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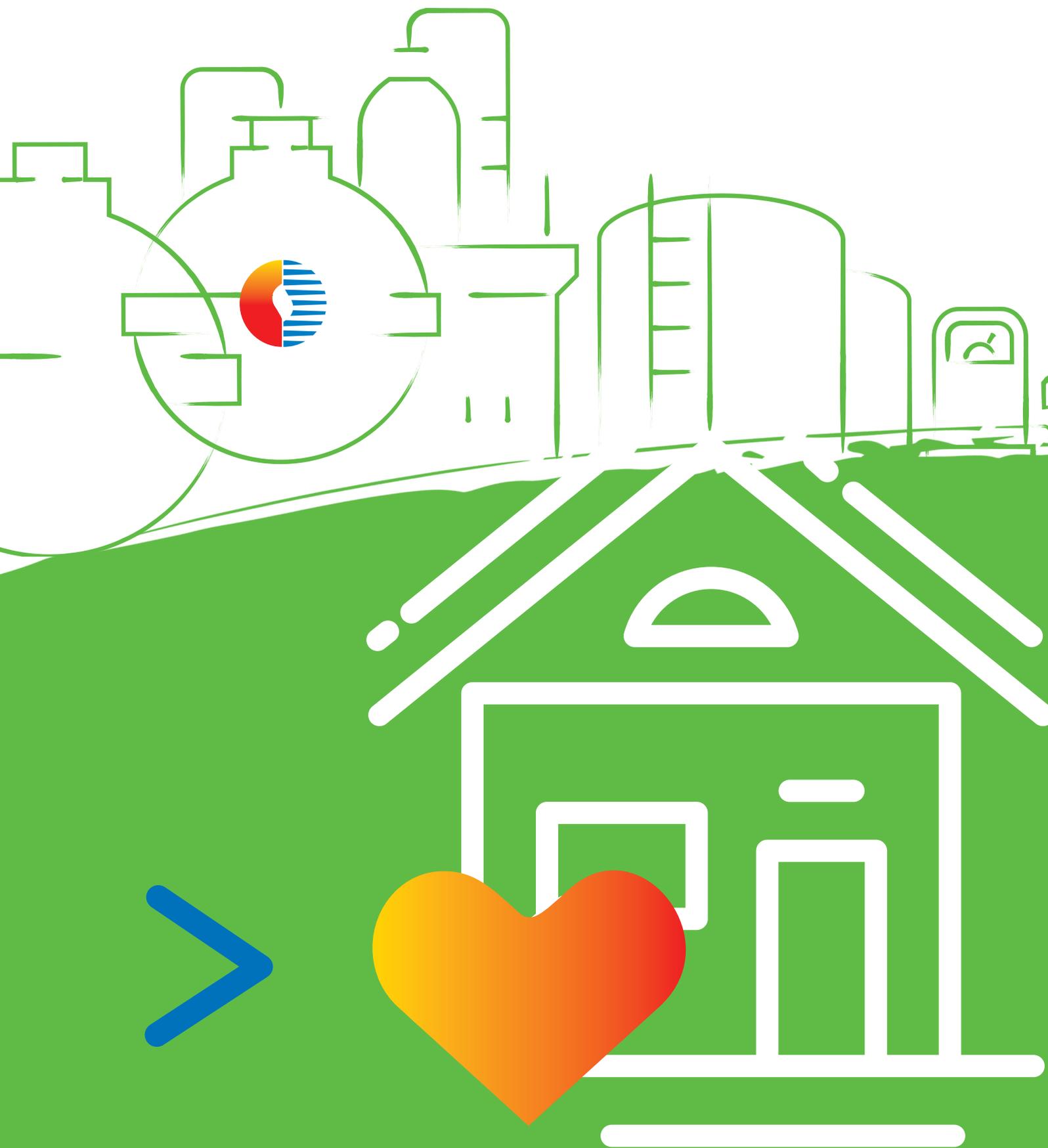
CHINA GAS HOLDINGS LIMITED  
中國燃氣控股有限公司\*

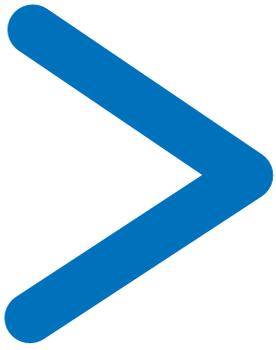
# GREENER FOR NEW GENERATION



\* For identification purpose only

2017/18 SUSTAINABILITY REPORT





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China Gas Holdings Limited  
2017/18 Sustainability Report

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# About this Report

## PURPOSE OF THE REPORT

This report is the second sustainability report (the “Report”) issued by China Gas Holdings Limited (the “Company”) and its subsidiaries collectively (the “Group” or “China Gas”). China Gas has engaged AECOM Asia Company Limited (“Consultant”), an independent professional consultant, in the preparation of this Report. The Report outlines the Group’s efforts and achievements in sustainability matters in the past year in a transparent and open manner and at the same time demonstrates the Group’s strategies and commitment in sustainable development.

This Report effectively serves as a transparent platform in which the Group believes would strengthen its communication with its stakeholders (or shareholders or equity holders), deepen their understanding of China Gas’s business operations and impacts, and build confidence in the Group. The Group will make use of the material sustainability topics identified as the basis for continual improvement and performance enhancement.



## REPORTING YEAR



This Report reflects the performance of China Gas on environmental management and corporate social responsibility from 1 April 2017 to 31 March 2018 (“Reporting Period” or “FY2017/18”). The Group will publish the sustainability report annually to the public to continuously enhance the transparency of information disclosure.

## SCOPE OF THE REPORT



China Gas is primarily engaged in the investment, construction and operation of city and town gas pipeline infrastructure facilities, gas terminals, storage and transportation facilities and gas logistics systems, transmission of natural gas and liquefied petroleum gas (“LPG”) to residential, industrial and commercial users, construction and operation of compressed natural gas (“CNG”)/liquefied natural gas (“LNG”) refilling stations as well as development and application of technologies relating to natural gas and LPG in the PRC. This Report covers important areas related to above businesses, including the operations of China Gas’s headquarters and all subsidiaries under the operational control of the Group during the Reporting Period. Detailed contents are formulated with reference to materiality assessment, stakeholder engagement and other relevant disclosure guidelines. For details of the Group’s business strategies and consolidated financial statements, please refer to the Group’s 2017/18 Annual Report. Contractors and subcontractors are not regarded as employees of the Group.

## REPORTING GUIDELINES



The Report is prepared in accordance with the Global Reporting Initiative (“GRI”) Standards: Core option, its Oil and Gas Sector Disclosures as well as the Environmental, Social and Governance (“ESG”) Reporting Guide published by The Stock Exchange of Hong Kong Limited (the “Stock Exchange”). The Report is also prepared with reference to the Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-CSR3.0) of Chinese Academy of Social Sciences and the Sustainable Development Goals (“SDGs”) of United Nations. With this move, the Group hopes to cover material issues in a more comprehensive manner, and to demonstrate the Group’s determination in adopting the best international practices. A complete index is set out in the last chapter of this Report for reference.

### REPORTING PRINCIPLES

During the preparation of this Report, China Gas applied the four reporting principles as listed in the ESG Reporting Guide by the Stock Exchange, namely materiality, quantitative, balance and consistency. The table below presents the Group's understanding about and responses to these reporting principles.

Reporting Principles	Meaning	Response from China Gas
<b>Materiality</b>	The Report should contain environmental and social topics which are material to stakeholders.	The Report was based on materiality analysis and was guaranteed to cover the most concerned topics of different stakeholder groups.
<b>Quantitative</b>	The Report should disclose key performance indicators in ways that can be measured.	The Group continued to improve the data disclosure of the Report and strived to present quantitative information with explanations.
<b>Balance</b>	The Report should present the performance of the Group in an unbiased manner.	The Report identified and described the achievements made and challenges faced by the Group.
<b>Consistency</b>	The Report should use consistent statistical and disclosure methods so that meaningful comparison can be made in future.	The Group strived to adopt consistent statistical and disclosure methods whenever appropriate with comparisons of different years presented, so that stakeholders can make year-on-year comparison on the performances of the Group.

### INFORMATION COLLECTION AND REPORTING

Information contained herein is collected from the documents and statistics provided by the various departments of the Group, and summary of the monitoring, management and operational information rendered by the relevant departments and subsidiaries according to the relevant system of the Group. Certain amounts and numbers in this Report have been rounded. To ensure that such information is as accurate and reliable as possible, the Group has established an internal regulatory mechanism and a review process. The reporting content has also been reviewed by the senior management of the Group, and approved by the Board of Directors of the Group (the "Board").

### HOW TO ACCESS

The Report is available in both English and Chinese electronic versions and has been uploaded onto the websites of HKEXnews ([www.hkexnews.hk](http://www.hkexnews.hk)) and the Group ([www.chinagasholdings.com.hk](http://www.chinagasholdings.com.hk)). If there is any inconsistency or discrepancy between the Chinese and English versions, the Chinese version shall prevail; if there is any inconsistency or discrepancy between this Report and the Annual Report of the Group, the Annual Report shall prevail.

### FEEDBACK

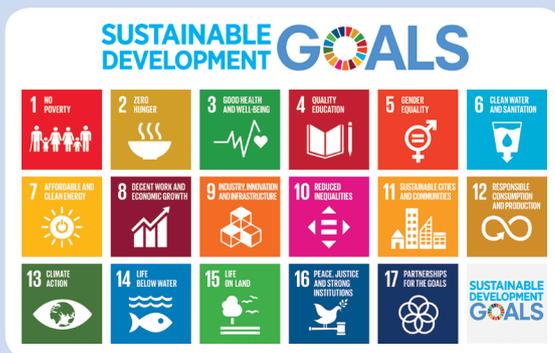
Your valuable feedback on both the content and the format of this Report motivates China Gas's improvement. Please help us in improving our environmental, social and corporate governance performance by sending us your comments to [investor@chinagasholdings.com.hk](mailto:investor@chinagasholdings.com.hk).

# Message from the Chairman

With globalized economic development, China Gas's sustainability reports showcase the Group's emphasis in sustainable development. It demonstrates our consistent innovation in the capital market and global society, in creating greater values for all stakeholders.

China Gas follows the pulse of global economic, environmental and social development, and strives to promote the SDGs conceded at the Sustainable Development Summit of United Nations in 2015. Clean and efficient energy not only offers continuous support to long term social and economic growth, it also creates job opportunities for industry development and promotes invention of advanced technology and products. In project operation, China Gas pays full attention to the impacts on the surrounding environment and communities. Our promise to combat climate change and protect the environment is also enacted through high standard of corporate governance and risk management.

As China launched energy structure reform and promoted the replacement with and use of clean energy, China Gas persists in assisting business organizations and residents to reduce air pollutants and greenhouse gas emissions through its business, to respond to the country's low-carbon development goal. Through continuously taking advantage of the solid foundation in our primary natural gas business, extending the new development trend of LPG industrial chain, as well as expanding into new businesses, the Group also actively develops the cascade use of energy to enhance comprehensive energy efficiency.



## Alignment to the SDGs

- 

The Group supports the government's "Blue Sky" initiative by actively investing in township "replacement of coal with gas" projects for winter heating in North China.
- 

The Group upholds the energy-saving development model and strives to reduce energy consumption.
- 

The Group replaces highly polluting fuels such as traditional fossil fuels and heavy oil with natural gas, which can effectively reduce pollutant and carbon dioxide equivalent emissions to alleviate the existing air pollution issues.
- 

The Group promotes the use of natural gas in cities and townships through active collaboration with provincial and municipal governments in establishing strategic cooperation agreements.

## Message from the Chairman



We believe employees are valuable to China Gas's sustainable development. The Group puts emphasis on creating an equal and diversified workplace. To allow employees bring their potential into full play, we bring in cultural events, system establishment and business training to enable employees to grow together with the Group. Under the "People Oriented, Strive for Excellence" principle, the Group also cooperated with universities and set up China Gas Institute of Technology, with a commitment to cultivating technical and managerial professionals and attracting young people to the industry.

As an enterprise with strong awareness in social responsibility and community connection, China Gas actively participates in community services. Through establishing China Gas Charity Foundation Limited ("China Gas Charity Foundation"), we launched diversified activities including tree planting and caring the underprivileged to support the healthy development of communities in which our business operates, and to spread the message of community service.

In addition, we are honored to be one of the constituents, and the sole city gas operator among the ten newly selected companies, of Hang Seng China Enterprises Index in FY2017/18, which demonstrates the Group's pioneering status in the industry. This is a recognition to our clean gas energy supply to a broad group of users throughout the years, which enhanced China Gas's reputation in the market and confidence from shareholders.

Looking ahead, with immense opportunities brought to the gas industry by China's new energy form and favorable policies on natural gas, China Gas will continue to strengthen itself in strategic transformations. As we build the energy network, we will actively explore green, low-carbon, recyclable and sustainable development strategies to enhance our pioneering role in the industry.

**Mr. ZHOU Si**

*Chairman of the Board*



# About China Gas

## MAIN PRODUCTS AND SERVICES

China Gas has been developing city gas projects since 2002, and is primarily engaged in the investment, construction and operation of city and town gas pipeline infrastructure, gas terminals, storage and transportation facilities and gas logistics systems, transmission of natural gas and LPG to residential, industrial and commercial users, construction and operation of CNG/LNG refilling stations as well as development and application of technologies relating to natural gas and LPG in the PRC. China Gas has now evolved as one of China's largest cross regional energy service providers.

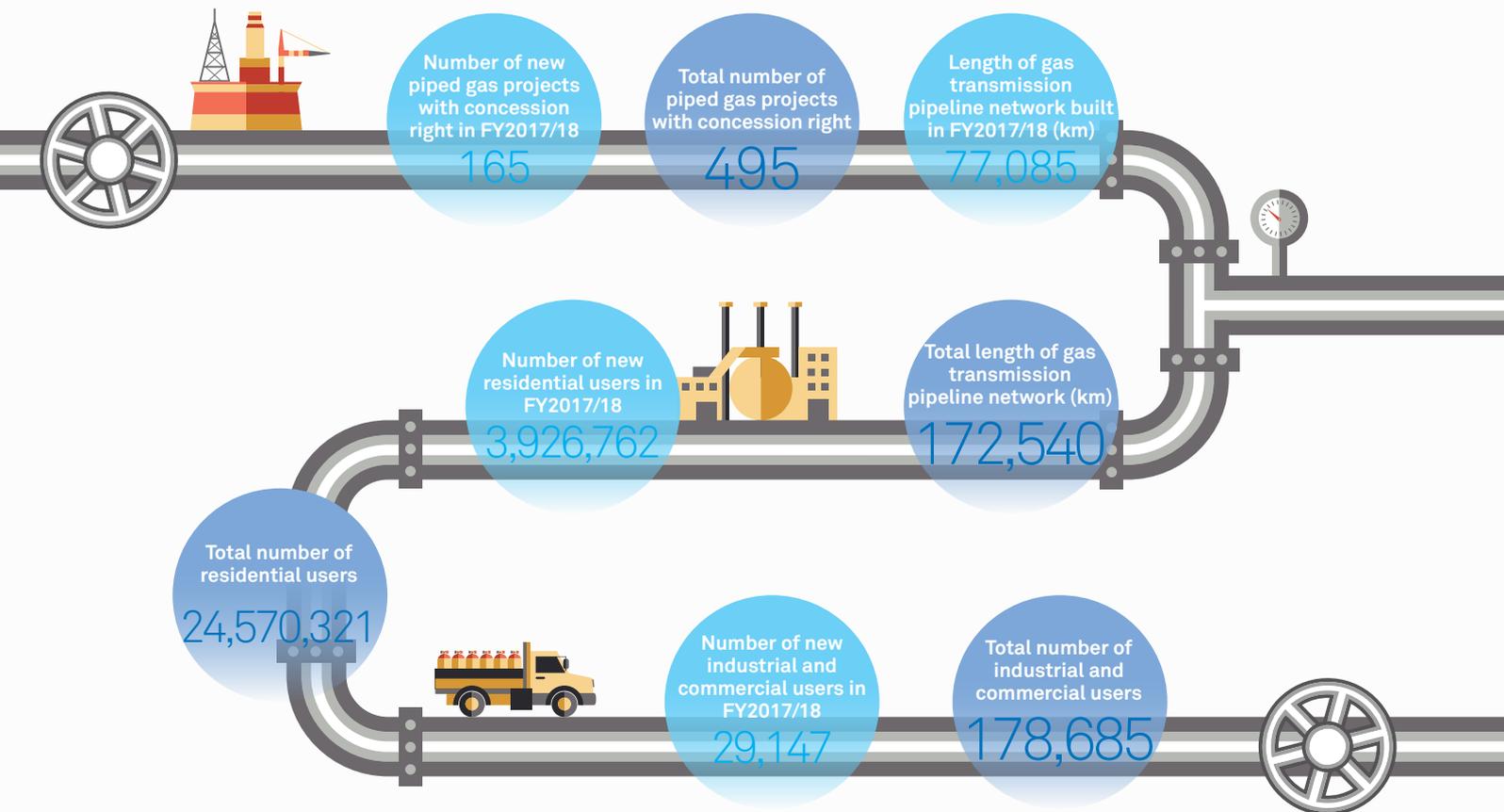
Benefitting from China's improved macro-economy performance, the government's determination to curb smog and haze pollution, adoption of increasingly tightened environmental protection policies, as well as effective implementation of natural gas utilization policies, such as "coal to gas conversion" in industrial and commercial sectors and township "replacement of coal with gas" in North China, China's natural gas industry is presented with tremendous development opportunities. To actively respond to market changes, the Group is constructing a new ecosystem for developing China Gas 4G energy network that is composed of piped natural gas (PNG), compressed natural gas (CNG), liquefied natural gas (LNG) and liquefied petroleum gas (LPG).

As at 31 March 2018, the Group cumulatively secured a total of 495 piped gas projects with concession rights (including 145 replacement of coal with gas projects in counties and districts), and operated 14 natural gas long distance transmission pipelines, 580 CNG/LNG refilling stations for vehicles, one coal bed methane development project, 100 LPG distribution projects as well as completed construction and commenced operation of 19 comprehensive energy supply projects with multi-energy complementation in 26 provinces, municipalities and autonomous regions in the PRC. The number of connectable population living in the cities covered by all of the Group's gas projects increased to 124 million (approximately 41 million households), representing a year-on-year increase of 5.8%.

## NATURAL GAS BUSINESS

### GAS PIPELINE NETWORK CONSTRUCTION AND USER CONNECTION

The Group connects natural gas pipelines to its residential, industrial and commercial users by constructing trunk and branch pipelines of city gas pipeline network, and charge them for connection fees and gas bills. As at 31 March 2018, the Group completed construction of gas transmission pipeline networks of 172,540 km and the connection rate of city gas projects reached 57.2%.



## About China Gas

### NATURAL GAS BUSINESS *(Continued)*

#### SALES OF NATURAL GAS

Natural gas was mainly sold through city and township piped gas network, trade and direct-supply channels. During the Reporting Period, the Group sold 18,659,299,000 m<sup>3</sup> of natural gas, representing an increase of 52.6% over the same period last year, among which 11,786,459,000 m<sup>3</sup> were sold through city and township piped gas network, representing an increase of 39.1% over the same period last year, and 6,872,840,000 m<sup>3</sup> were sold through trade and direct-supply channels, representing an increase of 83.2% over the same period last year.

#### TOWNSHIP “REPLACEMENT OF COAL WITH GAS”



2017 is the first year that China has carried out a large-scale implementation of the township replacement of coal with gas. The Environmental Protection Administration (the predecessor of the Ministry of Ecology and Environment (“MEE”)), the National Development and Reform Commission (“NDRC”), the Ministry of Finance (“MOF”) and the National Energy Administration (“NEA”), together with the people’s governments of Beijing, Tianjin, Hebei Province, Shanxi Province, Shandong Province and Henan Province jointly published 2017 Work Plan on Air Pollution Prevention and Control for Beijing-Tianjin-Hebei and Surrounding Areas on 17 February 2017, which identified “2+26” cities in Beijing-Tianjin-Hebei and the surrounding region as a primary focus on air pollution prevention for the first time. On 17 May in the same year, the MOF, the Ministry of Housing and Urban-Rural Development, the MEE and the NEA issued Notification on the Pilot Scheme for Central Finance Subsidies to Support Clean Energy Winter Heating Programs in Northern China as a pilot scheme for the MOF to provide support for clean energy winter heating to cities in northern China. The implementation of these environmental protection policies not only provides policy guidance and secures funding for the development of the township replacement of coal with gas projects, but also plays a positive role in promoting the utilization of natural gas in China and outlines an extensive market development prospect for the Group.

**NATURAL GAS BUSINESS** *(Continued)*

**TOWNSHIP “REPLACEMENT OF COAL WITH GAS”** *(Continued)*

The Group actively cooperated with provincial and municipal governments to establish strategic cooperation agreements on environmental governance, with a view to utilizing one another’s advantages and resources to foster project operation and promoting the use of natural gas in cities and townships. As at 31 March 2018, the Group has established strategic partnerships with Tianjin municipality, Hebei, Shandong, Shanxi, Henan, Shaanxi, Anhui, Yunnan, Hainan and Heilongjiang provinces respectively, and implemented projects including township replacement of coal with gas, conversion of coal-fired boilers to gas-fired boilers, gas for vehicles, distributed energy resources, gas storage facilities, gas pipeline network and “beautiful villages” in over 145 cities, counties and districts. During the Reporting Period, the Group has contracted township replacement of coal with gas for approximately 3.23 million residential households in total, completed gas pipeline connections for 1.149 million township residential users, and provided 250 million m<sup>3</sup> of natural gas to village residents for winter heating.

**CNG/LNG REFILLING STATIONS FOR VEHICLES AND VESSELS**

In the transportation sector, natural gas is mainly used in buses, shuttle buses, trucks and vessels in substitution of gasoline, diesel, fuel oil and other petroleum products. The central government has issued various favorable policies to encourage the use of natural gas for vehicles and vessels. Action Plan for Energy Development Strategy (2014–2020) issued by the State Council clearly proposes “to speed up the construction of natural gas refilling stations, proactively and orderly develop CNG and LNG vehicles with taxis and buses as priorities, and stably develop the use of natural gas for cars, shuttle buses and heavy duty trucks, etc.”. In terms of water transportation, Guidance on Promoting Utilization of LNG in Water Transportation Industry issued by the Ministry of Transport (MOT) has clearly set out the development route, targets, principles, duties and safeguard measures of LNG in the water transportation industry. As at 31 March 2018, the Group has owned 580 CNG/LNG refilling stations for vehicles. These stations can provide filling service to more than 200,000 natural gas vehicles per day on average.



## About China Gas

### LPG BUSINESS

With LPG becoming popular among rural-urban fringe residents, with industrial and commercial LPG demand growing steadily over the long term, and with LPG developing rapidly as a form of raw material in petrochemical synthesis and deep-processing sectors, LPG industry in China has welcomed a valuable development.

The Group is China's largest integrated LPG service provider. It boasts itself with a full industry chain composed of import, terminals, trade, warehousing, logistics, refilling, distribution and retail. It has 100 LPG distribution projects, a professional maritime shipping fleet, large land logistics fleets and 1,100 retail stores, serving more than 6 million residential, commercial and industrial users. It also has 8 LPG terminals reasonably located along the coast of China, 4 large petrochemical product storage and logistics bases, storage facilities with a storage capacity of 300,000 m<sup>3</sup>, Asia's largest LPG tank farm for ambient temperature storage, and a sales network covering 19 provinces of China. During the Reporting Period, the Group's total LPG sales volume was 4,030,394 tonnes, representing a year-on-year increase of 9.0%.

## VALUE-ADDED SERVICES FOR END USERS



The Group actively promotes various value-added services related to its gas sales business, including the sales of wall-hanging gas heaters and kitchen appliances under the brand of “Gasbo”, provision of comprehensive gas insurance agency services, and sales of gas corrugated pipes, gas alarms and other products such as bottled water. During the Reporting Period, various value-added services have achieved substantial growth. The Group has sold nearly 450,000 units of Gasbo wall-hanging gas heaters and kitchen gas appliances and has become China’s leading manufacturer and distributor of wall-hanging gas heaters

and kitchen gas appliances. As reflected in its service motto of “Lifelong Companion and Satisfaction”, Gasbo provides customers with “one-stop” professional services, including consultation, design, delivery, installation and professional maintenance. During the Reporting Period, the Group’s revenue from value-added business amounted to HK\$2,946,681,000, representing a year-on-year growth of 263.0%.

Furthermore, the Group has integrated online and offline sales effectively through the launch of Zhongran Smart Living APP by Zhongran Smart Living E-commerce Company Limited, in order to integrate resources via the E-commerce platform to provide one-stop smart living services to millions of users, including LPG ordering, gas payment and recharge, product sales, community services and household products O2O.



## EXPANSION INTO NEW BUSINESSES

The Group relies on the huge market and user advantages of gas projects and is committed to promoting the widespread deployment of new businesses such as natural gas-fired distributed energy resource, photovoltaic power generation, electricity distribution, charging piles, and central heating in China. We leverage on our experiences in market development and technological innovations to develop integrated energy utilization and provide users with highly efficient integrated energy resources that address their needs for gas, heat, electricity, and cooling. As at 31 March 2018, the Group had a total of 19 comprehensive energy supply projects with multi-energy complementation in operation.

## About China Gas

### 1 Hebei

Cangzhou Development Zone, Nanpi County, Qinghedian, Wangdu City, Tangshan Nampo, Leting County, Xinle, Gaocheng, Pingshanxian, Fengnan District of Tangshan, Neiqiu County, Bohai New Zone, Cangzhou High-tech Zone County, Tang County, Handan Jinan New Zone, Luquan, Quyang County, Raoyang County, Botou New Zone, Laishui County, Dingzhou, Ding Xing County, Yutian County, Changli County, Weixian County, Xiahuayuan District, Chengan County, Wuqiao County, Ningjin County, Linzhang County, Zaoqiang County, Longyao County, Xingtang County, Gucheng County, Nangong City, Jize County, Xinhe County, Kangbao County, Zan Huang County, Huanghua, Cangzhou Zhongyou pipeline, Xingtai

### 2 Inner Mongolia Autonomous Region

Hohhot, Wuzhen Banner, Baotou, Helingeer County, Tuoketuo County, Tuzuo Banner, Wuchuan County, Alashangmeng, Alashangmeng Wusitai Industrial Zone, Zuo Banner Tenggei Industrial Zone, Wuhai, Wutelaqian Banner, Liangcheng County, Jinshan Industrial Park, Chang Meng pipeline, Wushen Banner pipeline

### 3 Gansu

Lingtai County, Huating County, Jingning County, Chongxin County, Huachi County, Heshui County

### 4 Ningxia Hui Autonomous Region

Zhongwei, Guyuan City

### 5 Shaanxi

Baoji, Qishanxian, Yulin, Linyouxian, Shangnan County

### 6 Hubei

Yichang, Xiaogan, Hanchuan, Yingcheng, Yunmeng, Suizhou, Tianmen, Dangyang, Wuhan Qingshan District, Wuhan Jiangnan, Laohekou, Danjiangkou, Yuanan, Dawu County, Run County, Wuxuetian Industrial Zone, Shiyan Wudangshan Zone, Fang County, Donghu High-tech Zone, Jianli County, Honghu City, Songzi City, Xinzhou District in Wuhan, Wuxue City, Yingshan County, Tuanfeng County, Longganhu District in Huangmei County, Huanggang City, Xishui County, Meichuan Town in Wuxue City, Huangmei County, Shiyan City, Zigui County, Huangshi Port Industrial Park, Xiaogan pipeline, Dangyang pipeline, Huanggang-Daye pipeline, Yunxi County, Xiaogan Hi-tech Zone

### 7 Chongqing

Yubei, Chongqing Changnan pipeline

### 8 Hunan

Yiyang, You County, Zhangjiajie, Yiyang Datonghu, Yiyang City New Zone

### 9 Guangxi Zhuang Autonomous Region

Yulin, Qinzhou, Liuzhou, Fangchenggang, Nanning ASEAN Development Zone, Laibin, Baise, Bobai, Nanning, Chongzuo, Guiping, Beihai, Luchuan, Tiandeng County, Dahua County, Hechi, Tianlin County, Guangxi Provincial Natural Gas Pipeline, Cenxi City, Napo County, Liucheng County, Luo Cheng County

### 10 Heilongjiang

Harbin, Jiamusi, Shuangcheng, Mudanjiang, Jiagedaqi, Huachuan County, Tangyuan County, Huanan County, Suibin County, Tongjiang, Mudanjiang Development Zone, Nongkenbaquanling, Raohe County, Qitaihe Jinsha New Zone, Mu Lan County, Tieli Chengguan, Fuyu County, Boli County, Luobei County, Yichun City Xinqing District, Ji Xi, Lingdong District in Shuangyashan, Heihe City, Nongken Hongxinglong District, Wudalianchi City, Xunke County, Qingan County, Shuangyashan City, Sunwu County

### 11 Liaoning

Fushun, Jinzhou Economic Hi-Tech Development Zone, Shenyang Sujiatun, Dalian Jinzhou Development Zone, Liaoyang, Gaizhou, Zhuanghe, Zhuanghe City Industrial Park, Pulandian, Liaoyang Economic Zone, Liaoyang Taizi River, Xinbin County, Jinzhou Longxiwan New Zone, Qingyuan County, Dashiqiao Economic Zone, Jianping County, Fushun County, Yixian Qilhe, Changhai County, Jinzhou Dayou Economic Area, Yingkou Bohai Tech City, Jinzhou City, Shenyang City, Liaoyang pipeline, Dalian Pawan Economic Development Zone, Kuandian Manzu Autonomous County

# Natural Gas Operational Locations



### 12 Xinjiang Uygur Autonomous Region

Horgos Economic Development Zone, Ho City Economic Development Zone

### 13 Tianjin

Jinghai Economic Development Zone, Ziya Industrial Zone, Baodi District in Tianjin, Tianjin pipeline

### 14 Shandong

Dezhou, Qingdao, Leling, Qufu, Sishui, Qufu New Zone, Weifang Binhai Economic Development Zone, Liaocheng, Dezhou Tianqu Industrial Zone, Linyi City, Linyi Economic Zone, Linshu County, Zhangqiu City, Rongcheng City, Haiyang, Wendeng, Rushan City, Weihai City, Shandong Provincial Natural Gas Pipeline

### 15 Henan

Xinyang, Jiaozuo City, Qinyang City, Wuzhi County, Xiuwu County, Luohe City 7 Projects, Xiping County, Jiyuan City, Sanmenxia City, Shanxian County, Sanmenxia Industrial Park, Lingbao City, Yanshi City, Yongcheng City, Yongcheng Industrial Zone, Xinmi City, Huangchuan County, Guangshan County, Gushi County, Huiguo Town, Gongyi City, Yuanyang County, Hui County

### 16 Jiangsu

Pizhou, Yangzhong, Jiang Bei District, Nanjing, Pu Kou District, Nanjing, Jiawang District, Xuzhou, Xinyi City, Yangzhou City, Taixing East District, Lianyungang Haizhou Economic Development Zone, Nanjing Jingqiao, Donghai County, Pei County, Sihong County, Guannan County, Nanjing ChangLu Industrial Park, Subei pipeline

### 17 Anhui

Wuhu, Huainan, Shouxian, Suzhou, Wuhu County, Nanling County, Huoshan County, Fengtai County, Wuwei, Qimen County, Xiuning County, Maoji Development Zone, Huoqu County, Susong Linjiang Industrial Zone, Suzhou Si County, Suzhou Yongqiao Economic Zone, Wuhe County, Sixian, Susong City, Taihu County, Binhu New District of Hefei City, Wuwei County Industrial Park

### 18 Zhejiang

Xiaoshan District, Hangzhou, Taizhou, Jinhua, Hangzhou Jiangdong Development Zone, Daishan Economic Development Zone, Yueqing City

### 19 Jiangxi

Nanchang Wanli, Xinfeng County, Lean City, Wuyuan County, Yihuang County, Xinfeng Industrial Park

### 20 Fujian

30 cities/regions, Sanming City, Shaowu City, Wuping County, Taining County, Qingliu County, Quanzhou Guanqiao Industrial Zone, Youxi County Industrial Park, Datian County, Jianping County, Hua'an Economic Development Zone

### 21 Guangdong

Maoming, Conghua, Meizhou, Yunfu, Shanwei, Xinxing County, Fengshun County, Pingyuan County, Dapu County, Wuhua County, Huazhou, Luhe, Mei County, Jieyang Industrial Park

### 22 Shanxi

Shuozhou City, Xiangning County in Kinfen City, Jing-Shuo pipeline

### 23 Jilin

Fusong, Baishan City, Changbai Mountain International Tourist Resort Zone in Fusong County, Jingyu County

### 24 Guizhou

Kaill City

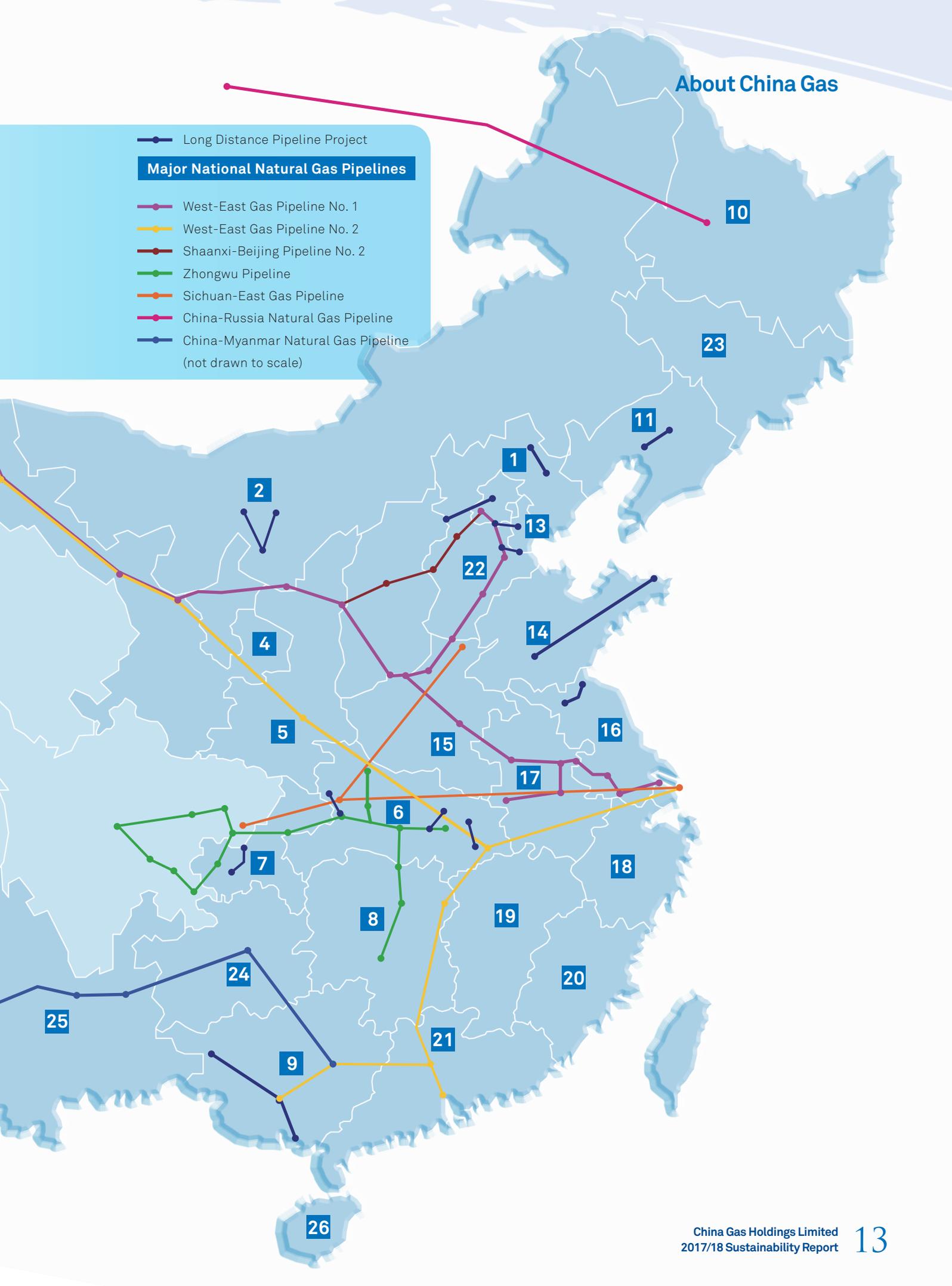
### 25 Yunnan

Dali Haidong New Zone, Baoshan City, Lvchun County

### 26 Hainan Province

Qiongzong Li and Miao Autonomous County

- Long Distance Pipeline Project
- Major National Natural Gas Pipelines**
- West-East Gas Pipeline No. 1
- West-East Gas Pipeline No. 2
- Shaanxi-Beijing Pipeline No. 2
- Zhongwu Pipeline
- Sichuan-East Gas Pipeline
- China-Russia Natural Gas Pipeline
- China-Myanmar Natural Gas Pipeline  
(not drawn to scale)





Operational  
Locations of  
**Liquefied  
Petroleum Gas**

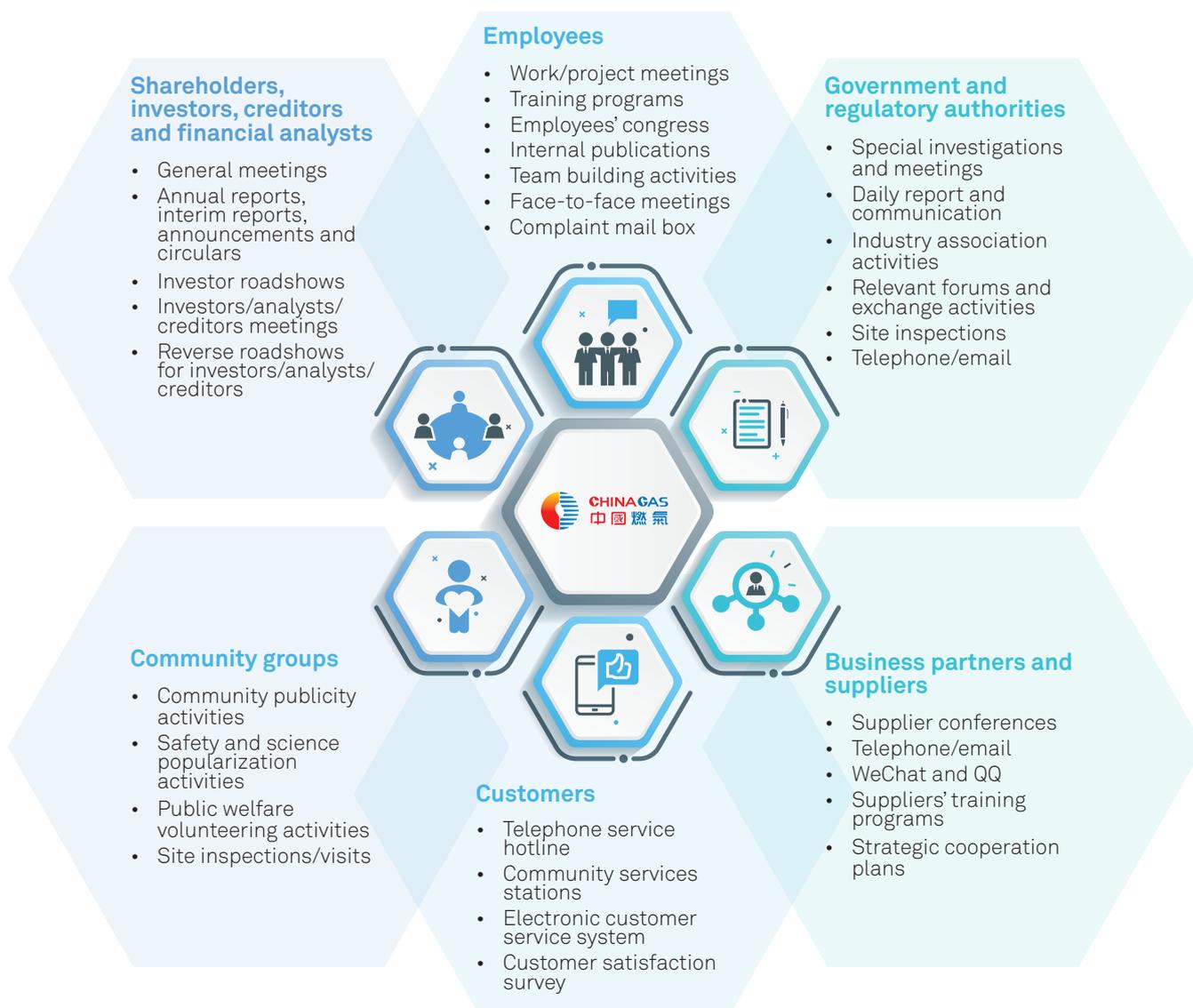


# Engaging with Stakeholders

## COMMUNICATING WITH STAKEHOLDERS

China Gas attaches great importance to close connections with stakeholders as it is an integral part of our blueprint for sustainable development, which allows us to make a balanced benefit when implementing long-term and strategic plans. Stakeholders of the Group include employees, management and directors within the organization, as well as external customers, business partners, investors, creditors, regulators and various community groups. Since the Group's business impacts stakeholder groups differently, we communicate regularly with them through various channels and solicit their feedbacks and comments.

The Group's principal channels of communication with stakeholders are as follows:



China Gas believes that stakeholder communication is a dynamic process that should be continuously developed. We have always been aiming at solidifying close connections and establishing mutually trusted relationships with stakeholders to achieve constructive interaction and communication. Apart from achieving positive interactions, the Group conducts regular reviews on the effectiveness of the activities and explores the room for improvement.

## MATERIALITY ASSESSMENT

The Group conducts a comprehensive materiality assessment every year, with a view to identifying our shared economic, environmental and social concerns with stakeholders. We allocate resources based on the assessment and to sharpen the focus of our sustainability reports.

The major steps of our materiality assessment in FY2017/18 are outlined as follows:



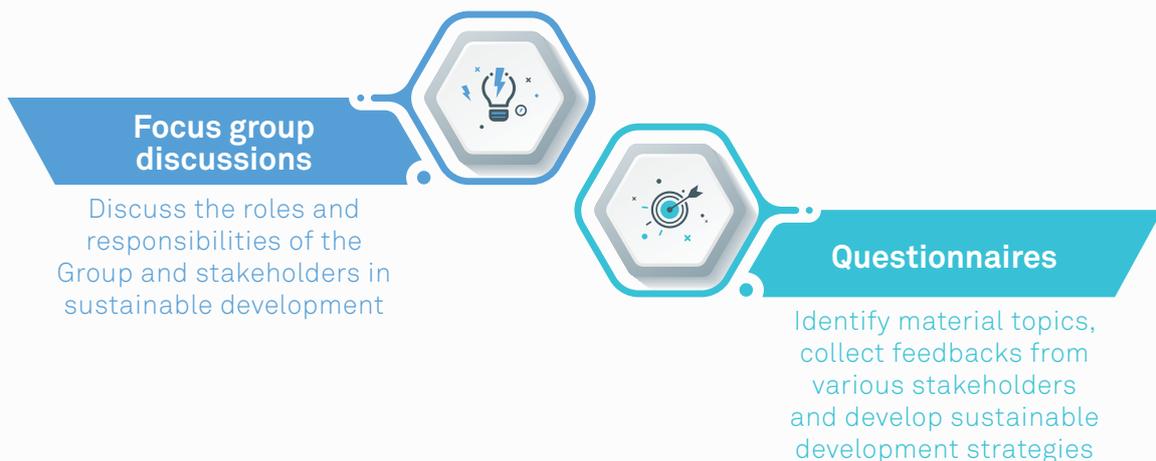
### IDENTIFYING SUSTAINABLE DEVELOPMENT TOPICS

With the help of the Consultant, China Gas conducted a comprehensive review and revision on the list of topics related to sustainable development of the Group to ensure they fully cover the nature of the Group's businesses and take into account topics raised in previous communication with stakeholders. The Group has identified 28 topics that are most relevant to its business and impact. These topics – spanning the four realms of “economy”, “environment”, “employees/customers” and “society” – have provided the basis for communication with internal and external stakeholders.



### CONDUCTING MATERIALITY ANALYSIS

China Gas invited internal and external stakeholders to actively participate in the identification of material topics. With the help of the independent consultant, China Gas organized focus group discussions for both internal and external stakeholders and conducted questionnaires, with an aim to collect and analyze stakeholders' ratings of the relevant sustainable development topics and expectations for this Report through a fair and balanced approach.



## Engaging with Stakeholders

### MATERIALITY ASSESSMENT *(Continued)*



#### FOCUS GROUP DISCUSSION FOR EXTERNAL STAKEHOLDERS



#### FOCUS GROUP DISCUSSION FOR INTERNAL STAKEHOLDERS



China Gas held two focus group discussions, one in Hong Kong for external stakeholders and one in Shenzhen for internal stakeholders, in January 2018 to gauge interest and collect valuable feedback from our stakeholders on our sustainability development.

Integrating the Group's business development model, the stakeholders shared in-depth views on the two topics: "Potential Material Sustainable Development Topics of China Gas" and "Alignment with the SDGs of United Nations" during the discussions. They actively expressed their opinions and suggestions on their concerns and issues. The Consultant collected and sorted the opinions of the stakeholders and summarized them by categories of economy, environment and society. Feedbacks and outcomes of the discussions were applied to further improve the Report and continue to contribute to the long-term development of the Group.

With globalized economic development, sustainability reports have become increasingly important in the international community and capital market, and are crucial indicators of corporate development evaluation. Apart from maintaining its leading position in industry development, China Gas will continue its innovation in sustainable development and create more values for the enterprise, society and stakeholders.

### MATERIALITY ASSESSMENT *(Continued)*

Stakeholder groups	Issues with highest concern
<b>Shareholders, investors, creditors and financial analysts</b>	<ul style="list-style-type: none"> <li>• Economic performance</li> <li>• Market presence</li> <li>• Indirect economic impacts</li> <li>• Anti-corruption</li> </ul>
<b>Employees</b>	<ul style="list-style-type: none"> <li>• Staff welfare</li> <li>• Market presence</li> <li>• Training and education</li> </ul>
<b>Government and regulatory authorities</b>	<ul style="list-style-type: none"> <li>• Environmental compliance</li> <li>• Greenhouse gas emission management and climate change mitigation</li> <li>• Disaster/ emergency planning and response</li> </ul>
<b>Community groups</b>	<ul style="list-style-type: none"> <li>• Environmental compliance</li> <li>• Greenhouse gas emission management and climate change mitigation</li> <li>• Effluent and waste management</li> </ul>
<b>Customers</b>	<ul style="list-style-type: none"> <li>• Greenhouse gas emission management and climate change mitigation</li> <li>• Customer health safety</li> <li>• Asset integrity and process safety</li> </ul>
<b>Business partners and suppliers</b>	<ul style="list-style-type: none"> <li>• Procurement practices</li> <li>• Greenhouse gas emission management and climate change mitigation</li> <li>• Supplier environmental assessment</li> </ul>

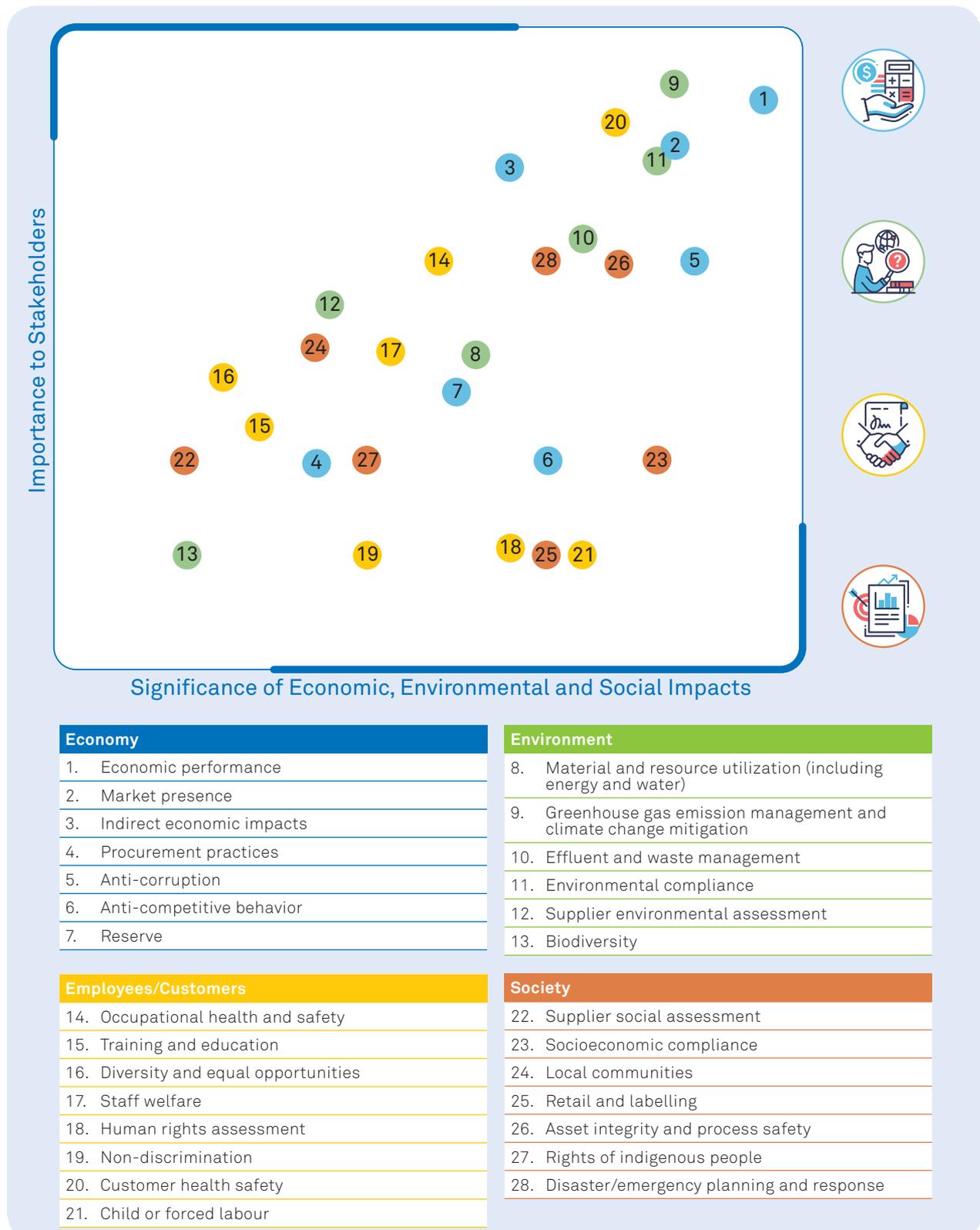
### MATERIALITY MATRIX

The independent consultant conducted a materiality analysis based on the results, and the most critical topics were identified and presented in a matrix. The top 10 material topics were extensively disclosed in this Report and were reframed into GRI Standards for the ease of reporting.

# Engaging with Stakeholders

## MATERIALITY ASSESSMENT (Continued)

### MATERIALITY MATRIX (Continued)



## MATERIALITY ASSESSMENT (Continued)

### 10 MATERIAL TOPICS OF CHINA GAS

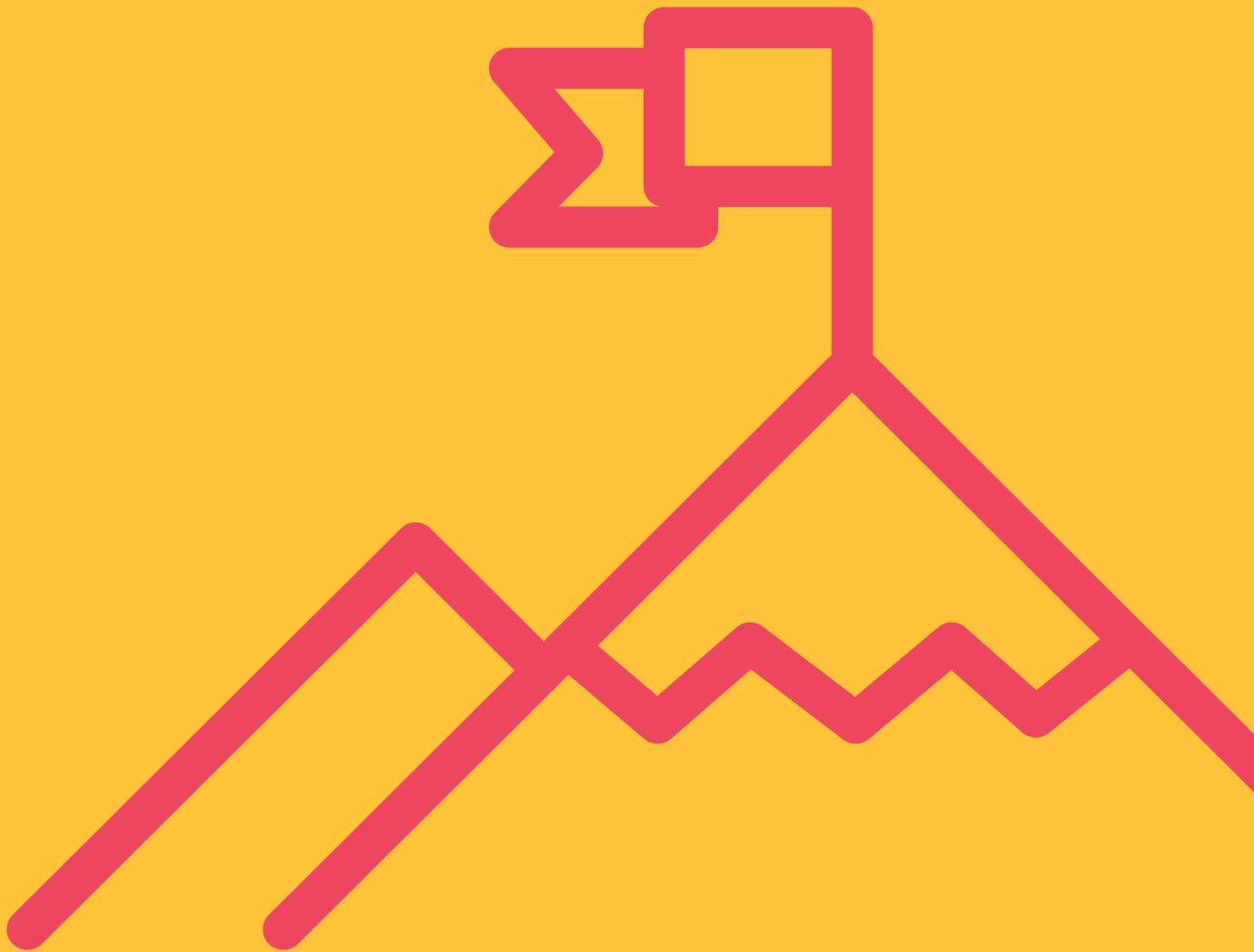
GRI Standards	Topic Boundary					
	Within China Gas		Outside China Gas			
	Shareholders, investors, creditors and financial analysts	Employees	Government and regulatory authorities	Community groups	Customers	Business partners and suppliers
<b>Economy</b>						
Economic performance	✓	✓	✓	✓	✓	✓
Market presence	✓	✓	✓	✓	✓	✓
Anti-corruption	✓	✓	✓			
Indirect economic impacts	✓	✓	✓	✓	✓	
<b>Environment</b>						
Emissions	✓	✓	✓	✓	✓	
Environmental compliance	✓	✓	✓	✓	✓	✓
Effluents and waste	✓	✓	✓	✓		
<b>Society</b>						
Asset integrity and process safety	✓	✓	✓	✓	✓	✓
Disaster/emergency planning and response	✓	✓	✓	✓	✓	
<b>Employees/Customers</b>						
Customer health safety	✓	✓	✓	✓	✓	✓



### VERIFYING MATERIAL TOPICS

Senior management of the Group verified the 10 prioritized material topics and their coverage, boundaries and completeness to ensure their significance to the Group.

# Establishing Sustainable Corporate Governance



# Establishing Sustainable Corporate Governance

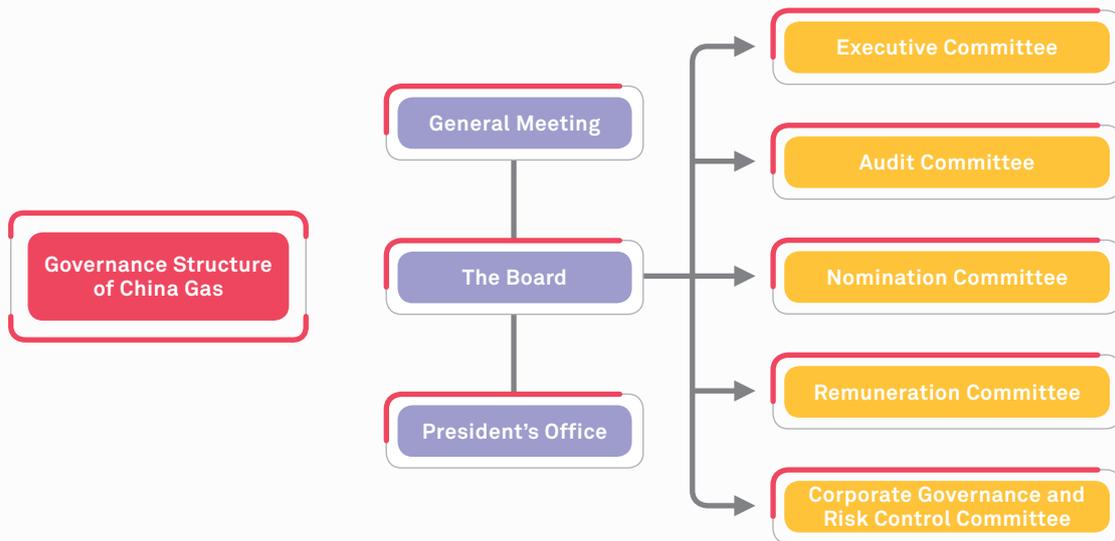
## MISSION AND VISION ON SUSTAINABILITY DEVELOPMENT

China Gas adheres to the mission of “Converging in Harmony and Benefiting the Society” in our corporate social responsibility while putting our green development into practice. The Group strives to create the greatest values for shareholders, customers, employees, business partners and the society through strengthening eco-friendly initiatives and ecological civilization with our green, low-carbon, recyclable and sustainable operation. As the reform and innovation in clean energy accelerates in China, the Group will uphold the core values in maximizing competitiveness and sustainable growth potential to seize the opportunity to become the world’s leading sustainable clean energy service provider.



Whilst achieving sustainable development, China Gas balances the needs of its stakeholders to ensure that their objectives are highly in line with the corporate development direction, with a view to jointly building a world-class integrated energy service enterprise.

## SUSTAINABILITY GOVERNANCE STRUCTURE



The Board is responsible for the sustainable development of China Gas. It formulates long-term strategic planning and annual work plan, and makes decisions on, plans for, and provides guidance on material issues about social responsibilities. The Board has five committees, including Executive Committee, Audit Committee, Nomination Committee, Remuneration Committee, and Corporate Governance and Risk Control Committee to discuss relevant issues and drive the relevant work.

## Establishing Sustainable Corporate Governance

### SUSTAINABILITY GOVERNANCE STRUCTURE *(Continued)*

The Group has diversified members in the Board to ensure the Board is equipped with necessary skills, experience and diverse viewpoints for corporate business. The diverse backgrounds of the members ensure that the Board can comprehensively represent benefits of all shareholders, as well as enhance the effectiveness of corporate governance. The Group believes the combination of non-executive Directors and independent non-executive Directors taking part in the management and decision-making of the Board and its subsidiary committees would allow impartiality and independence of the Board. The composition of the Board as at 31 March 2018 is illustrated as follows:

Number of Director	Gender	Designation	Ethnicity	Age group	Skill/industry experience	Directorship with China Gas (number of years)
15	Female	Executive	Non-chinese		Economics	Less Than 1 year
14				41-50		1-10 years
13			Chinese		Accounting & financial	
12	Male			51-60		
11						
10					Business administration	
9		Non-executive				
8						
7						
6						Over 10 years
5		Independent Non-executive			Legal	
4						
3				Over 60		
2					Marketing	
1					Logistics	

### THREE-TIER ORGANISATIONAL STRUCTURE OF THE GROUP'S HEADQUARTERS, REGIONAL MANAGEMENT CENTRES AND PROJECT COMPANIES

To serve the development strategy of replacement of coal with gas, China Gas issued effective policies such as the China Gas Level-based Authorization System of New Business including Replacement of Coal with Gas in Rural Areas and the China Gas Scheme for Further Improving Management and Control Mode of New Business including Replacement of Coal with Gas in Rural Areas during the Reporting Period, in a bid to establish and implement the management and control mode of “headquarters, regional management centres, core project companies, and branch and subsidiary of core project companies”, further push ahead with the transformation of the function of the headquarters from “management” to “service”, encourage maximum creativity and vitality of front-line staffs, and enable the management mechanism to catch up with the Group's rapid development.



#### HEADQUARTERS

Responsible for formulating strategies, policies, systems and standards, controlling decisions and budget as well as supervision and control



#### REGIONAL MANAGEMENT CENTRES

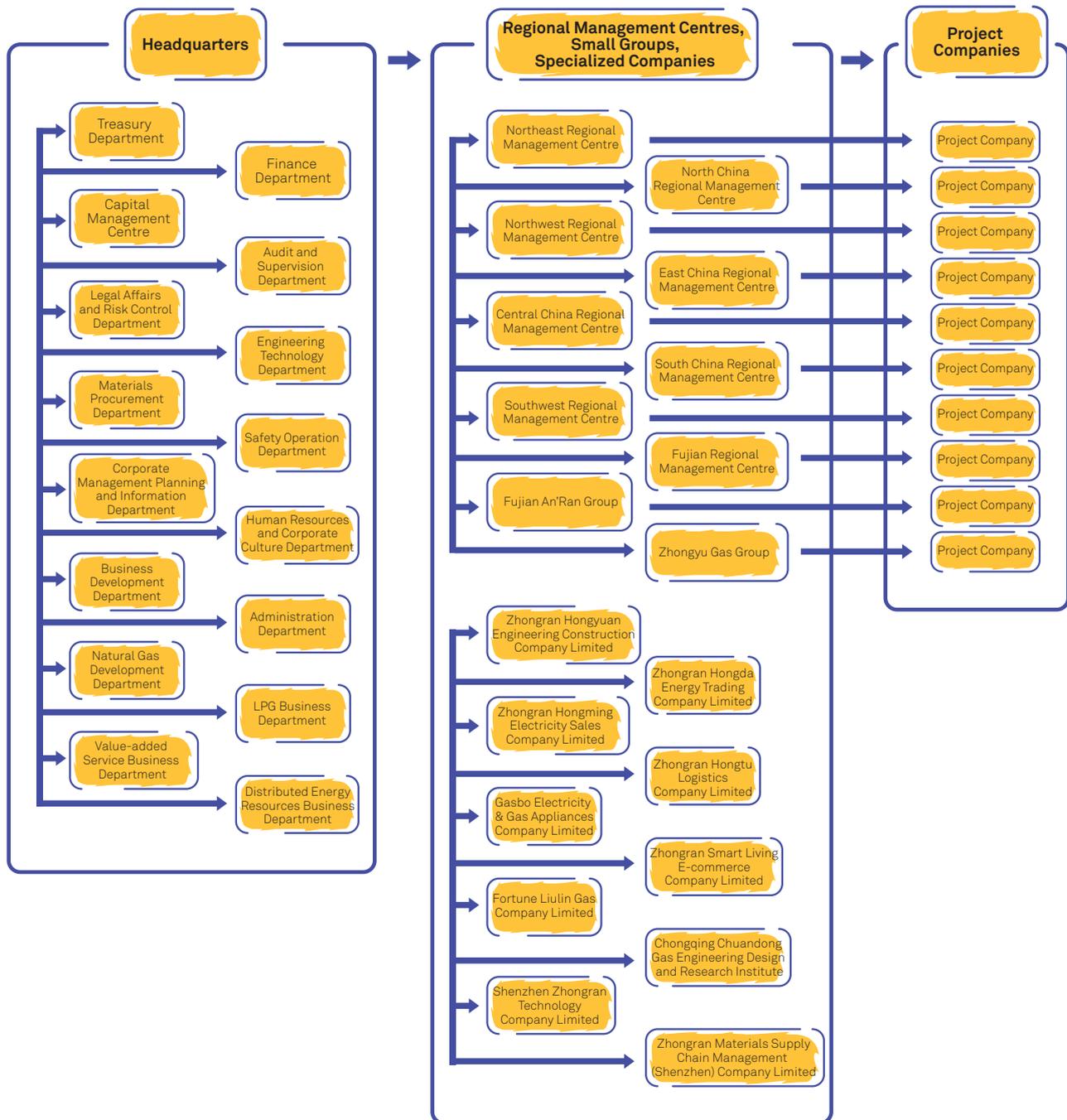
As an extension of the headquarters' management arm, undertaking and implementing important management functions of the Group



#### CORE PROJECT COMPANIES AND ITS BRANCHES AND SUBSIDIARIES

As a profit center and operating entity, enhancing self-management and increasing profitability of various business under the supervision and management of the Group headquarters and regional management centres

# Establishing Sustainable Corporate Governance



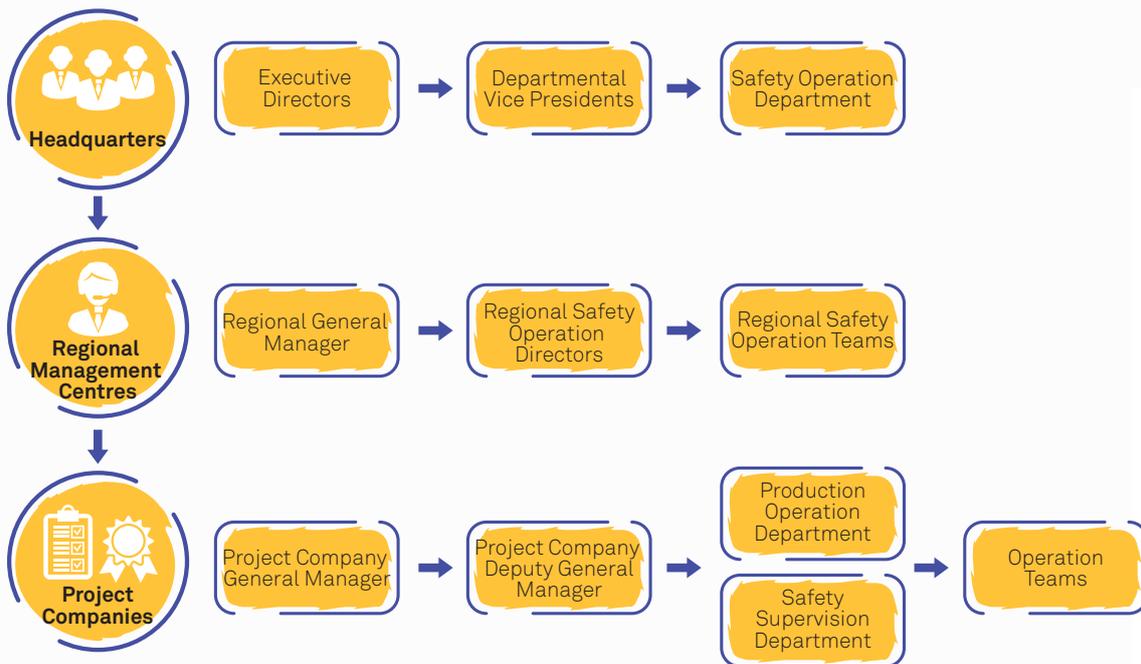
## MANAGEMENT SYSTEMS

Our Group has established various management systems to refine corporate governance structure and push ahead sustainable development.

### SAFETY OPERATION MANAGEMENT SYSTEM

Our Group has established a comprehensive Safety Operation Management System. It provides guidelines for business operation and management, fulfills safety responsibilities of all ranks and avoids safety risks at source.

#### SAFETY OPERATION MANAGEMENT STRUCTURE OF CHINA GAS





## ELEMENTS OF SAFETY OPERATION MANAGEMENT SYSTEM

### Management structure of safety operation

Dedicated safety management departments and teams are set up in the headquarters, regional management centers and project companies.

### Safety accountability system for personnel at all levels

Project companies have established clear safety responsibilities for managers and staff at all levels.

### Safety targets, standards and measures

According to the targets of enterprise safety management, project companies signed safety responsibility letters at all levels to ensure that all departments, units and employees strictly implement the relevant targets, standards and measures.

### Safety management systems, operating procedures and guidelines

28 safety management systems and 22 sets of operating procedures and guidelines, including the categories of pipeline network safety and user safety, were formulated.

### Safety emergency plans

Project companies have prepared emergency plans to provide clear guidelines for employees to deal with accidents in gas pipeline network or gas station system. The plans cover the composition, responsibilities and division of emergency response and rescue teams, as well as a summary of repairing equipment and safety equipment.

### Special management standards for safe operation

Management standards for safe operation were formulated for different working environments of special operations, ignition operations, confined space operations and high-altitude operations, and for different products such as LPG cylinders and hazardous chemicals.

### Safety facilities

All kinds of dangerous facilities or places are equipped with safety warnings and protection facilities against fire, explosion, thunder and poison.

### Safety incident management

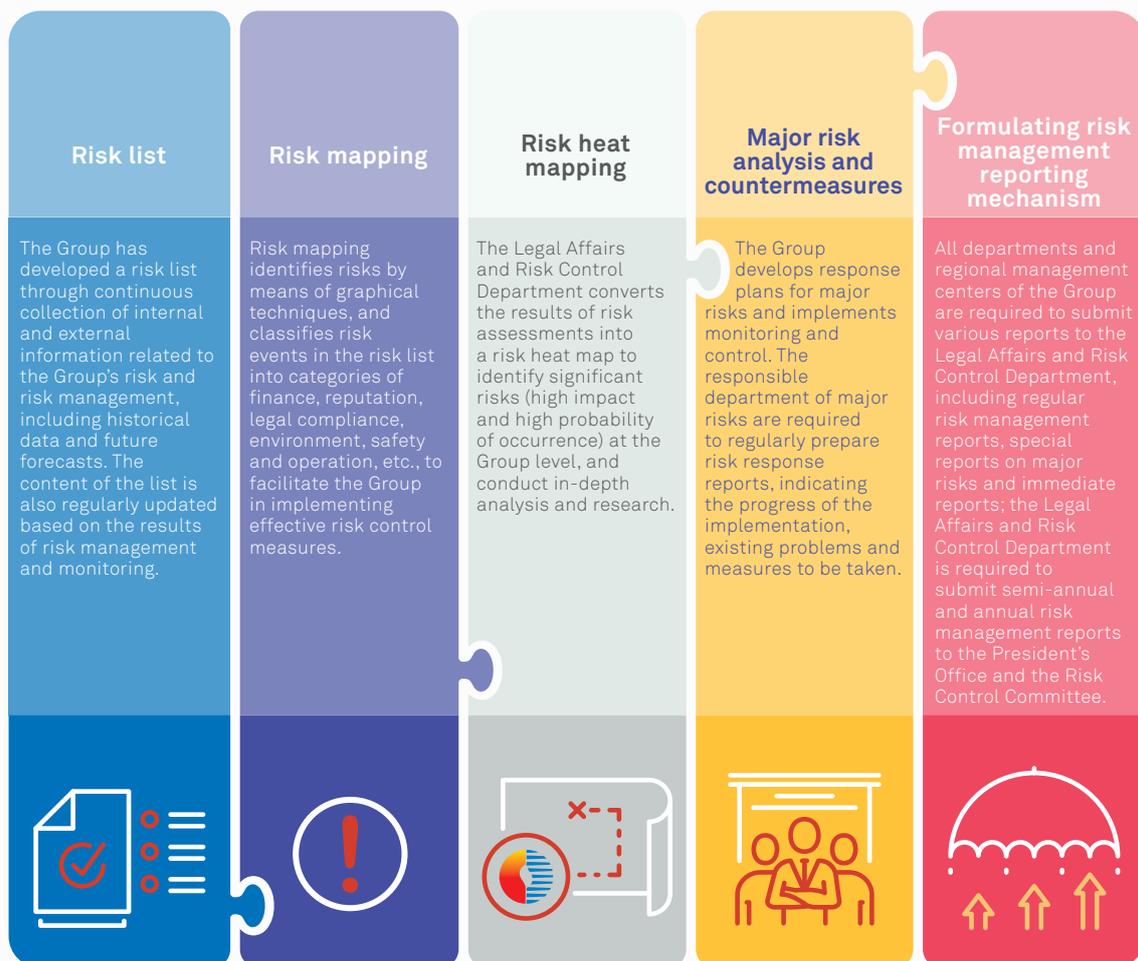
Project companies must report every safety accident along the ranks within 24 hours thereafter, regardless of loss and responsibility. Major accidents involving an explosion or casualties must be reported to the headquarters and regional management center within one hour.

## RISK MANAGEMENT SYSTEM

Our management documents such as Risk Management Guidelines provide detailed guidelines for the organization and procedures of comprehensive risk management and to enhance our risk prevention capability. At the Group level, the Group has set up a “Social Responsibility Taskforce”, which is composed of the Group’s management and major departments (including Audit and Supervision Department, Legal Affairs and Risk Control Department and Safety Operation Department). The team assesses the risks faced by the Group. Besides, project companies have set up risk teams to promote and carry out internal risk self-assessments, and to supervise and review the Group’s existing risk management system to ensure its effectiveness.

China Gas soundly improves corporate governance and internal control. The Group undertakes to incorporate effective and sustainable corporate governance and internal control measures into its development strategy and risk management system through self-examination and professional advice from independent third parties.

### ELEMENTS OF RISK MANAGEMENT SYSTEM



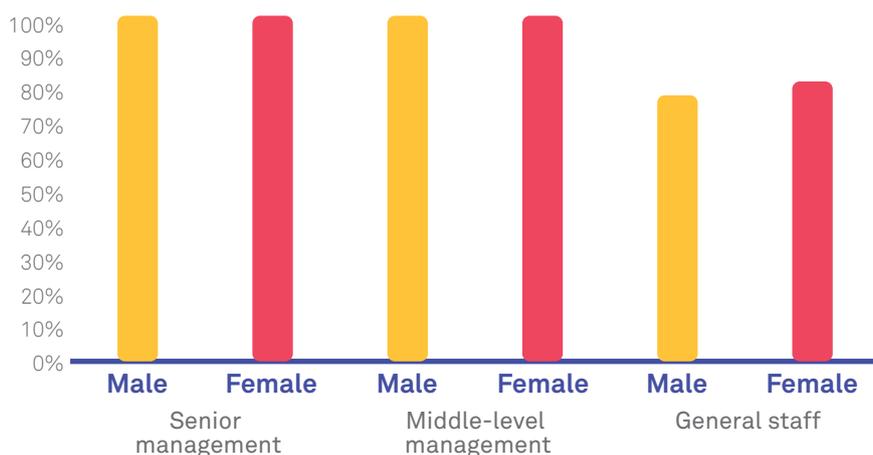
## Establishing Sustainable Corporate Governance

### ANTI-CORRUPTION MECHANISMS

China Gas emphasizes the strengthening of corporate governance through prevention and monitoring. To prevent bribery, extortion, fraud and money laundering, the Group has developed a series of policies and systems including Internal Audit Supervision and Management System, Internal Supervision and Reporting Management System, Upright and Diligent Handbook and Engineering Materials Supplier Management System. Our Employees' Code of Conduct states that all employees are prohibited from obtaining money from others or seeking gains from relatives and friends by taking advantage of their positions and duties. It indicates that our Group resolutely opposes acts of corruption, accepting or offering bribes. During auditing and monitoring, if any violation of regulations is identified, the Group will impose penalties according to relevant provisions of Employees' Rewards and Punishments Policy. If necessary, violators will be handed over to judicial authorities by relevant departments of the Group.

Moreover, we have organized training and dissemination pertaining to the Upright and Diligent Handbook. Newly joined cadres in the Management Academy must also learn the handbook. In FY2017/18, no cases of corruption, bribe, fraud or other misconduct were recorded.

#### PERCENTAGE OF EMPLOYEES RECEIVING ANTI-CORRUPTION TRAININGS



The Group understands that stakeholders are concerned about prevention of anti-competitive behaviors under this market environment, and is actively engaged in referencing relevant guidance. Regarding bid invitation and bidding activities, the Group strictly follows national laws and regulations including the Law of the PRC against Unfair Competition, Law of the PRC on Bid Invitation and Bidding and Government Procurement Law of the PRC, and strictly prohibits illegal activities such as colluded bidding and bid rigging in the process.

### PROTECTION OF INVESTORS' INTERESTS AND INFORMATION DISCLOSURE

In protection of the interests of investors and creditors, China Gas allows shareholders to participate in governance. For example, in the annual shareholder meeting, chairmen of all committees of the Board, or other members of relevant committees and external auditors of the Group would attend and answer questions from shareholders. We believe the diverse backgrounds of our Directors facilitate fair and impartial interests for minority shareholders. In addition, the Group provides contact information such as hotline and email address on its website for the convenience of shareholders to make any comments on the Group.

The Group attaches great importance to the transparency of corporate information. Hence, the Group actively and promptly notifies investors and creditors important information to ensure their rights to information. Channels of communication include interim and annual reports, announcements and circulars as published in accordance with the Listing Rules. These published documents and the latest corporate information and messages are available on the websites of the Group and the Stock Exchange.

### SUPPLY CHAIN MANAGEMENT

FY2017/18

Supplier compliance  
rate reached **100%**



Percentage of suppliers that  
have obtained certifications for  
environmental management system  
and occupational health and safety  
management system reached **100%**

The Group attaches great importance to the management of supply chain responsibility and is committed to establishing an open, orderly and win-win operation platform for positive competition among business partners. According to the Bidding Management System established by the Group, all suppliers of important materials must register with China Gas Procurement Portals and only “eligible suppliers” that have been registered are eligible to participate in the unified bid invitation held by the Group each year. The Group also requires all of its suppliers to obtain certifications for environmental management system and occupational health and safety management system before engaging in cooperation. Aside from a fair access system, the Group also attaches great importance to the regulation on suppliers, so as to evaluate the performance of suppliers in an impartial manner. China Gas Procurement Portals categorizes suppliers into six different statuses, including “certification completed”, “suspended”, “locked”, “removed”, “disqualified”, and “blacklisted”. The Materials Procurement Department would select a certain number of “eligible suppliers” from time to time annually and conduct on-site investigations on them, in order to verify the continuity of management level, technical competence and so on. As at 31 March 2018, 251 suppliers (all located in Mainland China) completed registration on China Gas Procurement Portals, with an increase of 30% over the previous year.



# Creating Green Value



# Creating Green Value

## ECONOMIC VALUE

	FY2017/18 HK\$'000
<b>Direct Economic Value Generated</b>	
Revenue	52,831,958
Other income	563,903
Share of results of associates	496,822
Share of results of joint ventures	758,313
<b>Economic Value Distributed</b>	
Staff costs	2,889,505
Other costs <sup>1</sup>	38,914,124
Finance costs	807,781
Dividends	1,391,185
Taxes <sup>2</sup>	1,930,711
Profit attributable to non-controlling interest	573,901
Charitable donations	5,299
<b>Economic Value Retained</b>	
Retained for China Gas's sustainable operation and development	8,138,490

### Notes

- 1: Represents other costs and other gains and losses but excludes depreciation and amortization for the year.  
 2: Represents current income tax but excludes deferred tax for FY2017/18.

During FY2017/18, China faced radical changes in its energy production and consumption structure. China Gas actively responded to the changing market and kept making innovations. With the Group's specialized 4G energy network, China Gas actively coordinated with the country's strong determination in eliminating smog, as well as the increasingly stringent environmental policies. We strive to push ahead with blue ocean strategy, and promote township "replacement of coal with gas" for winter heating and "coal to gas replacement" in industrial and commercial sectors, facilitating market deployment and investment in emerging businesses. Benefitting from China's improved macro-economy and the effective implementation of policies to utilize natural gas in industrial and commercial sectors, the Group's three major business segments (i.e. natural gas sales plus pipeline connections, LPG sales and value-added services) all recorded considerable increase in both financial and operating results. In FY2017/18, the Group's total revenue was HK\$52,831,958,000, representing an increase of 65.1% compared with the previous year, and the gross profit was HK\$11,671,024,000, representing an increase of 39.3% compared with the previous year. This has further established our leading status in the industry, reinforcing the capital market's confidence in the Group.

### MOVING FORWARD UNDER OPPORTUNITIES AND CHALLENGES

The consistently growing Chinese economy has gradually lifted the requirements for green energy development. The country has been firmly promoting the replacement of coal with gas, and launching, implementing and pushing prudently and systematically ahead with clean heating plans during winter in northern regions and building the foundation for air pollution management. Corresponding to the Air Pollution Prevention and Control Action Plan promulgated by the State Council and the 13th Five Year Plan for Natural Gas Development issued by the NDRC, China Gas strives to promote clean energy development and the use of natural gas as substitute in towns and rural villages, with an aim to improve the quality of life of farmers and tackling environmental pollution.

The Group has made an accurate prediction on the strategic business development of replacement of coal with gas. With upfront planning, we have taken the lead in commencing and formulating a large-scale replacement of coal with gas development strategy in China's city gas industry, putting replacement of coal with gas in North China as one of the Group's core development strategies. Despite the relatively low city gas penetration rate, the untapped market and the risk of rising price of natural gas, the Group will actively explore opportunities for development and discuss with local governments on corresponding measures such as natural gas subsidies, so as to secure a sustained sales growth of natural gas in the future. In addition, the Guidelines on Strengthening Gas Distribution Price Regulation issued by the NDRC in May 2017, covering gas transmission pipelines and distribution facilities in various provinces and cities, established a more comprehensive mechanism for price regulation. The new approach reformed the means and supervisory approach of price setting for pipeline transmission and improved the transparency of pipeline operation, signifying the launch of the natural gas pipeline transmission pricing mechanism reform in China. This will in turn benefit the marketization of the country's natural gas trunk pipe networks and resources, building the foundation for opening the country's natural gas pipeline network to third parties in the future.

Targeting on the township replacement of coal with gas, the Group has established a dedicated North China Replacement of Coal with Gas Command and Platform Company and formulated scientific plans on the organizational structure for replacement coal with gas. Meanwhile, we have selected over 300 management level staff from various project companies across the country to form the North China Township Elite Team for the Replacement of Coal with Gas. The team will conduct standardized professional trainings on end-user market development in towns, engineering design and construction, gas sources price management, energy performance contracting, sales and installation of wall-mounted heaters, safe operation, customer service, etc., so as to promptly expedite the development of township replacement of coal with gas projects in North China.

### MOVING FORWARD UNDER OPPORTUNITIES AND CHALLENGES *(Continued)*

Furthermore, the international oil price remained at low levels in FY2017/18 despite picking up after a nosedive in 2015, resulting in a lower economic efficiency of vehicular natural gas than that of petrol and diesel in China. At the same time, under the impact of policies such as electric vehicle subsidies, both market development and natural gas sales volume of CNG refilling stations were confronted with pressure. However, thanks to the recovery of China's logistics and transportation industry which had led to an increase in the number of LNG heavy-duty trucks, gas sales volume of LNG refilling stations achieved a satisfactory growth. In this regard, the Group proactively refined the development strategy of refilling stations to meet market changes. Working with a focus on "upgrading the market development capability of gas refilling stations, enhancing the profitability of gas refilling stations for vehicles and vessels, releasing the potentials of inefficient and problematic gas refilling stations, and optimizing the investment strategy", the Group improved project management practice and strengthened investment risk control to promote market development. At the same time, the Group spared no efforts in publicity and improved service quality for vehicle and vessel users. The Group also promoted value-added businesses such as "Yikatong" smart card system and gas refilling station convenience store services, attracting both new and existing customers so as to expand sources of profit and to improve customer loyalty.

In the aspect of gas refilling business for vessels, the Group possesses the patents and intellectual property rights for LNG vessel engine modifications and advanced conversion technology and development experience in oil to gas conversion projects for vessels. In combination with the incentive policies promulgated by the NDRC and the MOT in relation to the application of natural gas for vessels, the Group proposed the execution approach of "innovative layout, detailed analysis, prudent implementation" with a view to actively promoting the development of its LNG refilling business for vessels.

In the years to come, the Group will firmly implement the "one main business, one new core engine, two drivers and all forms of business operations" (112N) business-wide development strategy, and on the basis of continuing to consolidate the city gas business, we will be dedicated to promote our replacement of coal with gas in rural villages and construction of beautiful villages businesses, thereby ensuring continued growth of the traditional core business. Meanwhile, the Group will also accelerate the development of LPG and LNG trading, combined heat and power, value-added business, distributed energy resources and other new businesses, achieving a steady joint development.

PROMOTING SUSTAINABLE DEVELOPMENT THROUGH STRATEGIC COOPERATION



Through active collaboration with provincial and municipal governments in establishing strategic cooperation agreements on environmental governance, the Group strives to integrate each other’s advantages and resources to foster project construction and promote the use of natural gas in cities and towns with all-out efforts.



On 9 November 2017, China Gas entered into a non-binding memorandum of understanding with DELFIN LNG LLC (“DELFIN”) on the sales and procurement of LNG. DELFIN is going to develop the first floating LNG vessel (FLNGV) project in North America, which involves transportation of natural gas from Louisiana to a LNG deepwater port located 51 miles off the coast via an existing submarine pipeline. The natural gas will be converted to LNG at the FLNGVs as it transports through the submarine pipeline, which will then be delivered to the import countries by LNG carriers (LNGC). Compared to traditional means, production of LNG by floating liquefaction

is more environmentally friendly, more cost competitive, faster to build and has higher efficiency. The project is anticipated to commence operation by 2021-2022. In the first 15 years of operation, DELFIN will sell 3 million tonnes of LNG to China Gas annually. This China-U.S. partnership is mutually beneficial in which both parties will utilize their respective advantages in LNG production, purchase and sale, receiving, storage, transport and downstream utilization of natural gas, maximizing the value of natural gas resources in China and in the U.S. .





Providing  
Quality  
Services

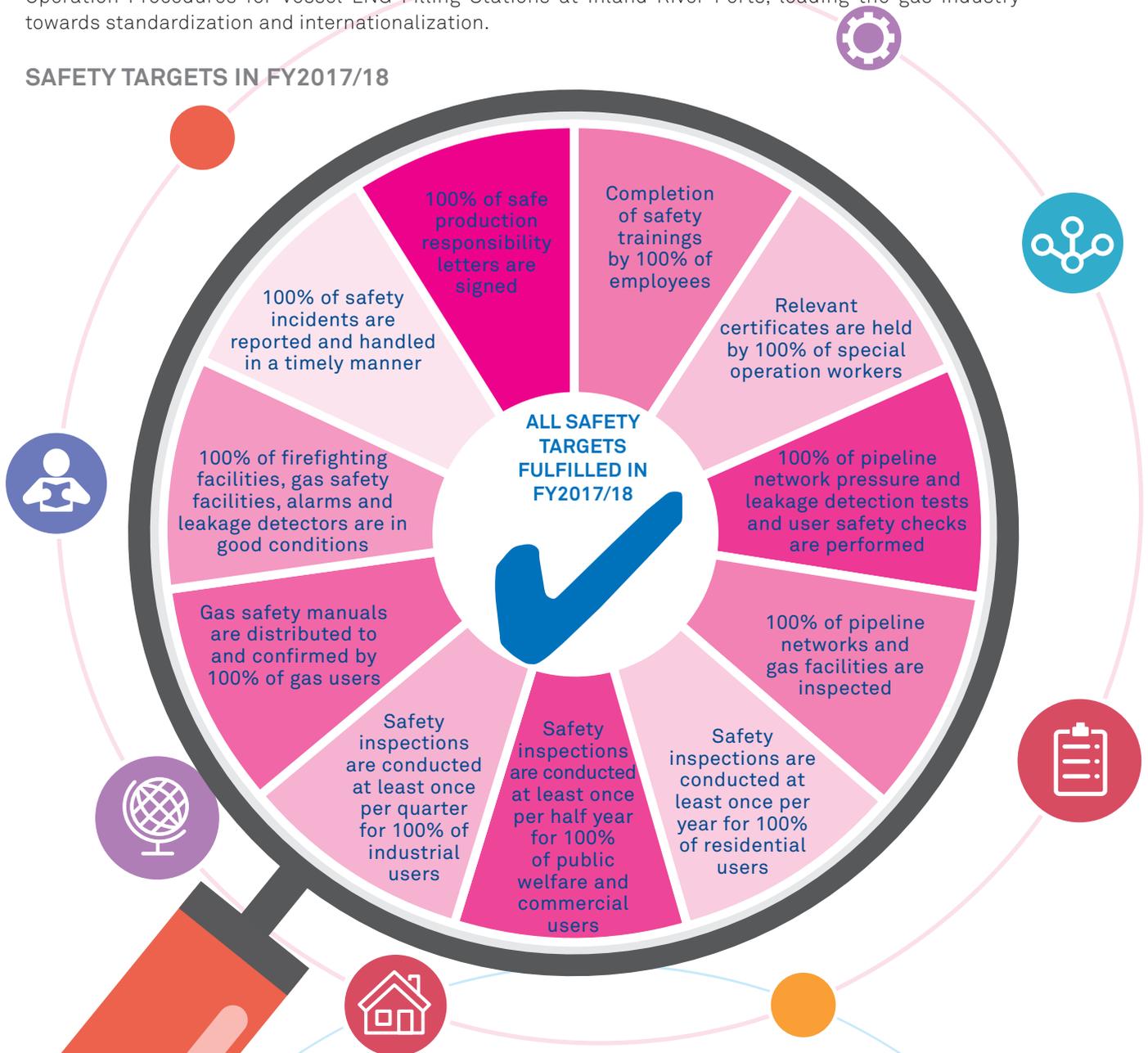
# Providing Quality Services

## ENSURING RELIABLE AND SAFE OPERATIONS

China Gas is committed to meeting the needs of customers with high quality services and upholds the “Customer-Oriented” principle. We place safe production as our first priority and implement the safety management approach of “Safety First, Prevention Focused, and Integrated Management”. Our Safe Operation Management System ensures the safety of employees, customers and the surrounding residents throughout at construction and operation stages. The Group also updates relevant systems, procedures and guidelines in a timely manner, including the Management System of Safety Incidents, Integrated Treatment and Management Measures for Safety Incidents and Safety Management Procedures for Gas Users.

During FY2017/18, China Gas also actively took part in formulating and reviewing gas industry standards, such as Technical Standard for Gas Supply by Small Propane Tank, Code for Design of Urban LNG Supply Station, Code for City Gas, Code for Design of City Gas Engineering of User, and Research Report on Safe Operation Procedures for Vessel LNG Filling Stations at Inland River Ports, leading the gas industry towards standardization and internationalization.

### SAFETY TARGETS IN FY2017/18



## RECTIFICATION AND MANAGEMENT OF TRANSMISSION LOSS

Gas leakage not only affects corporate economic efficiencies and generates carbon emissions, but may also cause severe safety accidents. China Gas implements a two-level transmission loss management mechanism, under which the Safety Operation Department of the headquarters is responsible for leading rectification work at all levels and conducting target-based assessments on transmission loss under an accountability system. The Group has implemented the Rectification and Management Procedure for Transmission Loss since 2016, tackling transmission losses in four aspects: transmission loss in gas pipeline networks, transmission loss due to metering inaccuracies, transmission loss arising from data handling errors, and transmission loss due to gas theft.

<b>Rectification of transmission loss due to metering inaccuracies</b>	<ul style="list-style-type: none"> <li>• Establish a robust metering management system</li> <li>• Strengthen maintenance and weekly inspection of flowmeters</li> <li>• Strengthen management on flowmeter selection</li> <li>• Carry out special flowmeter rectification activities</li> <li>• Provide dedicated meters to rural village users</li> </ul>
<b>Rectification of transmission loss due to gas theft</b>	<ul style="list-style-type: none"> <li>• Take practical measures to prevent gas theft</li> <li>• Step up our inspection efforts to combat gas theft</li> </ul>
<b>Rectification of transmission loss in gas pipeline networks</b>	<ul style="list-style-type: none"> <li>• Establish robust scheduling and inspection systems to ensure tightness and safety of the gas transmission and distribution system</li> <li>• Establish a robust leakage detection and prevention mechanism to control the leakage rate at seal points of the gas transmission and distribution system</li> <li>• Establish a robust emergency repair mechanism to control gas leakage and unexpected incidents in the gas transmission and distribution system</li> <li>• Refine pipe replacement scheme to strictly control the amount of gas escaped during construction</li> </ul>
<b>Rectification of transmission loss arising from data handling errors</b>	<ul style="list-style-type: none"> <li>• Conduct in-depth audits, user verifications, and meter and leakage inspections</li> <li>• Enhance efforts in internal inspections to improve meter recording accuracy</li> <li>• Perform monthly meter reading for wall-mounted heater users during warm seasons</li> <li>• Standardize billing practices for domestic prepaid users</li> <li>• Conduct operational safety checks of gas facilities by customer management officers</li> <li>• Arrange maintenance staff to carry out timely repair and rectification works when potential hazard is identified</li> </ul>

## Providing Quality Services

### RECTIFICATION AND MANAGEMENT OF TRANSMISSION LOSS *(Continued)*

In order to further improve metering management and transmission loss rectification measures, the Safety Operation Department of the headquarters has completed investigation reports on the current status of China Gas's metering tools usage and subsequently revised three procedures, namely Metering Management Procedures, Gas Flowmeter Selection Procedures, and Rectification and Management Procedure for Transmission Loss. We also issued China Gas Notices [2017] No. 87 and No. 88 to carry out special flowmeter rectification activities and strengthen management on flowmeter selection.

- All industrial and commercial users as well as WeChat business users are required to follow the flowmeter selection procedures and establish annual section mechanism on domestic gas flowmeters;
- All industrial and commercial users as well as WeChat business users shall be equipped with IC card controllers; and
- All wall-mounted heater users shall be equipped with temperature- and pressure-compensated gas meters, and rectification works shall be completed for existing users in a timely manner.

During the Reporting Period, a total of 65 project companies participated in the FY2017/18 rectification plan, covering 24,037 wall-mounted heater users, 434 industrial users and 4,639 commercial users, accounting for a total cost of approximately RMB17 million.

### LEAKAGE DETECTION AND PREVENTION MECHANISM

#### Leakage detection and prevention mechanism

- Rectify the main parts of gas leakage
- Develop the Management Guidelines for Gas Pipeline Network Inspection, which sets out contents and monitoring standards for gas pipeline network inspections

Our project companies have developed robust line inspection systems to grasp information of the gas transmission and distribution system in a complete, timely and accurate manner. These systems can help us instantly locate the breakdown points and confirm impacts on users when issues arise, so that immediate repairs can be made. In the event of emergency repairs, the system can assist the dispatch center to make rapid decisions on valve closure in different segments. On-site emergency repairs staff can then quickly identify the valves that need to be shut off in accordance with work orders issued from the dispatch center. In case of valve failure or blockage, the dispatch center can be contacted in time and a secondary valve closure analysis can be performed in accordance with the site conditions. As a result, incidents in city gas pipeline networks can be promptly responded and handled to minimize accidental losses to the greatest extent possible, while on the other hand reducing the repair time.

## EMERGENCY REPAIR MECHANISM

### Emergency repair mechanism

- Prepare emergency response plans and conduct drills
- Develop the Operation and Maintenance Management Standards for Gas Facilities, which sets out management standards on pipeline network maintenance, emergency repairs, natural gas spherical tanks maintenance, and safety valves maintenance

To enhance the efforts in preventing damages to pipeline networks caused by third-party construction activities, the Group improved measures to manage third-party damages to gas facilities in a standardized and institutionalized manner. In particular, the Group revised the Management and Assessment Measures for Third-Party Construction Damage Incidents (Accidents) for Gas Facilities, which was first issued by the Central China Regional Management Center in form of a red-head document together with a specialized assessment file. As a result, the number of third-party damage incidents recorded during the Reporting Period was significantly decreased by 62% as compared with the previous year, reflecting the effectiveness of the measures.

## PIPELINE NETWORK RENOVATION PLAN

During the Reporting Period, we further rectified projects with potential hazards. In particular, we conducted comprehensive cleaning of aged cast iron pipeline networks that pose safety risks due to their prolonged operation time. We have completed systematic analysis on the current status of the Group's grey cast iron pipeline networks and aged steel pipeline networks, classified them in accordance with priorities, and implemented renovation plans in the Northeastern region, Northwestern region and North China region.

As at  
31 March 2018

The total length of aged pipeline network having been renovated reached

**318.11 km**

## EMERGENCY DRILLS

China Gas is fully aware of the importance of emergency management, and firmly believes that emergency drills simulating safety accidents can help improve emergency response capabilities of the Company and reduce losses caused by accidents. At the request of the headquarters and regional management centers, project companies of the Group conducted various types of emergency drills, including gas refilling station emergency drills, anti-terrorism drills, fire drills. During the Reporting Period, the Group held over 300 emergency drills with more than 20,000 employee participants in total.

## Providing Quality Services

### EMERGENCY DRILLS *(Continued)*

Our Southwest China Regional Management Center has conducted a LNG gasification station joint emergency response drill, which simulated a large scale LNG leakage accident due to flange gasket damage during truck unloading process. The planned drills and emergency response exercises tied to real-life situations and focused on practical measures. Through conducting emergency drills, we have validated that the emergency plans are scientific, suitable and effective.

Our South China Regional Management Center organized a level 3 LPG station tank zone leakage emergency response drill and emergency repair and rescue experience sharing activities in Changsha. The drill mainly focused on emergency measures in response to leakages that may occur in root valves at storage tanks of old LPG refilling stations, which had undergone prolonged operation and possessed aged facilities. The drill thoroughly examined our responsiveness and overall ability in executing emergency rescue operations through live simulations.

In addition, the Group has paid close attention to fire safety in office areas. During the Reporting Period, our employees were arranged to participate in fire evacuation drills in office areas in accordance with the operating procedures including fire reporting, firefighting, and emergency evacuation of staff. With over 10,000 attendances by employees, the drills improved their emergency awareness and emergency handling capabilities.

### SAFETY INSPECTION

With years of development, China Gas has formed a three-tier safety inspection mechanism, where safety inspections are organized annually, quarterly and monthly at the Group level, regional centers and project companies respectively.

#### FIRE DRILL





China Gas is committed to providing customers with all-round protection in gas safety. In addition to ensuring customer safety through our Safety Operation Management System, the Group attaches importance to safety management at the customer's end. The Group carries out indoor safety inspections and special inspections of environmental safety conditions for gas use, thereby reducing potential hazards and accident rates.

Users can confirm completion of the inspection and offer feedback through the customer management system, which helps ensure that China Gas has provided caring, competent and efficient preventive maintenance services to customers through a competent workforce. During the Reporting Period, more than 20,000 employees from various project companies of China Gas were involved in safety inspections. More than 2,000 large-scale gas safety campaigns were organized in different formats and disseminated through visits to corporations, schools, communities, villages and households. Through comprehensive promotion of gas safety among customers, we raised their awareness in gas safety precautions, promoted accident prevention know-how and skills to every individuals and households, thus creating a social environment in harmony with safe natural gas development and laying a foundation for safe operations of natural gas facilities across the country.



### SAFETY PROMOTION AND EDUCATION

During the Reporting Period, project companies continued to organize "Safe Home" and "Safe Production Month" theme activities. We provided users with trainings on gas safety, consultations, inspections and maintenance services through visiting communities, schools and elderly homes. We also offered one-stop value-added services in the sales of gas tubing, insurances, as well as gas appliances to further protect users on gas safety. In FY2017/18, the Group organized a total of more than 5,000 promotion activities and over 900 knowledge quiz contests, involving more than 40,000 staff in total.

## Providing Quality Services



### “SAFE HOME” THEME ACTIVITY: CHILDREN’S DRAWING ACTIVITY

Combining home gas safety with next generation’s drawing to promote safe use of gas



### “SAFE HOME” THEME ACTIVITY: CAMPUS SAFETY TRAINING

Through vivid thematic trainings, interactive games and price quizzes, children are provided with trainings on safe use of gas, which raised their awareness towards home safety



### “SAFE HOME” THEME ACTIVITY: COMMUNITY GAS SAFETY PROMOTION TALK

Providing elderlies with gas safety fun games and free maintenance services



In addition, the Group pays special attention to safety education for customers so as to improve their emergency response capabilities. Through different platforms such as WeChat, short message, multimedia TV and village broadcasting, the Group delivers safety-related publicity materials and videos to customers. The Group also organizes activities such as professional knowledge training, safety knowledge competitions and safety talks for industrial as well as commercial users.

## CONTINUOUSLY RAISE CUSTOMER SATISFACTION

To enable customers to enjoy services with higher quality, the China Gas has built a three-tier management framework comprising of headquarters, regional management centers and project companies. Customer service centers are set up in project companies to provide customer service hotlines. The headquarters established eight guidelines on customer service operations management and seven technical guidelines on customer services, which clearly delineated the responsibilities at each level, so as to continuously improve customer service quality with a robust management mechanism.

The Group has been developing new service monitoring channels and enhancing communication mechanisms through publication of performance pledges to the society, the launch of national service quality monitoring hotline and the conduct of third-party customer satisfaction surveys. During the Reporting Period, all 204 complaints received by the Group’s service quality monitoring hotline were properly handled, with complaint resolution and satisfaction rates reached 100%.

The Group believes that, through close communication with customers, project companies can “Create Customer Satisfaction” at all levels of work. During the Reporting Period, the Group found no case of violation of regulations related to product responsibility.



**Safeguarding  
the Environment**

# Safeguarding the Environment

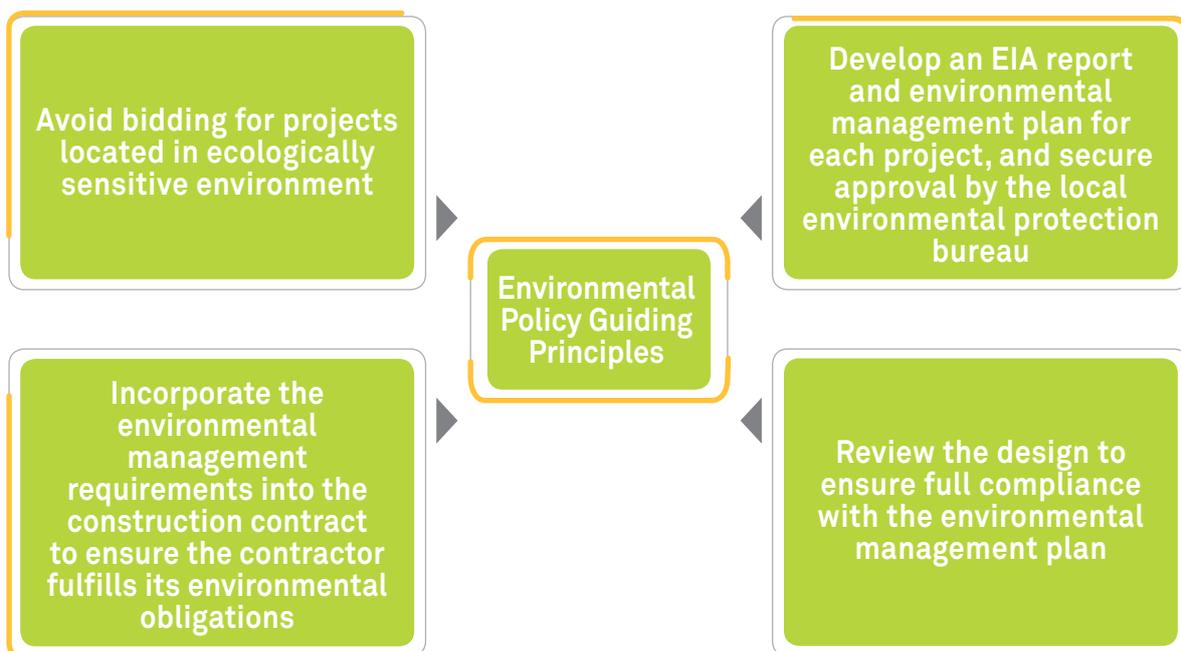
Climate change is impacting on global economic development and impairing corporate resources and operational stability directly or indirectly through extreme weathers. As the world's second largest economy, China has made important commitments to tackle climate change and promote low carbon development together with energy reform. As part of the country, China Gas is committed to not only achieving harmonious coexistence among business operation, local environment and the society, but also helping industrial and commercial institutions as well as residential users to reduce air pollution and greenhouse gas emissions through its own business.

The Group has developed an Environmental and Social Management System, setting up the framework of environmental and social policies to ensure our operations comply with applicable PRC environmental laws and meet the environmental and social safeguard requirements as stipulated in the *Safeguard Policy Statement* of the Asian Development Bank (ADB). The Group has also set up an environmental management system in accordance with ISO 14001 standard and prepared guidelines on environmental protection, occupational health and safe production issues. All business units and subsidiaries of the Group are required to implement the relevant policies.

## PROTECTING THE ENVIRONMENT AND NATURAL RESOURCES

China Gas accords priority in environmental conservation. It adopts a holistic approach that takes into account activities' impacts on the environment, and strives to cherish resources and protect biodiversity.

The Group developed an Environmental Impact Assessment Report Outline to guide preparation of environmental impact assessment ("EIA") reports, so that potential environmental impacts and risks can be accurately reflected in the well-prepared EIA reports which would be submitted to the relevant environmental protection bureaus or departments where necessary. Throughout the project cycle, the Group carries out environmental analysis and environmental management planning. The Group's requirements on the EIA reports include prediction and assessment of all positive, negative, direct and indirect impacts of the project on the natural environment and ecology in a quantitative approach, and identification of issues that require follow-up actions. For foreseeable environmental impacts, the EIA report should provide mitigating measures and alternative options. The EIA report should also describe stakeholder communication process as well as grievance mechanism. The Group strictly abides by environmental protection laws, regulations and related requirements. During the Reporting Period, the Group did not violate any relevant environmental protection laws and regulations.



### PROTECTING THE ENVIRONMENT AND NATURAL RESOURCES *(Continued)*

In terms of long-term strategic development, the Group will keep pace with the country. As an enterprise that makes continuous progress, China Gas will not only develop natural gas business which is more mature, but also invest more resources to develop demonstration projects in wind energy, solar energy, geothermal energy, etc., in the future. The Group will formulate more detailed internal environmental guidelines, long-term sustainable development policies and roadmaps to actively promote environmental initiatives.

### COUNTERING CLIMATE CHANGE AND MANAGING EMISSIONS

Air pollutants and smog have seriously affected daily lives and health of the public. China Gas appreciates the importance of its role in tackling climate change as an energy service company. Through synergies of various business segments, we help build a clean energy supply chain that reduces greenhouse gas emissions and protects the environment.



Natural gas, a green and clean energy, is technologically mature in terms of production, storage and transportation comparing with solar energy, wind energy and biomass energy. Its economic potential and feasibility are far greater than other new energies. Therefore, replacing traditional polluting fuels such as coal and heavy oil with natural gas can effectively reduce air pollutants and carbon dioxide equivalent emissions, presenting an effective way to relieve the current air pollution problems.

In the field of transportation, natural gas also has its significantly advantages in terms of emission reduction and environmental protection. According to actual operational data as referenced by the NEA, vehicles consuming 1 m<sup>3</sup> of natural gas with CNG engines can substitute the consumption of 1 liter and 1.2-1.3 liters of petrol under urban and highway driving conditions, respectively, while 0.94 liters of diesel can be replaced by the consumption of 1 m<sup>3</sup> of natural gas in LNG heavy-duty trucks. Currently, petroleum accounts for approximately 90% of transportation fuel consumption in China. Thus, there are good prospects for the replacement of fuel oil with natural gas in the future.

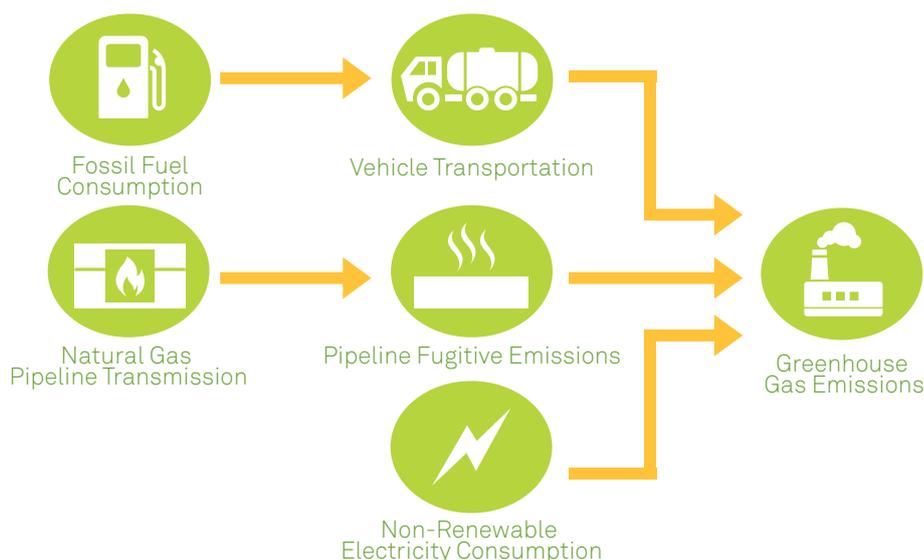
According to the statistics, if fuel oil is entirely replaced by natural gas, the exhaust gas from vehicles could contain 24% less carbon dioxide, 97% less carbon monoxide, 72% less hydrocarbons, 14% less nitrogen oxides, and particulates containing benzene, lead, and dust could be reduced by 100%, with the overall emissions level to be reduced by 80%. It is evident that the use of natural gas can significantly alleviate the air pollution problems arising from the consumption of coal and fuel oil.



### COUNTERING CLIMATE CHANGE AND MANAGING EMISSIONS *(Continued)*



The Group also places high priority to the environmental impacts of its own operations and closely monitors greenhouse gas emissions as well as air pollutants inevitably generated by the business. Since FY2017/18, the Group estimated projects' greenhouse gas emissions with reference to the methodologies of the Clean Development Mechanism (CDM) under the United Nations Framework Convention on Climate Change (UNFCCC). The CDM calculation methodologies cover natural gas pipeline transmission and vehicle transportation. Operational emissions performances in terms of emission type, quantity and scope, are fully disclosed. The Group incorporates carbon assessment together with other emissions statistics into its work plan and will explore to develop emissions reduction targets as well as priorities to improve efficiencies in emissions reduction.



### GREENHOUSE GAS EMISSIONS IN FY2017/18

Greenhouse Gas (GHG) Emissions	Coverage	Unit	FY2017/18
<b>Scope 1 (Direct Emissions)</b>	Consumption of fossil fuels for operations, fugitive emissions released during transmission/transportation and storage of natural gas and LPG	tCO <sub>2</sub> e	678,877.64
<b>Scope 2 (Energy Indirect Emissions)</b>	Consumption of non-renewable purchased electricity	tCO <sub>2</sub> e	82,494.55
<b>Total GHG Emissions</b>		tCO <sub>2</sub> e	761,372.19
<b>GHG Intensity</b>		kgCO <sub>2</sub> e/GJ of energy sold	1.13

## AIR EMISSIONS IN FY2017/18<sup>1</sup> (TONNE)

Particulate Matter (PM)	Sulfur Dioxide (SO <sub>2</sub> )	Nitrogen Oxides (NO <sub>x</sub> )
24.59	258.22	172.14

### Notes

1: Air emissions are calculated by estimating the indirect air emissions from non-renewable electricity consumption with emission factors adopted from *The Clean Air Charter - A Business Guidebook* published by the Hong Kong General Chamber of Commerce and the Hong Kong Business Coalition on the Environment.

## RESOURCES UTILIZATION AND WASTE REDUCTION

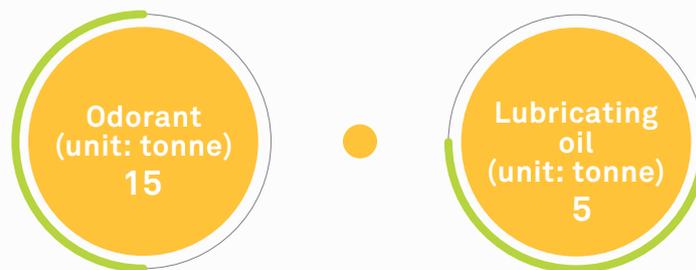
China Gas has formulated the 7S Office Environment Management System with seven major elements of "Organize, Reform, Clean, Cleanse, Conserve, Safety and Ethics" as core values of office environment management. The 7S management principles have been carried out in the Group for training as well as publicity and the implementation of corrective plans is monitored through regular inspections.

Since 2017, the Group has cooperated with Fuji Xerox to implement the Office Printing Improvement Program. The objectives of the program are to reduce overall printing cost by 10%, increase text printing efficiency and reduce energy consumption. Program measures include light asset allocation of printing equipment, outsourced printing equipment, monthly report on printer usage, attention on double-sided printing rate, etc. At present, the printing improvement program have been promoted to 17 companies in the South China Regional Management Center and the Group will implement Green Printing Improvement Plans in phases in the next stage.

The main material used for the packaging of products is LPG cylinder. During the Reporting Period, the Group purchased 365,665 LPG cylinders. Each project strictly complies with the Group's material use management objectives. About 99% of the materials used in the production of cylinders are recyclable materials (steel, brass, aluminum-zinc alloy), and only the remaining 1% are non-recyclable paint coatings.

All waste generated are handled by designated waste collectors.

## MATERIAL CONSUMPTION STATISTICS IN FY2017/18



## WATER SAVING

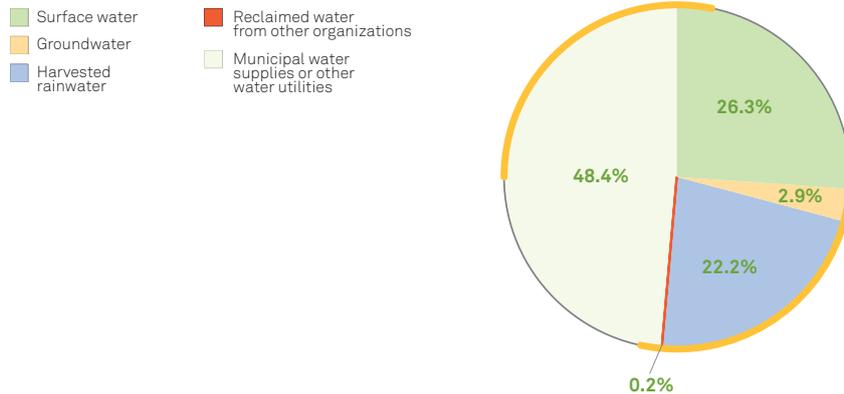
In China Gas, water is mainly used as feedwater for gas-fired boilers, supplementary water for firefighting pools, and domestic water for use in offices and by employees. Under the guidance of the 7S Office Environment Management System, the Group is committed to conserving water and adopting various measures to improve water efficiencies. Our water cherishing and conservation measures adopted in projects and offices include:

- Install rainwater harvesting facilities
- Utilize recirculating water for water-consuming equipment such as natural gas compressors, ice machines, and sprinkler systems to improve water efficiency
- Install automatic sensor water taps in offices

During the Reporting Period, the Group's total water consumption was 2,485,680 tonnes.

## Safeguarding the Environment

### WATER WITHDRAWN BY SOURCE IN FY2017/18

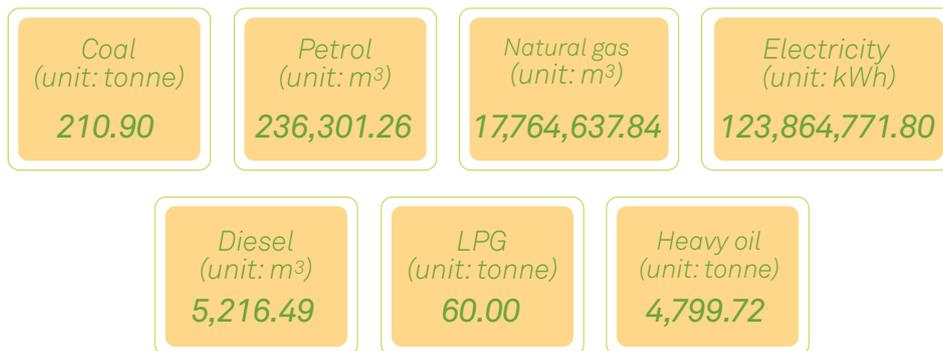


### INCREASING ENERGY USAGE EFFICIENCY



As a leading energy supplier in the industry, China Gas always adheres to the principles of environmental protection as well as sustainability in terms of energy usage and reduction in energy consumption. Resources consumed in our daily operations and transportation mainly include natural gas, LPG, petrol, diesel, electricity, etc. The Group upholds the energy-saving development model and strives to reduce energy consumption.

### ENERGY CONSUMPTION STATISTICS IN FY2017/18



Targeting on transportation energy consumption, the Group strictly follows the China Gas Vehicle Management System to manage vehicle use to ensure that vehicle arrangements meet the basic needs and the provisions of high fuel-consuming as well as luxury vehicles are reduced. Moreover, users are required to fill out vehicle usage forms together with fuel consumption analysis sheets so that the vehicle costs are strictly controlled to minimize energy consumption.

Other energy management measures adopted in our projects and offices include:

- Use energy-saving equipment such as variable frequency drive
- Separate domestic from industrial electricity use
- Timely overhaul of high energy-consuming equipment
- Adopt video conferencing system to reduce energy consumed by employees due to business travels
- Use energy-saving lights instead of traditional lights
- Raise employees' awareness towards energy saving and environmental protection so that lights are switched off when not in use



Caring for  
**the Growth of  
Employees**

# Caring for the Growth of Employees

China Gas's sustainable development are driven by the employees. As at 31 March 2018, the Group had 42,829 employees in total with more than 99% of them based in Mainland China. In order to expand our talent pool and to strengthen employees' sense of belonging, the Group puts efforts in enhancing employees' individual values and recognition to the Group through corporate culture promotions, system establishment, business training, etc. Our Human Resources Management Manual advocates "three-ness" with respect to openness, fairness and righteousness in the recruitment process, embodying China Gas's respect for the right of employees to enjoy equal opportunities and striving to create a fair and diverse workplace. During the Reporting Period, China Gas had no violation case on relevant regulations about employment and labour standards. We also had no discrimination records relating to gender, ethnicity, age and health during the recruitment process. Adhering to the concept of "People-oriented, Pursuit of excellence", we endeavor to become an excellent employer, put our corporate culture into practice with our employees and play an exemplary role to the industry.



## EMPLOYEE STATISTICS (AS AT 31 MARCH 2018)

	Number of employees
<b>By age</b>	
Under 30 years old	12,029
30-50 years old	24,295
Above 50 years old	6,505
<b>By gender</b>	
Male	28,404
Female	14,425
<b>By rank</b>	
Senior management	1,796
Middle-level management	6,165
General staff	34,868
<b>By ethnicity</b>	
Han	40,071
Ethnic minorities	2,758
<b>By location</b>	
Mainland China	42,804
Hong Kong	25

### NUMBER OF NEW HIRES DURING THE REPORTING PERIOD

Employee category	Number of new hires	Percentage of employee by category
<b>By age</b>		
Under 30 years old	3,785	31.47%
30-50 years old	6,207	25.55%
Above 50 years old	1,767	27.16%
<b>By gender</b>		
Male	7,482	26.34%
Female	4,277	29.65%

### NUMBER OF EMPLOYEE TURNOVER DURING THE REPORTING PERIOD

Employee category	Number of employee turnover	Percentage of employee by category
<b>By age</b>		
Under 30 years old	1,143	9.50%
30-50 years old	969	3.99%
Above 50 years old	195	3.00%
<b>By gender</b>		
Male	1,427	5.02%
Female	880	6.10%
<b>By location</b>		
Mainland China	2,304	5.38%
Hong Kong	3	12.00%

## CARING ABOUT EMPLOYEES' WELL-BEING

### Employee Benefits

#### Remuneration system

- Adjust payrolls according to different local policies on salary standards
- Provide incentive performance-based pays

#### Benefits and subsidies

- Provide length of service subsidy, festival allowance, physical examination allowance, withholding of supplementary commercial insurance premium, medical insurance, and diet subsidies, etc
- Apart from basic salary and pension fund contributions, qualified employees will receive discretionary bonuses, rewards and stock options determined by the Group's financial performance and their individual performance

#### Recruitment and promotion

- Stipulate China Gas Recruitment Management System to build the Group's staff team based on the principle of "recruiting employees in a open, fair, equal and person-job fit manner"
- Prioritize promotion opportunities for internal staffs with excellent performance before external recruitment

#### Family-friendly employment

- Respect family responsibilities of employees, implement localized policies for staffs and cadres, improve team stability and resource complementary

The Group believes that providing a sound working environment to employees can boost employees' sense of belonging to the Group and improve their work efficiency. Therefore, we set up a Staff Care Committee to promote various welfare practices and organize diversified leisure activities, such as carrying out regular democratic life meetings, birthday parties, medical examination, outdoor hiking, fun games, speech competitions, etc. By organizing these activities, we hope to improve the cohesion of the Group by creating a "Passion to Create, Friendly to Share, Close as Family" atmosphere.

### RACE WALKING FOR HEADQUARTERS EMPLOYEES



On 27 June 2017, over 150 headquarters employees participated in the race walking. The day of the race was raining heavily in the morning in Shenzhen, every participated staff wore a raincoat and finished the 8.2km

foot race persistently, reflecting our adamant spirit to overcome the bad weather.



### FUN GAMES AT HEADQUARTERS

On 26 November 2017, China Gas organized fun games at headquarters. 19 teams of over 500 people from different departments and project companies joined the event. 5 collective games and 2 family games which integrate fun and competition were held, allowing employees and their family to express themselves in this relaxed atmosphere, and share happiness together.



### EMPLOYEE COMMUNICATION AND INTEGRATION

China Gas has been actively connecting with the employees through sound communication mechanisms to understand and respond to their needs. The Group has established the “Listen to Your Voice” section on the “China Gas Home” WeChat platform for employees to express their difficulties and worries in work and life. The concerns raised will then be addressed and replied by professional departments of the Group. “China Gas Home” has become an important communication tool in addition to the internal OA forum and publications. It provides employees with timely release of the Group’s latest updates, staff care activities and corporate culture promotion events, allowing employees to learn more about the strategies and goals of the Group, which demonstrates the effectiveness of two-way communication.

Moreover, the Group has built an unobstructed complaint and whistle-blowing platform. In accordance with the Group’s internal audit system, the Audit and Supervision Department will conduct investigations for every complaint, playing an important role in safeguarding the legitimate rights and interests of employees and ensuring that the Group is fair, impartial and open. The results of the investigation will be reported to the management when needed and will be sent back to the complainant.

In order to comprehensively analyze the real feeling and needs of headquarters employees toward the Group’s incentive mechanisms, the Group launched the “Satisfaction Survey on Employee Care System at Headquarters” in August 2017, and conducted in-depth analysis on the survey results according to the researches and studies of international authoritative organizations such as the Society for Human Resource Management and the Incentive Federation, to help formulate a win-win incentive plan for the Group and employees. We also value the voices of employees through channels including China Gas’s CEO mailbox, WeChat, etc., at the same time striving to enhance the communication between senior management and employees.

Furthermore, the annual election event “Elites of the Year” provides a showcase platform for outstanding employees and to show our appreciation to those excellent employees and elite managers. Apart from encouraging and praising employees, the event also plays an important role in further enhancing team cohesiveness and employees’ centripetal force to the Group.

## Caring for the Growth of Employees

### “ CHINA GAS CARE ACTION SET SAIL IN THE NORTH-EAST REGION



On 17 January 2018, the consolation team formed by the person in charge of China Gas Charity Foundation and China Gas's employees started the “Warm Winter” care action, sending care and warm to the staff in Jiamusi City. The consolation team visited the staff in Jiamusi's control center and operation room, and sent warm greetings

and condolences to the staff at the Binjiang Road storage and distribution station and the emergency repair site for medium pressure pipelines, experiencing the defrost operation done by staff in the cold. The action reflects the atmosphere of mutual attention within the Group.

## LABOUR STANDARD COMPLIANCE

The Group is fully aware that child labour and forced labour violate basic human rights and international labour conventions, and pose a threat to sustainable social and economic development. The Group strictly abides by the Labour Contract Law and other applicable labour laws and regulations, prohibiting child labour and forced labour. China Gas Recruitment Management System sets out that employment of those who are under legal working age or provide the false identity is strictly prohibited. Meanwhile, we also specify measures regarding working hours, overtime work and leave management for employees, which safeguards their interests.

During the Reporting Period, the Group had no violation record on child labour or forced labour. China Gas will continue to implement policies and management measures regarding prohibition of child labour and forced labour in light of the spirit of the United Nations Global Compact, aiming to protect the rights of employees and being part of the “Global Compact” citizenship.

## DIVERSE DEVELOPMENT OF EMPLOYEES

China Gas seeks employees as the strategic partners of the Group and encourages employees to undergo diverse development so as to create a learning-proactive and innovative business atmosphere. Our Group strongly believes that nurturing and keeping talents are the cores to sustain the business and strengthen the Group's competitiveness. Therefore, we improve staffs' working skills and expertise through some effective mutual learning methods such as training camp for general managers, specialist training on safety, construction, finance, legislation, etc., as well as book recommendation by the CEO and book sharing sessions.

China Gas's Training and Management System is made up of a three-tier management system, including the Group's headquarters, regional management centers and project companies. The training content is designed according to the career growth stage of employees, varying from the basic training for newly recruited staff, the training for the transferred staff to the management skills training for senior management personnel. In response to the actual needs for different departments and functions, the Group provides all types of trainings in a targeted manner. In order to provide flexible and systematic learning opportunities to employees, each project company will prepare and implement training plans annually according to the training theme and business highlights of the Group headquarters as well as the regional management centers. Moreover, China Gas requires participated staff to develop a “Performance Improvement Plan” to ensure that the skills acquired in training are applied in practical work.

### DIVERSE DEVELOPMENT OF EMPLOYEES *(Continued)*

To continuously improve personal capability, China Gas also built an “E-learning” training system to provide employees with online learning opportunities, covering the important documents, systems and professional courses published within the Group. During the Reporting Period, 39,289 people participated in online learning and the total training hours amounted to over 301,886 hours.

#### AVERAGE TRAINING HOURS OF EMPLOYEES

Employee category	Average training hours (hour)	Percentage of employee trained by category
<b>By gender</b>		
Male	21.11	100%
Female	23.44	100%
<b>By rank</b>		
Senior management	29.11	100%
Middle-level management	16.87	100%
General staff	22.41	100%

In order to further optimize the allocation of human resources, China Gas has carried out a staff suitability assessment by conducting a comprehensive evaluation of all employees including the group management through performance appraisal. In terms of cadre management, we continue to implement dynamic management, with the regionally-led recruitment, management and use of reserve cadres. At the same time, we strengthened the organization and discipline in cadre deployment, which provided a strong and powerful support for the Group. In addition, China Gas has designed an incentive remuneration system based on the attributes of our market-oriented business such as value-added services and emerging businesses. We motivate our employees to work through incentives of economic leverage, integrating the individual goals of our employees with the goals of corporate development, and achieving mutual growth.

### OCCUPATIONAL HEALTH AND SAFETY

The Group attaches great importance to the health and safety of its employees, and regards safe operation as the top priority. We have established an Environment, Health and Safety Management System (“EHS Management System”), including the formulation of various safety management systems, operational procedures, assessment criteria and safety contingency plans, etc., that are in line with our business and in accordance with the standard of OHSAS 18001 Occupational Health and Safety Management Certification. Over 20 safety management systems, safety operation procedures and guidelines have been prepared and issued, including Reforming System on Safety Check and Potential Risk, Safety Management System on Operation with Gas, China Gas Safety Monitoring Work Guideline and China Gas Contingency Plan for Emergency.

In order to effectively implement safety management and protect employees with greatest efforts, the Group has also established a management structure of safety operation. At the same time, the project companies are required to establish a safety accountability system for personnel at all levels.

## Caring for the Growth of Employees

### OCCUPATIONAL HEALTH AND SAFETY (Continued)

<b>Daily safety education</b>	Provide special safety education and training according to the operation situation and production needs, and conduct training evaluation. Unqualified employees have to be suspended from duties and can only resume duties after passing make-up examination.
<b>Education for new post</b>	Employees who have changed their position need to receive safety education regarding their new posts before independent operation.
<b>Special safety education</b>	Prior to using new technology, process and equipment, safety technical regulations must be formulated and related employees must receive professional know-how training and safety education.

China Gas focuses on improving employees' knowledge of operational safety, and has developed training materials including "Gas Transmission and Distribution and Operation Management", "200 Questions You Should Know about Gas Transmission and Distribution" and "China Gas Production and Operation Video Training". We provide training to employees on laws, regulations, safety knowledge and professional skills at least once a month to raise awareness on safe production. Through a diversity of safety activities, a well-established atmosphere on safety can enhance the employee's awareness on safety responsibility and eliminate all kinds of safety risk effectively.

Headquarters and project companies also conduct regular health knowledge training activities, including prevention and treatment of high-risk diseases in cities, prevention of occupational diseases, and interpretation of good health reports, to deepen employees' attention to their own health.

The Group set June 2017 as the safety month and organized diverse and vital events on safety with the theme of "Comprehensive Implementation on Safety Operation Responsibility in the Enterprise". A good atmosphere on safety was created and staff's safety awareness was raised through these safety promotion events, which is effective in preventing all kinds of safety incidents.

### OCCUPATIONAL HEALTH AND SAFETY STATISTICS IN FY2017/18

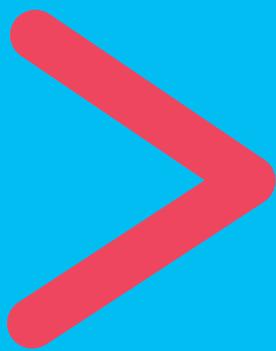
<b>Injury rate (per 1,000 employees)<sup>1</sup></b>	5.04
<b>Fatality rate (per 1,000 employees)<sup>2</sup></b>	0.14
<b>Lost days due to work-related injuries</b>	3,077

#### Notes

1: Injury rate = (number of work-related injuries/ total number of employees) x 1,000

2: Fatality rate = (number of work-related fatalities/ total number of employees) x 1,000

The Group allocated budgets specifically on medical examinations as a part of employee welfare, all of our employees received body checks and occupational health reports on an annual basis. To comprehensively safeguard the work and life of employees, commercial insurance has been purchased apart from the five social insurances and one housing fund. To promote the concept of healthy living for employees, we also arranged various activities organized by the Basketball Association, the Badminton Association and the Table Tennis Association every week.

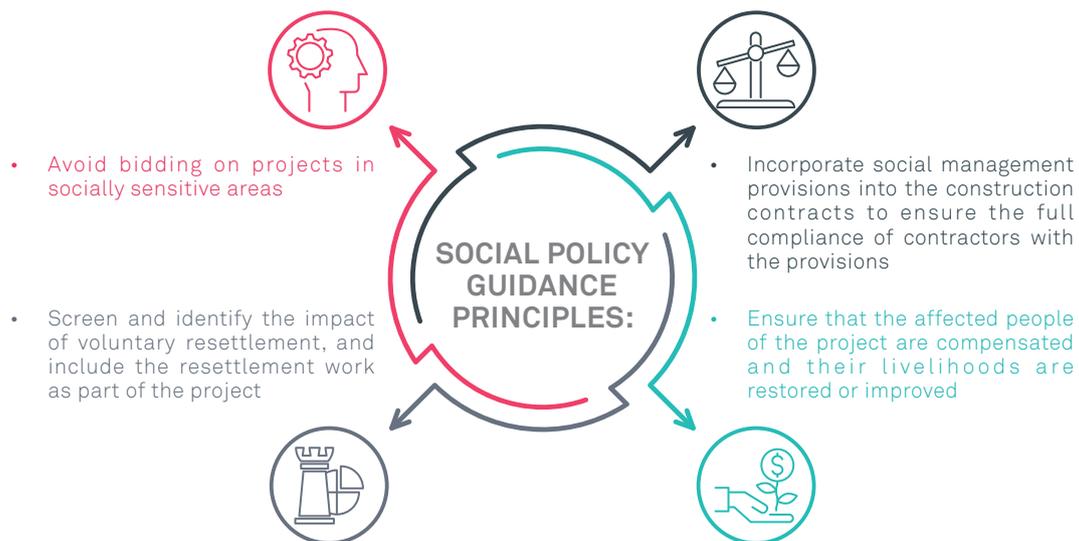


**Build  
a Better  
Community**

# Build a Better Community

Understanding and responding to the needs of communities where projects are located is important to the business development of China Gas. Therefore, we persist to fulfil the social responsibility and to connect with the community. We committed to extend the culture of “Gathering the people, Benefiting the society” by enlivening the collective assistance among the Group in building a healthy and energetic community. For a long time, China Gas has carried out activities such as planting trees, caring for orphans and disabled children, actively undertaking and supporting philanthropy, spreading our love and corporate philosophy, and creating a caring platform for the community.

As a responsible organization to the society, the Group avoids and minimizes the disturbance to the living and life of community members during operation and implements a set of guidance principles, so as to promote social harmony and contribute to the sustainable development of the community.



## INVOLUNTARY RESETTLEMENT

China Gas places great importance to social inclusion and embraces clear development goals:

- to avoid resettlement when feasible;
- to minimize resettlement when resettlement is inevitable;
- to ensure re-settlers or affected people are compensated or assisted and at least to keep their situation in good condition.

In accordance to the involuntary resettlement requires set out in the *Safeguard Policy Statement* of ADB, the Group has formulated the Resettlement Planning and Policies which stipulates the procedures and responsibilities for controlling relevant risks and impacts. During the year, the Group did not have projects which require resettlement of residents. If there is a genuine need for resettlement in the future, the Group will make proper arrangements for the affected residents in accordance with established procedures, with an aim to achieve mutual growth of project activities and the surrounding communities.

## CHARITABLE ACTIVITIES

Upholding the mission of “Converging in Harmony and Benefiting the Society”, China Gas actively engages in disaster relief, poverty alleviation and other public welfare and charitable affairs, and gives back to the society through practical actions. China Gas Charity Foundation, financed by several major shareholders of the Group, actively contributes to charity and provides financial support for charitable activities every year.

FY2017/18



During the Reporting Period, the Foundation continued to carry out various charitable activities according to the work plan, such as conducting visits at the replacement of coal with gas projects at various regions in North China, organizing elderly care activities in Hong Kong, etc. The Staff Care Committee focuses on providing care and assistance to employees within the Group, providing financial and emotional assistance and help to those who suffer from serious illnesses and poverty, helping employees to overcome their difficulties and regaining their courage in life. The warmth of the China Gas Family is brought all over China.

In order to continue to promote the work of the China Gas Volunteer Service Team, we invited a trainer from the Shenzhen Volunteer Association to conduct professional volunteer trainings for our colleagues, to help them fully understand the meaning of volunteer service and enhance their sense of responsibility. The participants shared their learning inspirations and volunteering experiences, which reflected the spirit of mutual help and love.

### THEMATIC ACTIVITY ON LEARNING FROM LEI FENG



In the FY2017/18, China Gas launched a nationwide thematic activity on learning from Lei Feng, calling on all employees to learn the spirit of Lei Feng, organizing Lei Feng volunteer teams, and conducting various volunteering services for the society.

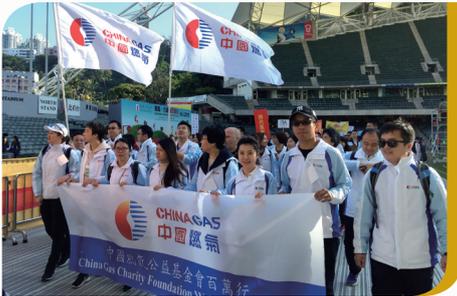
### BLOOD DONATION EVENT



2017 Blood Donation Event of China Gas was held in August 2017, which was the sixth blood donation event organized by the Group since 2011. The Group's eight regional management centers and project companies actively responded to the call from the Group headquarters in organizing blood donation activities, to spread the love of China Gas throughout the country.



## HONG KONG AND KOWLOON WALK



On 14 January 2018, a cold but sunny day, the China Gas team led by Li Jing, Chairman of the China Gas Charity Foundation, actively participated in Hong Kong Community Chest's "Hong Kong and Kowloon Walk". Together with over 170 teams formed by industrial and commercial organizations and community groups, the team raised funds for family and child welfare services in Hong Kong.

## RESPECT ELDERLY DAY WITH FRIENDSHIP AND LOVE



On 17 June 2017, the "Respect Elderly Day with Friendship and Love" event was held at the Martha Boss Lutheran Community Center in Hong Kong. It was a joyful gathering with singing performances and lucky draw activities for the elderly in the community. The guests sang a number of classical Chinese songs, which brought nearly 200 elderly people to the past to relive the good old days. The volunteers also presented prizes and China Gas lucky bags to the participants.

# Sustainability Overview

## ECONOMIC PERFORMANCE

	For the year ended March 31	
	FY2017/18 HK\$'000	FY2016/17 HK\$'000
<b>Direct Economic Value Generated</b>		
Revenue	<b>52,831,958</b>	31,993,323
Other income	<b>563,903</b>	445,644
Share of results of associates	<b>496,822</b>	293,060
Share of results of joint ventures	<b>758,313</b>	611,187
<b>Economic Value Distributed</b>		
Staff costs	<b>2,889,505</b>	1,860,899
Other costs <sup>1</sup>	<b>38,914,124</b>	22,682,738
Finance costs	<b>807,781</b>	705,116
Dividends	<b>1,391,185</b>	953,816
Taxes <sup>2</sup>	<b>1,930,711</b>	1,207,506
Profit attributable to non-controlling interest	<b>573,901</b>	546,964
Charitable donations	<b>5,299</b>	3,188
<b>Economic Value Retained</b>		
Retained for China Gas's sustainable operation and development	<b>8,138,490</b>	5,382,987

### Notes

- 1: Represents other costs and other gains and losses but excludes depreciation and amortization for the year.
- 2: Represents current income tax but excludes deferred tax for FY2017/18.

## OPERATIONAL PERFORMANCE

	Unit	FY2017/18	FY2016/17
Number of piped gas projects with concession right	No.	495	330
Number of natural gas long distance transmission pipelines	No.	14	14
Total length of natural gas pipelines	km	172,540	95,455
Number of CNG/LNG refilling stations	No.	580	580
Number of LPG distribution projects	No.	100	92
Total natural gas sales volume	m <sup>3</sup>	18,659,299,000	12,224,292,000
Total LPG sales volume	Tonne	4,030,394	3,699,000
Number of comprehensive energy supply projects	No.	19	18
Number of violation cases related to product responsibility	No.	0	0

## SUPPLIERS

	Unit	FY2017/18	FY2016/17
Cumulative total number of suppliers completed registration on China Gas Procurement Portals	No.	251	193
Supplier compliance rate	%	100	100
Percentage of suppliers certified to environmental management system and occupational health and safety management system	%	100	100

# Sustainability Overview

## ENVIRONMENTAL PERFORMANCE

	Unit	FY2017/18
<b>Greenhouse Gas (GHG) Emissions</b>		
Scope 1 (direct emissions)	tCO <sub>2</sub> e	<b>678,877.64</b>
Scope 2 (energy indirect emissions)	tCO <sub>2</sub> e	<b>82,494.55</b>
Total GHG emissions	tCO <sub>2</sub> e	<b>761,372.19</b>
GHG Intensity	kgCO <sub>2</sub> e/GJ of energy sold	<b>1.13</b>
<b>Air Emissions</b>		
PM	Tonne	<b>24.59</b>
SO <sub>2</sub>	Tonne	<b>258.22</b>
NO <sub>x</sub>	Tonne	<b>172.14</b>
<b>Energy Consumption</b>		
Coal	Tonne	<b>210.90</b>
Petrol	m <sup>3</sup>	<b>236,301.26</b>
Natural gas	m <sup>3</sup>	<b>17,764,637.84</b>
LPG	Tonne	<b>60.00</b>
Diesel	m <sup>3</sup>	<b>5,216.49</b>
Heavy oil	Tonne	<b>4,799.72</b>
Electricity (non-renewable energy)	kWh	<b>123,864,670.80</b>
Electricity (renewable energy)	kWh	<b>101.00</b>
Total energy consumption <sup>1</sup>	GJ	<b>8,615,131.06</b>
Energy consumption intensity	GJ/GJ of energy sold	<b>0.013</b>
<b>Material Use</b>		
Odorant	Tonne	<b>15.00</b>
Lubricating oil	Tonne	<b>5.00</b>
<b>Water Consumption</b>		
Total water consumption	Tonne	<b>2,485,680</b>
Water consumption intensity	kg/GJ of energy sold	<b>3.68</b>
<b>Wastewater and Waste</b>		
Total wastewater discharged	Tonne	<b>665,859.76</b> (all wastewater was discharged to designated wastewater treatment plants in accordance with the prevailing laws and regulations)
Non-hazardous waste produced	Tonne	<b>11,944</b>
Intensity of non-hazardous waste produced	Tonne/employee	<b>0.28</b>
<b>Environmental Compliance</b>		
Environmental regulatory non-compliances	No.	<b>0</b>

Note

1: Energy consumption is calculated based on the conversion factors provided in *China Energy Statistical Yearbook 2017*.

## EMPLOYMENT AND LABOUR PRACTICES

	Unit	FY2017/18
<b>Health and safety</b>		
Number of work-related injuries	No.	216
Number of work-related fatalities	No.	6
Number of occupational diseases	No.	0
Number of disability injuries	No.	24
Injury rate (per 1,000 employees) <sup>1</sup>	–	5.04
Fatality rate (per 1,000 employees) <sup>2</sup>	–	0.14
Lost days due to work-related injuries	Days	3,077
<b>Training and development</b>		
Employee training rate	%	100
Average training hours per employee	Hour	21.90
<b>Labour practices</b>		
Number of violation cases related to employment or labour regulations	No.	0
Number of violation cases related to child labour or forced labour	No.	0
Number of discrimination cases related to gender, ethnicity, age and health during recruitment	No.	0

## Notes

1: Injury rate = (number of work-related injuries/ total number of employees) x 1,000

2: Fatality rate = (number of work-related fatalities/ total number of employees) x 1,000

## COMMUNITY INVESTMENT

	Unit	FY2017/18	FY2016/17
<b>Participated volunteers</b>	People	235	123
<b>Voluntary hours</b>	Hour	1,016	528
<b>People benefited</b>	People	8,100	578

# Content Indexes

## STOCK EXCHANGE ESG REPORTING GUIDE

Subject Areas, Aspects, General Disclosures and KPIs	Description	Relevant chapter(s) or Other explanation
<b>Environmental</b>		
<b>Topic A1: Emissions</b>		
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer  relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	Safeguarding the Environment
KPI A1.1	The types of emissions and respective emissions data.	Safeguarding the Environment, Sustainability Overview
KPI A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Safeguarding the Environment, Sustainability Overview
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	We do not directly generate significant hazardous waste in our operation. Besides, we are exploring effective approaches to measure the weight of our hazardous wastes.
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Sustainability Overview
KPI A1.5	Description of measures to mitigate emissions and results achieved.	Safeguarding the Environment
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	Safeguarding the Environment

Subject Areas, Aspects, General Disclosures and KPIs	Description	Relevant chapter(s) or Other explanation
<b>Topic A2: Use of Resources</b>		
General disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	Safeguarding the Environment
KPI A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	Safeguarding the Environment, Sustainability Overview
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	Safeguarding the Environment, Sustainability Overview
KPI A2.3	Description of energy use efficiency initiatives and results achieved.	Safeguarding the Environment
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	Safeguarding the Environment
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	Safeguarding the Environment
<b>Topic A3: The Environment and Natural Resources</b>		
General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources.	Safeguarding the Environment
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	Safeguarding the Environment
<b>Social</b>		
<b>Topic B1: Employment</b>		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer  relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	Caring for the Growth of Employees
KPI B1.1	Total workforce by gender, employment type, age group and geographical region.	Caring for the Growth of Employees
KPI B1.2	Employee turnover rate by gender, age group and geographical region.	Caring for the Growth of Employees

## Content Indexes

Subject Areas, Aspects, General Disclosures and KPIs	Description	Relevant chapter(s) or Other explanation
<b>Topic B2: Health and Safety</b>		
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer  relating to providing a safe working environment and protecting employees from occupational hazards.	Caring for the Growth of Employees
KPI B2.1	Number and rate of work-related fatalities.	Caring for the Growth of Employees, Sustainability Overview
KPI B2.2	Lost days due to work injury.	Caring for the Growth of Employees
KPI B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	Caring for the Growth of Employees
<b>Topic B3: Development and Training</b>		
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	Caring for the Growth of Employees
KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	Caring for the Growth of Employees
KPI B3.2	The average training hours completed per employee by gender and employee category.	Caring for the Growth of Employees
<b>Topic B4: Labour Standards</b>		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	Caring for the Growth of Employees
KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	Caring for the Growth of Employees
KPI B4.2	Description of steps taken to eliminate such practices when discovered.	Caring for the Growth of Employees
<b>Topic B5: Supply Chain Management</b>		
General Disclosure	Policies on managing environmental and social risks of the supply chain.	Establishing Sustainable Corporate Governance
KPI B5.1	Number of suppliers by geographical region.	Establishing Sustainable Corporate Governance
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored	Establishing Sustainable Corporate Governance

Subject Areas, Aspects, General Disclosures and KPIs	Description	Relevant chapter(s) or Other explanation
<b>Topic B6: Product Responsibility</b>		
General disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	Providing Quality Services
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Sustainability Overview
KPI B6.2	Number of products and service related complaints received and how they are dealt with.	Sustainability Overview
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	Providing Quality Services
KPI B6.4	Description of quality assurance process and recall procedures.	Providing Quality Services
KPI B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	Providing Quality Services
<b>Topic B7: Anti-corruption</b>		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer  relating to bribery, extortion, fraud and money laundering.	Establishing Sustainable Corporate Governance
KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	Establishing Sustainable Corporate Governance
KPI B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	Establishing Sustainable Corporate Governance
<b>Topic B8: Community Investment</b>		
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	Building a Better Community
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	Building a Better Community
KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	Building a Better Community

## Content Indexes

### GRI STANDARDS AND CASS-CSR3.0

GRI Standards	Description	CASS-CSR3.0	Relevant chapter(s) or Other explanation
GRI 101	<b>Foundation 2016 [Does not Include any Disclosures]</b>		
GRI 102	<b>General Disclosures 2016</b>		
<b>Organizational Profile</b>			
102-1	Name of the organization	P4.1	About this Report
102-2	Activities, brands, products, and services	P4.2	About China Gas
102-3	Location of headquarters	P4.1	About this Report
102-4	Location of operations	P4.4	About China Gas
102-5	Ownership and legal form	P4.1	About this Report
102-6	Markets served	P4.4	About China Gas
102-7	Scale of the organization	P4.3	About China Gas
102-8	Information on employees and other workers	P4.5, S2.1	Caring for the Growth of Employees
102-9	Supply chain	M3.5	Sustainability Overview, Establish Sustainable Corporate Governance
102-10	Significant changes to the organization and its supply chain	P4.7	Creating Green Value, Establish Sustainable Corporate Governance
102-11	Precautionary Principle or approach	G1.1, G1.2, G2.4	Establishing Sustainable Corporate Governance
102-12	External initiatives	G1.2, E1.3	Creating Green Value
102-13	Membership of associations	P4.6	The Group is a member of China Gas Association.
<b>Strategy</b>			
102-14	Statement from senior decision-maker	P3.2	Message from the Chairman
102-15	Key impacts, risks, and opportunities	P3.2	Creating Green Value

GRI Standards	Description	CASS-CSR3.0	Relevant chapter(s) or Other explanation
<b>Ethics and Integrity</b>			
102-16	Values, principles, standards, and norms of behavior	G1.1, M3.2	About China Gas
102-17	Mechanisms for advice and concerns about ethics	G2.2	Establishing Sustainable Corporate Governance
<b>Governance</b>			
102-18	Governance structure	G2.1, G2.2, G2.3, G2.4	Establishing Sustainable Corporate Governance
102-19	Delegating authority	G2.3, G2.4	Establishing Sustainable Corporate Governance
102-20	Executive-level responsibility for economic, environmental, and social topics	G2.3, G2.4	Establishing Sustainable Corporate Governance
102-21	Consulting stakeholders on economic, environmental, and social topics	G2.2, M1.1	Engaging with Stakeholders
102-22	Composition of the highest governance body and its committees	G2.2, G2.3	Establishing Sustainable Corporate Governance
102-23	Chair of the highest governance body		2017/18 Annual Report
102-24	Nominating and selecting the highest governance body	M1.1	2017/18 Annual Report
102-25	Conflicts of interest		2017/18 Annual Report
102-26	Role of highest governance body in setting purpose, values, and strategy	G2.4	2017/18 Annual Report
102-27	Collective knowledge of highest governance body	M1.1	2017/18 Annual Report
102-28	Evaluating the highest governance body's performance		2017/18 Annual Report
102-29	Identifying and managing economic, environmental, and social impacts	G2.4	Engaging with Stakeholders

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GRI Standards	Description	CASS-CSR3.0	Relevant chapter(s) or Other explanation
102-30	Effectiveness of risk management processes	G2.4	2017/18 Annual Report
102-31	Review of economic, environmental, and social topics	G2.4	Engaging with Stakeholders
102-32	Highest governance body's role in sustainability reporting	G2.4	Engaging with Stakeholders
102-33	Communicating critical concerns	G5.4, G5.5	Engaging with Stakeholders
102-34	Nature and total number of critical concerns		2017/18 Annual Report
102-35	Remuneration policies		2017/18 Annual Report
102-36	Process for determining remuneration		2017/18 Annual Report
102-37	Stakeholders' involvement in remuneration	M1.1	2017/18 Annual Report
102-38	Annual total compensation ratio		Ratio of the total remuneration of the highest-paid individual to the median total remuneration of all employees (excluding the highest-paid individual): 27.91:1
102-39	Percentage increase in annual total compensation ratio		Ratio of the annual percentage increase in total remuneration of the highest-paid individual to the median percentage increase in annual total remuneration of all employees (excluding the highest-paid individual): 0.93:1

GRI Standards	Description	CASS-CSR3.0	Relevant chapter(s) or Other explanation
<b>Stakeholder Engagement</b>			
102-40	List of stakeholder groups	G5.1	Engaging with Stakeholders
102-41	Collective bargaining agreements		Not Applicable
102-42	Identifying and selecting stakeholders	G5.2	Engaging with Stakeholders
102-43	Approach to stakeholder engagement	P2.3	Engaging with Stakeholders
102-44	Key topics and concerns raised	G5.3	Engaging with Stakeholders
<b>Reporting Practice</b>			
102-45	Entities included in the consolidated financial statements	P1.2, P1.3, P4.3	About this Report
102-46	Defining report content and topic Boundaries	P1.1, P2.2, G1.3	About this Report
102-47	List of material topics	P2.2, G1.3	Engaging with Stakeholders
102-48	Restatements of information	P1.2, P1.3	Not Applicable
102-49	Changes in reporting	P1.2, P1.3	About this Report
102-50	Reporting period	P1.2, P1.3	About this Report
102-51	Date of most recent report	P1.2	About this Report
102-52	Reporting cycle	P1.2, P1.3	About this Report
102-53	Contact point for questions regarding the report	P1.5	About this Report
102-54	Claims of reporting in accordance with the GRI Standards	P1.1	About this Report
102-55	GRI content index	P1.1	Content Index
102-56	External assurance	P1.1	Not Applicable

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GRI Standards	Disclosure Number	Description	CASS-CSR3.0	Relevant chapter(s) or Other explanation
<b>Material Topics</b>				
<b>Economic Performance</b>				
<b>GRI103 Management Approach 2016</b>	<b>103-1</b>	Explanation of the material topic and its Boundary	P1.3	Engaging with Stakeholders
	<b>103-2</b>	The management approach and its components	P1.3	Creating Green Value
	<b>103-3</b>	Evaluation of the management approach	P1.3	Creating Green Value
<b>GRI201: Economic Performance 2016</b>	<b>201-1</b>	Direct economic value generated and distributed	M1.2, M1.3, M1.4, M1.5, S1.5	Sustainability Overview
	<b>201-2</b>	Financial implications and other risks and opportunities due to climate change		Creating Green Value
	<b>201-3</b>	Defined benefit plan obligations and other retirement plans		Caring for the Growth of Employees
<b>Market Presence</b>				
<b>GRI103 Management Approach 2016</b>	<b>103-1</b>	Explanation of the material topic and its Boundary		Engaging with Stakeholders
	<b>103-2</b>	The management approach and its components		Creating Green Value
	<b>103-3</b>	Evaluation of the management approach		Creating Green Value
<b>GRI202: Market Presence 2016</b>	<b>202-1</b>	Ratios of standard entry level wage by gender compared to local minimum wage		The compensation of all of our employees is higher than the minimum wage rules.

GRI Standards	Disclosure Number	Description	CASS-CSR3.0	Relevant chapter(s) or Other explanation
<b>Indirect Economic Impacts</b>				
<b>GRI103 Management Approach 2016</b>	<b>103-1</b>	Explanation of the material topic and its Boundary		Engaging with Stakeholders
	<b>103-2</b>	The management approach and its components		Creating Green Value
	<b>103-3</b>	Evaluation of the management approach		Creating Green Value
<b>GRI203: Indirect Economic Impacts 2016</b>	<b>203-1</b>	Infrastructure investments and services supported	S4.11, S4.12	Creating Green Value
	<b>203-2</b>	Significant indirect economic impacts	S1.8, S4.11, S4.12	Creating Green Value
<b>Anti-corruption</b>				
<b>GRI103 Management Approach 2016</b>	<b>103-1</b>	Explanation of the material topic and its Boundary	S1.3	Engaging with Stakeholders
	<b>103-2</b>	The management approach and its components	S1.3	Establishing Sustainable Corporate Governance
	<b>103-3</b>	Evaluation of the management approach	S1.3	Establishing Sustainable Corporate Governance
<b>GRI 205: Anti-corruption 2016</b>	<b>205-1</b>	Operations assessed for risks related to corruption		Establishing Sustainable Corporate Governance
	<b>205-2</b>	Communication and training about anti-corruption policies and procedures		Establishing Sustainable Corporate Governance

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GRI Standards	Disclosure Number	Description	CASS-CSR3.0	Relevant chapter(s) or Other explanation
<b>Emissions</b>				
<b>GRI103 Management Approach 2016</b>	<b>103-1</b>	Explanation of the material topic and its Boundary	E1.1, E2.1	Engaging with Stakeholders
	<b>103-2</b>	The management approach and its components	E1.1, E1.5, E2.1	Safeguarding the Environment
	<b>103-3</b>	Evaluation of the management approach	E1.1, E1.5, E2.1	Safeguarding the Environment
<b>GRI305: Emissions 2016</b>	<b>305-1</b>	Direct (Scope 1) GHG emissions	E2.8	Safeguarding the Environment
	<b>305-2</b>	Energy indirect (Scope 2) GHG emissions	E2.8	Safeguarding the Environment
	<b>305-4</b>	GHG emissions intensity	E2.8	Safeguarding the Environment
	<b>305-7</b>	Nitrogen oxides (NO <sub>x</sub> ), sulfur oxides (SO <sub>x</sub> ), and other significant air emissions	E2.8	Safeguarding the Environment
<b>Effluents and Waste</b>				
<b>GRI103 Management Approach 2016</b>	<b>103-1</b>	Explanation of the material topic and its Boundary	E1.1, E2.1, E2.11	Engaging with Stakeholders
	<b>103-2</b>	The management approach and its components	E1.1, E1.5, E2.1, E2.11, E2.18, E2.19	Safeguarding the Environment
	<b>103-3</b>	Evaluation of the management approach	E1.1, E1.5, E2.1, E2.11, E2.18, E2.19	Safeguarding the Environment
<b>GRI306: Effluents and Waste 2016</b>	<b>306-1</b>	Water discharge by quality and destination	E2.10	Sustainability Overview
	<b>306-2</b>	Waste by type and disposal method	E2.10, E2.12	Safeguarding the Environment
	<b>306-3</b>	Significant spills	E2.12, E4.2	Safeguarding the Environment

GRI Standards	Disclosure Number	Description	CASS-CSR3.0	Relevant chapter(s) or Other explanation
	<b>306-5</b>	Water bodies affected by water discharges and/or runoff	E4.2	Our business operations will not adversely affect nearby water bodies.
<b>Oil and Gas Sector Disclosures</b>	<b>OG5</b>	Volume and disposal of formation or produced water	E2.10	Our business operations do not involve formation water or produced water.
<b>Environmental Compliance</b>				
<b>GRI103 Management Approach 2016</b>	<b>103-1</b>	Explanation of the material topic and its Boundary	E1.1, E2.1	Engaging with Stakeholders
	<b>103-2</b>	The management approach and its components	E1.1, E1.5, E2.1	Safeguarding the Environment
	<b>103-3</b>	Evaluation of the management approach	E1.1, E1.5, E2.1	Safeguarding the Environment
<b>GRI307: Environmental Compliance 2016</b>	<b>307-1</b>	Non-compliance with environmental laws and regulations	G4.4, E4.2	Sustainability Overview
<b>Customer Health and Safety</b>				
<b>GRI103 Management Approach 2016</b>	<b>103-1</b>	Explanation of the material topic and its Boundary	M2.4, M2.5	Engaging with Stakeholders
	<b>103-2</b>	The management approach and its components	M2.4, M2.5	Providing Quality Services
	<b>103-3</b>	Evaluation of the management approach	M2.4, M2.5	Providing Quality Services
<b>GRI416: Customer Health and Safety 2016</b>	<b>416-1</b>	Assessment of the health and safety impacts of product and service categories	M2.5	Providing Quality Services
	<b>416-2</b>	Incidents of non-compliance concerning the health and safety impacts of products and services	M2.4	Providing Quality Services

## Content Indexes

GRI Standards	Disclosure Number	Description	CASS-CSR3.0	Relevant chapter(s) or Other explanation
<b>Asset Integrity and Process Safety</b>				
<b>GRI103 Management Approach 2016</b>	<b>103-1</b>	Explanation of the material topic and its Boundary	S3.2	Engaging with Stakeholders
	<b>103-2</b>	The management approach and its components	S3.2	Providing Quality Services
	<b>103-3</b>	Evaluation of the management approach	S3.2	Providing Quality Services
<b>Oil and Gas Sector Disclosures</b>	<b>OG13</b>	Number of process safety events	S3.6, S3.7	There were 39 process safety events in FY2017/18.
<b>Emergency Preparedness</b>				
<b>GRI103 Management Approach 2016</b>	<b>103-1</b>	Explanation of the material topic and its Boundary	S3.2	Engaging with Stakeholders
	<b>103-2</b>	The management approach and its components	S3.2, E1.2	Providing Quality Services
	<b>103-3</b>	Evaluation of the management approach	S3.2, E1.2	Providing Quality Services
<b>Involuntary Resettlement</b>				
<b>Oil and Gas Sector Disclosures</b>	<b>OG12</b>	Operations where involuntary resettlement took place		Building a Better Community



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