds which are deposited with several banks with high credit ratings, the Group does not have any other significant concentration of credit risk.

The tables below detail the credit risk exposures of the Group's financial assets, which are subject to ECL assessment:

	Notes	External credit rating	Internal credit rating	12-month or lifetime ECL	Gross carrying amount 2020 RMB million	2019 RMB million
Financial assets at amortised cost						
Amounts due from associates*	29	N/A	(note a)	12-month ECL	**394**	455
				Lifetime ECL (not credit impaired)	**540**	483
					934	938
Amounts due from joint ventures*	30	N/A	(note a)	12-month ECL	**1,400**	427
				Lifetime ECL (not credit impaired)	**746**	662
					2,146	1,089
Amounts due from related companies*	31	N/A	(note a)	12-month ECL	**142**	4
				Lifetime ECL (not credit impaired)	**213**	164
					355	168
Restricted bank deposits	34	AA	N/A	12-month ECL	**766**	1,012
Bank balances	34	AA+	N/A	12-month ECL	**8,630**	7,373
Other receivables	23	N/A	(note a)	12-month ECL	**702**	472
Loan receivables	23	N/A	(note a)	12-month ECL	**379**	191
Trade receivables	23	N/A	(note b)	Lifetime ECL (provision matrix)	**2,350**	2,456
				Lifetime ECL (not credit impaired)	**30**	30
				Credit-impaired	**139**	109
					2,519	2,595
Bills receivable	23	N/A	(note a)	12-month ECL	**1,441**	1,413
Contract assets	28	N/A	(note b)	Lifetime ECL (provision matrix)	**751**	785
				Credit-impaired	**1**	1
					752	786

* The gross carrying amounts disclosed above include both trade nature receivables and non-trade nature receivables. All trade nature receivables are applying lifetime ECL.

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Credit risk and impairment assessment (continued)

Other receivables, amounts due from associates/joint ventures/related companies and bank balances *(continued)*

Notes:

a. For the purposes of internal credit risk management, the Group uses past due information to assess whether credit risk has increased significantly since initial recognition.

2020

	Past due RMB million	**Not past due/ No fixed terms of repayment RMB million**	**Total RMB million**
Amounts due from associates	–	**934**	**934**
Amounts due from joint ventures	–	**2,146**	**2,146**
Amounts due from related companies	–	**355**	**355**
Bills receivable	–	**1,441**	**1,441**
Other receivables	–	**702**	**702**
Loan receivables	–	**379**	**379**

2019

	Past due RMB million	Not past due/ No fixed terms of repayment RMB million	Total RMB million
Amounts due from associates	–	938	938
Amounts due from joint ventures	–	1,089	1,089
Amounts due from related companies	–	168	168
Bills receivable	–	1,413	1,413
Other receivables	–	472	472
Loan receivables	–	191	191

b. For trade receivables and contract assets, the Group has applied the simplified approach in HKFRS 9 to measure the loss allowance at lifetime ECL. Except for debtors with significant outstanding balances, the Group determines the expected credit losses on these items by using a provision matrix, grouped by past due status.

As part of the Group's credit risk management, the Group uses debtors' aging to assess the impairment for its customers in relation to its operation because these customers consist of a large number of small customers with common risk characteristics that are representative of the customers' abilities to pay all amounts due in accordance with the contractual terms. The following table provides information about the exposure to credit risk for trade receivables and contract assets which are assessed based on provision matrix as at 31 December 2020 within lifetime ECL. A full provision was made for debtors that were credit-impaired.

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53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Credit risk and impairment assessment (continued)

Gross carrying amount

	2020		2019	
	Average loss rate	**Trade receivables and contract assets RMB million**	Average loss rate	Trade receivables and contract assets RMB million
0 to 3 months	**0.40%**	**2,012**	0.38%	2,344
4 to 6 months	**7.06%**	**414**	6.08%	188
7 to 9 months	**9.30%**	**237**	7.80%	283
10 to 12 months	**12.11%**	**42**	9.03%	98
1 to 2 years	**28.59%**	**297**	22.58%	273
2 to 3 years	**39.44%**	**99**	39.11%	55
		3,101		3,241

The estimated loss rates are estimated based on historical observed default rates over the expected life of the debtors and are adjusted for forward-looking information that is available without undue cost or effort. The grouping is regularly reviewed by management to ensure relevant information about specific debtors is updated.

As at 31 December 2020, the Group provided RMB170 million (2019: RMB105 million) and RMB19 million (2019: RMB28 million) impairment allowance for trade receivables and contract assets respectively, based on the provision matrix. Impairment allowance of RMB165 million (2019: RMB128 million) and RMB1 million (2019: RMB1 million) were made for trade receivables and contract assets respectively, based on debtors that were credit impaired.

The following table shows reconciliation of loss allowances that have been recognised for trade receivables, contract assets, bills receivables, other receivables, amounts due from associates, joint ventures, related companies.

	12-month ECL RMB million	**Lifetime ECL (not credit-impaired)** RMB million	**Lifetime ECL (credit-impaired)** RMB million	**Total** RMB million
As at 1 January 2019	39	64	174	277
Changes due to financial instruments recognised				
– Transfer to credit-impaired	(2)	(39)	41	–
– Impairment losses recognised	28	55	65	148
– Impairment losses reversed	(45)	(57)	(2)	(104)
As at 31 December 2019	20	23	278	321
Changes due to financial instruments recognised				
– Transfer to credit-impaired	(2)	(26)	28	–
– Impairment losses recognised	62	100	32	194
– Impairment losses reversed	(28)	(36)	(1)	(65)
As at 31 December 2020	52	61	337	450

The Group writes off a trade receivable when there is information indicating that the debtor is in severe financial difficulty and there is no realistic prospect of recovery, e.g. when the debtor has been placed under liquidation or has entered into bankruptcy proceedings, whichever occurs earlier.

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Liquidity risk management

To manage the liquidity risk, the Group reviews the level of cash and cash equivalents to ensure their adequacy to finance the Group's operations, capital expansion plans and mitigate the effects of fluctuation in cash flows. The Group also reviews the utilisation of borrowings and ensures the compliance of loan covenants.

The Group relies on various bonds and bank and other loans as a significant source of liquidity, detail of which are set out in Notes 40, 41, 42 and 43. Except for the unutilised issuance quota of the green bonds amounting to RMB5,000 million by China Securities Regulatory Commission and National Development and Reform Commission, the Group has unutilised credit facilities of approximately RMB12,001 million as at 31 December 2020, which are subject to renewal within twelve months from the end of the reporting period as set out in Note 2.

The following table details the Group's remaining contractual maturity for its financial liabilities based on the agreed repayment terms. The table has been drawn up based on the undiscounted cash flows of financial liabilities based on the earliest date on which the Group can be required to pay. The table includes both interest and principal cash flows. To the extent that interest flows are carried at floating rate, the undiscounted amount is derived from interest rate existed at the end of the reporting period.

	Weighted average interest rate %	Repayable on demand or within one year RMB million	Within the second year RMB million	Within the third year RMB million	Within the fourth year RMB million	Within the fifth year RMB million	Over five years RMB million	Total undiscounted cash flow RMB million	Carrying amount at end of the reporting period RMB million
At 31 December 2020									
Non-derivative financial liabilities									
Trade and other payables		8,302	–	–	–	–	–	8,302	8,302
Amounts due to associates	0.64	320	–	–	–	–	–	320	319
Amounts due to joint ventures	0.11	977	585	–	–	–	–	1,562	1,561
Amounts due to related companies		925	–	–	–	–	–	925	925
Bank and other loans									
– fixed rate	3.28	3,678	49	529	55	12	582	4,905	4,715
– variable rate	3.16	1,043	91	41	251	36	768	2,230	1,953
Lease liabilities	5.02	109	81	60	48	37	154	489	399
Corporate bonds	4.13	91	2,131	–	–	–	–	2,222	2,097
Senior notes	3.74	2,573	128	128	128	128	5,504	8,589	7,207
Unsecured bonds	3.25	121	3,792	–	–	–	–	3,913	3,712
Financial guarantee contracts		775	–	–	–	–	–	775	–
		18,914	6,857	758	482	213	7,008	34,232	31,190
Derivatives									
– inflow		(2,114)	(3,984)	(40)	–	–	–	(6,138)	
– outflow		2,285	4,113	73	–	–	–	6,471	

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

c. Financial risk management objectives and policies *(continued)*

Liquidity risk management (continued)

	Weighted average interest rate %	Repayable on demand or within one year RMB million	Within the second year RMB million	Within the third year RMB million	Within the fourth year RMB million	Within the fifth year RMB million	Over five years RMB million	Total undiscounted cash flow RMB million	Carrying amount at end of the reporting period RMB million
At 31 December 2019									
Non-derivative financial liabilities									
Trade and other payables		7,635	–	–	–	–	–	7,635	7,635
Amounts due to associates	0.93	190	–	–	–	–	–	190	189
Amounts due to joint ventures	0.23	786	735	–	–	–	–	1,521	1,520
Amounts due to related companies		1,060	–	–	–	–	–	1,060	1,060
Bank and other loans									
– fixed rate	3.03	7,256	5	103	–	–	–	7,364	7,277
– variable rate	3.59	410	2,223	104	61	48	539	3,385	3,066
Lease liabilities	5.20	129	104	76	63	53	275	700	550
Corporate bonds	4.13	91	87	2,136	–	–	–	2,314	2,094
Senior notes	6.00	153	2,627	–	–	–	–	2,780	2,539
Unsecured bonds	3.25	136	136	4,322	–	–	–	4,594	4,169
Financial guarantee contracts		726	–	–	–	–	–	726	–
		18,572	5,917	6,741	124	101	814	32,269	30,099
Derivatives									
– inflow		(599)	(1,613)	(4,431)	(22)	–	–	(6,665)	
– outflow		669	1,631	4,343	36	–	–	6,679	

The amounts included above for financial guarantee contracts are the maximum amounts the Group could be required to settle under the arrangement for the full guaranteed amount if that amount is claimed by the counterparty to the guarantee. Based on the expectations at the end of the reporting period, the Group considers that it is more likely than not that no amount will be payable under the arrangement. However, these estimates are subject to change depending on the probability of the counterparties claiming under the guarantee in case that the financial receivables held by the counterparty suffer credit losses.

The amounts included above for variable interest rate instruments for non-derivative financial liabilities is subject to change if changes in variable interest rates differ to those estimates of interest rates determined at the end of the reporting period.

The contractual expiry periods of financial guarantee contracts at the end of the reporting period are as follows:

	2020		2019	
	RMB million	**Expiry period**	RMB million	Expiry period
Guarantees issued to banks to secure loan facilities granted to an associate and joint ventures	**775**	**2029**	726	2025

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

d. Fair value measurement of financial instruments

(i) Fair value of the Group's financial assets and financial liabilities that are measured at fair value on a recurring basis

The Group measures its following financial instruments at fair value at the end of the reporting period on a recurring basis:

	Fair value as at 31 December		Fair value	
	2020 RMB million	2019 RMB million	**hierarchy**	**Valuation technique and key input**
Financial assets				
Derivative financial instruments	**628**	673	Level 2	Discounted cash flow for swap Future cash flows are estimated based on forward commodity price and forward exchange rates at settlement date, contracted strike rate, cap rate and premium payment, discounted at the swap curves expected by various counterparties Black-Scholes Model for option Fair value estimated based on strike price, commodity price, time to expiration, volatility and risk-free interest rate
Listed equity securities, equity interest in Shanghai Utilities	**244**	287	Level 1	Fair values are derived from quoted bid prices in an active market
Unlisted wealth management products	**70**	16	Level 3	Discounted cash flow Future cash flows are estimated based on the recoverable amount expected, discounted at a rate that reflects the credit risk of the counterparty
1.13% equity interest in Sinopec Marketing	**4,170**	4,170	Level 3	Estimated based on the P/B ratio of comparable listed companies and a liquidity discount
Other unlisted equity securities – FVTPL	**346**	384	Level 3	Fair value is derived from price multiples of similar assets that have been traded in the market
Unlisted equity securities – FVTOCI	**149**	123	Level 3	Fair values are derived from the fair value of the underlying assets and liabilities held by the investee
Listed equity securities – FVTOCI	**62**	–	Level 1	Fair values are derived from quoted bid prices in an active market
Financial liabilities				
Derivative financial instruments	**927**	746	Level 2	Discounted cash flow for swap Future cash flows are estimated based on forward commodity price and forward exchange rates at settlement date, contracted strike rate, cap rate and premium payment, discounted at the swap curves expected by various counterparties Black-Scholes Model for option Fair value estimated based on strike price, commodity price, time to expiration, volatility and risk-free interest rate

53. CAPITAL MANAGEMENT AND FINANCIAL INSTRUMENTS *(continued)*

d. Fair value measurement of financial instruments *(continued)*

(i) Fair value of the Group's financial assets and financial liabilities that are measured at fair value on a recurring basis (continued)

The Group's 1.13% equity interest in Sinopec Marketing which is classified as financial assets at FVTPL under Level 3 hierarchy amounted to RMB4,170 million as at 31 December 2020 under HKFRS 9. The significant unobservable input is the liquidity discount rate. The higher liquidity discount rate, the lower fair value of the financial assets at fair value will be. A 5% increase/decrease in the liquidity discount rate, holding all other variables constant, the fair value of the investments would decrease/increase by RMB32 million as at 31 December 2020.

(ii) Fair value of the Group's financial assets and financial liabilities that are not measured at fair value on a recurring basis

Except as detailed in the following table, the Directors consider that the carrying amounts of financial liabilities recorded at amortised cost in the consolidated statement of financial position approximate their fair values:

	2020		2019	
	Carrying amount RMB million	**Fair value RMB million**	Carrying amount RMB million	Fair value RMB million
Fixed-rate bank and other loans	**4,715**	**4,518**	7,277	7,079
Senior notes	**7,207**	**7,345**	2,539	2,655
Unsecured bonds	**3,712**	**3,823**	4,169	4,216
Corporate bonds	**2,097**	**2,115**	2,094	2,105

In the above table, other than the fair values of bank loans disclosed which are under the fair value hierarchy of Level 3, the rest of the fair values disclosed are under the fair value hierarchy of Level 2. The fair values of the senior notes and unsecured bonds are derived from the quoted prices in an over-the-counter market, and the fair values of corporate bonds are derived from the inactive quoted prices in the Shanghai Stock Exchange. The fair values of the rest of the financial liabilities at amortised cost are derived from discount cash flow technique by reference to the market interest rate of the loans with comparable maturity and credit risk of the respective group entities at the end of the reporting period.

54. RECONCILIATION OF LIABILITIES ARISING FROM FINANCING ACTIVITIES

The table below details changes in the Group's liabilities arising from financing activities, including both cash and non-cash changes. Liabilities arising from financing activities are those for which cash flows were, or future cash flows will be classified in the Group's consolidated statement of cash flows as cash flows from financing activities.

	Bank and other loans RMB million (Note 40)	**Lease liabilities RMB million**	**Corporate bonds RMB million (Note 41)**	**Unsecured bonds RMB million (Note 43)**	**Senior notes RMB million (Note 42)**	**Others RMB million (note)**	**Total RMB million**
At 1 January 2020	**10,343**	**550**	**2,094**	**4,169**	**2,539**	**1,222**	**20,917**
Financing cash flows	**(3,645)**	**(107)**	**–**	**(208)**	**5,065**	**(2,663)**	**(1,558)**
Loss on repurchase of unsecured bonds	**–**	**–**	**–**	**9**	**–**	**–**	**9**
Acquisition of subsidiaries	**161**	**–**	**–**	**–**	**–**	**–**	**161**
Disposal of subsidiaries	**(7)**	**(110)**	**–**	**–**	**–**	**–**	**(117)**
Foreign exchange translation	**(184)**	**–**	**–**	**(265)**	**(405)**	**249**	**(605)**
New leases entered	**–**	**66**	**–**	**–**	**–**	**–**	**66**
Dividends paid to shareholders	**–**	**–**	**–**	**–**	**–**	**1,719**	**1,719**
Interest expense	**–**	**–**	**3**	**7**	**8**	**724**	**742**
At 31 December 2020	**6,668**	**399**	**2,097**	**3,712**	**7,207**	**1,251**	**21,334**

	Bank and other loans RMB million (Note 40)	Lease liabilities RMB million	Corporate bonds RMB million (Note 41)	Unsecured bonds RMB million (Note 43)	Senior notes RMB million (Note 42)	Others RMB million (note)	Total RMB million
At 1 January 2019	10,722	–	2,497	4,539	2,491	876	21,125
Initial application of HKFRS16	–	632	–	–	–	–	632
Financing cash flows	(661)	(101)	(407)	(459)	–	(1,691)	(3,319)
Acquisition of subsidiaries	215	–	–	–	–	–	215
Foreign exchange translation	67	–	–	83	42	–	192
New leases entered	–	19	–	–	–	–	19
Dividends paid to shareholders	–	–	–	–	–	1,176	1,176
Interest expense	–	–	4	6	6	861	877
At 31 December 2019	10,343	550	2,094	4,169	2,539	1,222	20,917

Note: The amounts include the interest payables, non-trade payables due to joint ventures, associates and related companies.

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55. RELATED PARTY TRANSACTIONS

Apart from the related party balances as stated in Notes 29, 30 and 31 and the equity transactions as stated in Notes 47 and 48, the Group had the following transactions with certain related parties:

	2020 RMB million	2019 RMB million
Nature of transaction		
Associates:		
– Sales of gas to	**928**	576
– Sales of materials to	**310**	284
– Purchase of gas from	**384**	282
– Purchase of equipment from	**3**	3
– Loan interest received from	**14**	24
– Provision of gas transportation services to	**1**	1
– Provision of gas transportation services from	**55**	28
– Deposit interest paid to	**2**	2
– Provision of supporting services to	**9**	8
– Provision of supporting services from	**1**	–
– Provision of construction and installation service to	**5**	32
– Purchase of equity interest from	**–**	52
Joint ventures:		
– Sales of gas to	**2,537**	1,546
– Sales of materials to	**274**	281
– Purchase of gas from	**3,419**	3,961
– Provision of gas transportation services to	**373**	388
– Loan interest received from	**12**	42
– Loan interest paid to	**3**	4
– Provision of supporting services to	**45**	21
– Purchase of equipment from	**5**	23
– Deposit interest paid to	**2**	13
– Provision of construction services by	**25**	23
– Provision of supporting services by	**5**	2
– Lease of vehicles to	**3**	2
– Provision of energy efficiency technology services to	**–**	2
– Provision of technology service by	**6**	7
– Provision of construction and installation services to	**12**	–
– Provision of gas transportation services from	**19**	–

55. RELATED PARTY TRANSACTIONS *(continued)*

	2020 RMB million	2019 RMB million
Nature of transaction – continued		
Companies controlled by Mr. Wang:		
Transactions exempt from shareholders' approval under Chapter 14A of the Listing Rules:		
– Purchase of equipment from	**128**	52
– Provision of construction services by	**974**	1,263
– Provision of information technology services by	**195**	139
– Purchase of LNG from	**136**	1,313
– Provision of LNG terminal usage services by	**644**	131
– Purchase of equity interest from (note)	**–**	100
Transactions fully exempt from shareholders' approval, annual review and all disclosure requirements under Chapter 14A of the Listing Rules:		
– Sales of gas, gasoline and diesel to	**64**	13
– Sales of materials to	**59**	43
– Provision of construction and installation services to	**14**	7
– Provision of property management services by	**16**	17
– Provision of property management services to	**4**	1
– Lease of premises to	**8**	4
– Lease of premises from	**3**	7
– Provision of supporting services by	**54**	51
– Provision of supporting services to	**62**	54
– Provision of outsourcing services by	**63**	55
– Provision of electronic business services by	**9**	4
– Provision of technology services to	**63**	52
– Provision of research and development service to	**–**	10
– Provision of energy efficiency technology services to	**12**	6
– Loan interest received from	**3**	–

Note: During the year ended 31 December 2019, the Group completed the acquisition of the additional 4.5% equity interest in ENN Finance from a related company controlled by Mr. Wang. The consideration for the acquisition amounted to approximately RMB100 million.

The Company issued senior notes on 13 May 2011 and 17 September 2020, unsecured bonds on 24 July 2017 and entered into a club loan agreement with various banks on 23 November 2018. The terms and conditions of these debts require Mr. Wang and any affiliate of him to retain certain percentage of shareholding over the Company, failing which the Company would be required to repay or repurchase all outstanding debts at predetermined prices.

Compensation of key management personnel

The remuneration of the Directors who are also the members of key management personnel during the years ended 31 December 2020 and 2019 was disclosed in Note 12.

Financial guarantee contracts

As at 31 December 2020, the guaranteed facilities amount utilised by the joint ventures were RMB775 million (2019: RMB 726 million). In the opinion of the Directors, the fair values of the financial guarantee contracts of the Group issued during the year ended 31 December 2020 and 31 December 2019 were insignificant at the date of issue of the financial guarantee and no provision is necessary. In addition, the Directors do not consider it probable that a claim will be made against the Group under any of these guarantees.

As at 31 December 2020, no related company has provided guarantees to the Group.

As at 31 December 2019, a related company has provided guarantees to the Group to the extent of RMB140 million, the guaranteed facilities amount utilised by the Group were RMB120 million.

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56. PARTICULAR OF PRINCIPAL SUBSIDIARIES

Name of Company	Place of incorporation/ establishment	Issued and fully paid share capital/ registered capital	Proportion of ownership interest/voting power held by the Group 2020	2019	Principal activities
ENN Gas Investment Group Limited ("ENN Gas")	British Virgin Island	USD1,000	**100.00%**	100.00%	Investment holding
北京新奧華鼎貿易有限公司 Beijing Xinao Huading Trading Company Limited*	PRC	USD23,800,000	**100.00%**	100.00%	Retail of gas pipelines, related materials and equipment
長沙新奧燃氣有限公司 Changsha Xinao Gas Company Limited*	PRC	RMB120,000,000	**55.00%**	55.00%	Investment in gas pipeline infrastructure and sales of piped gas
常州新奧燃氣發展有限公司 Changzhou Xinao Gas Development Company Limited*	PRC	USD600,000	**60.00%**	60.00%	Sales of piped gas
常州新奧燃氣工程有限公司 Changzhou Xinao Gas Engineering Company Limited*	PRC	USD5,000,000	**60.00%**	60.00%	Investment in gas pipeline infrastructure
滁州新奧燃氣有限公司 Chuzhou Xinao Gas Company Limited*	PRC	USD7,100,000	**90.00%**	90.00%	Sales of piped gas
泉州市燃氣有限公司 Quanzhou City Gas Company Limited ("Quanzhou City Gas")	PRC	RMB450,000,000	**60.00%**	60.00%	Investment in gas pipeline infrastructure and sales of piped gas
晉江新奧燃氣有限公司 Jinjiang Xinao Gas Company Limited	PRC	RMB60,000,000	**60.00%**	60.00%	Investment in gas pipeline infrastructure and sales of piped gas
洛陽新奧華油燃氣有限公司 Luoyang Xinao Huayou Gas Company Limited*	PRC	RMB160,000,000	**70.00%**	70.00%	Investment in gas pipeline infrastructure and sales of piped gas
石家莊新奧燃氣有限公司 Shijiazhuang Xinao Gas Company Limited* ("Shijiazhuang Xinao")	PRC	RMB300,000,000	**60.00%**	60.00%	Investment in gas pipeline infrastructure and sales of piped gas
肇慶新奧燃氣有限公司 Zhaoqing Xinao Gas Company Limited*	PRC	RMB52,700,000	**100.00%**	100.00%	Investment in gas pipeline infrastructure and sales of piped gas
株洲新奧燃氣有限公司Zhuzhou Xinao Gas Company Limited*	PRC	RMB135,000,000	**55.00%**	55.00%	Investment in gas pipeline infrastructure
蚌埠新奧燃氣有限公司 Bengbu Xinao Gas Company Limited*	PRC	RMB110,000,000	**70.00%**	70.00%	Investment in gas pipeline infrastructure
蚌埠新奧燃氣發展有限公司 Bengbu Xinao Gas Development Company Limited*	PRC	USD600,000	**70.00%**	70.00%	Sales of piped gas
葫蘆島新奧燃氣發展有限公司 Huludao Xinao Gas Development Company Limited*	PRC	USD1,200,000	**90.00%**	90.00%	Investment in gas pipeline infrastructure

56. PARTICULAR OF PRINCIPAL SUBSIDIARIES *(continued)*

Name of Company	Place of incorporation/ establishment	Issued and fully paid share capital/ registered capital	Proportion of ownership interest/voting power held by the Group 2020	2019	Principal activities
青島新奧新城燃氣有限公司 Qingdao Xinao Xincheng Gas Company Limited*	PRC	USD839,000,000	**90.00%**	90.00%	Sales of piped gas
浙江新奧智能裝備貿易有限公司 Zhejiang Xinao Intelligent Equipment Trading Company Limited	PRC	RMB10,000,000	**100.00%**	100.00%	Retail of gas pipelines and intelligent equipments
新奧泛能網絡科技有限公司 ENN Ubiquitous Energy Network Technology Company Limited*	PRC	RMB103,000,000	**100.00%**	100.00%	Solutions and operating services of integrated energy
新奧能源物流有限公司 Xinao Energy Logistics Company Limited*	PRC	USD22,230,000	**100.00%**	100.00%	Transportation of oil products and gas
新奧能源貿易有限公司 Xinao Energy Sales Company Limited*	PRC	USD30,200,000	**100.00%**	100.00%	Wholesale and retail of LNG and CNG, piped gas facilities, gas equipment, appliances and others
新奧液化天然氣貿易有限公司 ENN LNG Trading Company Limited	Hong Kong	HK$1,000	**100.00%**	100.00%	Sourcing and sales of LNG
新奧財務有限責任公司 ENN Finance	PRC	RMB2,000,000,000	**100.00%**	100.00%	Provision of financial services
新奧燃氣發展有限公司 Xinao Gas Development Company Limited*	PRC	USD23,000,000	**100.00%**	100.00%	Sourcing of compressed pipeline gas and investment in gas pipeline infrastructure and sales of piped gas
新奧新能源工程技術有限公司 Xinao New Energy Engineering Technology Company Limited*	PRC	USD7,000,000	**100.00%**	100.00%	Investment in gas pipeline infrastructure
新奧(中國) Xinao (China)*	PRC	USD231,778,124	**100.00%**	100.00%	Investment holding
廊坊新奧燃氣有限公司 Langfang Xinao Gas Company Limited	PRC	USD9,333,900	**100.00%**	100.00%	Investment in gas pipeline infrastructure and sales of piped gas
淮安新奧燃氣有限公司 Huaian Xinao Gas Company Limited	PRC	RMB35,000,000	**100.00%**	100.00%	Investment in gas pipeline infrastructure and sales of piped gas
寧波城際能源貿易有限公司 Ningbo Chengji Energy Trading Company Limited	PRC	RMB5,000,000	**100.00%**	100.00%	Sourcing and sales of LNG

* Foreign-invested enterprises

56. PARTICULAR OF PRINCIPAL SUBSIDIARIES *(continued)*

All of the above subsidiaries, except for ENN Gas and Xinao (China), are indirectly held by the Company.

All of the above subsidiaries operate principally in the places of their incorporation/establishment respectively, except that ENN Gas operates principally in Hong Kong. The above table lists the subsidiaries of the Company which, in the opinion of the Directors, principally affected the results or net assets of the Group. Giving the details of other subsidiaries would, in the opinion of the Directors, result in particulars of excessive length.

None of the subsidiaries issued any debt securities as at 31 December 2020 or at any time during the year except for Xinao (China) which has issued the following debt securities.

	2020 **RMB million**	2019 RMB million
Corporate bonds	**2,097**	2,094

The table below shows details of non-wholly owned subsidiaries of the Company that have material non-controlling interests:

Name of subsidiary	**Incorporation/ establishment/ registration and operation**	**Proportion ownership interest held by non-controlling interests**		**Profit allocated to non-controlling interests**		**Accumulated non-controlling interests**	
		2020 **%**	2019 %	**2020** **RMB million**	2019 RMB million	**2020** **RMB million**	2019 RMB million
Quanzhou City Gas*	PRC	**40**	40	**137**	112	**350**	300
Shijiazhuang Xinao*	PRC	**40**	40	**65**	82	**279**	289
Individually immaterial subsidiaries with non-controlling interests						**4,982**	4,563

* excluding non-controlling interests of Quanzhou City Gas's and Shijiazhuang Xinao's subsidiaries.

Summarised financial information in respect of each of the Company's subsidiaries that has material non-controlling interests is set out below. The summarised financial information below represents amounts before intragroup eliminations.

Quanzhou City Gas	**2020** **RMB million**	2019 RMB million
Non-current assets	**1,318**	1,201
Current assets	**447**	611
Current liabilities	**891**	1,062
Revenue	**4,055**	4,560
Profit and total comprehensive income for the year (note)	**343**	279
Dividends paid to non-controlling interests	**88**	90
Net cash inflow from operating activities	**269**	267
Net cash outflow from investing activities	**(155)**	(176)
Net cash outflow from financing activities	**(285)**	(158)
Net cash outflow	**(171)**	(67)

Note: Included in the amount for the year ended 31 December 2020 is dividends income from Quanzhou City Gas's subsidiaries and joint venture of RMB259 million (2019: RMB177 million).

56. PARTICULAR OF PRINCIPAL SUBSIDIARIES *(continued)*

Shijiazhuang Xinao	2020 RMB million	2019 RMB million
Non-current assets	**1,975**	1,930
Current assets	**1,188**	655
Non-current liabilities	**515**	155
Current liabilities	**1,951**	1,706
Revenue	**2,078**	2,114
Profit and total comprehensive income for the year	**162**	206
Dividends paid to non-controlling interests	**75**	52
Net cash (outflow) inflow from operating activities	**(291)**	476
Net cash outflow from investing activities	**(103)**	(167)
Net cash inflow (outflow) from financing activities	**430**	(367)
Net cash inflow (outflow)	**36**	(58)

57. STATEMENT OF FINANCIAL POSITION OF THE COMPANY

	2020 RMB million	2019 RMB million
Non-current Assets		
Investments in subsidiaries	**9,664**	8,183
Investment in an associate	**39**	39
Financial assets at FVTPL	**287**	379
Amounts due from subsidiaries	**4,444**	4,315
	14,434	12,916
Current Assets		
Derivative financial instruments	**2**	–
Amounts due from subsidiaries	**3,923**	5,779
Cash and cash equivalents	**152**	76
	4,077	5,855
Current Liabilities		
Other payables	**131**	132
Taxation payables	**112**	238
Amounts due to subsidiaries	**1,377**	1,613
Bank loans – due within one year	**652**	4,281
Senior notes	**2,380**	–
Derivative financial instruments	**92**	–
	4,744	6,264
Net Current Liabilities	**(667)**	(409)
Total Assets less Current Liabilities	**13,767**	12,507
Capital and Reserves		
Share capital	**117**	116
Reserves	**3,945**	3,550
Total Equity	**4,062**	3,666
Non-current Liabilities		
Bank loans – due after one year	**979**	2,093
Senior notes	**4,827**	2,539
Unsecured bonds	**3,712**	4,169
Derivative financial instruments	**43**	–
Deferred tax liabilities	**144**	40
	9,705	8,841
	13,767	12,507

NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
For the year ended 31 December 2020

57. STATEMENT OF FINANCIAL POSITION OF THE COMPANY *(continued)*

The statement of changes in equity is as follow:

	Share capital RMB million	Treasury stocks RMB million	Share premium RMB million	Hedging reserve RMB million	Share options reserve RMB million	Retained earnings RMB million	Total RMB million
At 1 January 2019	116	–	2,614	–	78	1,381	4,189
Profit and total comprehensive income for the year	–	–	–	–	–	678	678
Recognition of equity-settled share-based payment (Note 45)	–	–	–	–	74	–	74
Purchase of shares under Share Award Scheme	–	(151)	–	–	–	–	(151)
Issue of ordinary shares upon exercise of share options (Notes 39 & 45)	–	–	76	–	(24)	–	52
Dividends appropriation (Note 14)	–	–	–	–	–	(1,176)	(1,176)
At 31 December 2019 and 1 January 2020	116	(151)	2,690	–	128	883	3,666
Profit and total comprehensive income for the year	–	–	–	36	–	1,913	1,949
Recognition of equity-settled share-based payment (Note 45)	–	–	–	–	70	–	70
Purchase of shares under Share Award Scheme	–	(17)	–	–	–	–	(17)
Issue of ordinary shares upon exercise of share options (Notes 39 & 45)	1	–	163	–	(51)	–	113
Dividends appropriation (Note 14)	–	–	(1,719)	–	–	–	(1,719)
At 31 December 2020	117	(168)	1,134	36	147	2,796	4,062

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