



Stock Code : 384

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



Embrace our **Green Future**

SUSTAINABILITY REPORT 2022/23

* For identification purpose only

Contents

02	REPORT PROFILE		
04	MESSAGE FROM THE CHAIRMAN		
06	CORPORATE PROFILE		
19	FY2022/23 PERFORMANCE HIGHLIGHTS		
23	STATEMENT OF THE BOARD		
24	RESPONSIBLE GOVERNANCE		
25	Sustainability Strategies		
37	Corporate Governance		
43	Risk Management		
44	Business Ethics		
47	Information Security Management		
50	Supply Chain Management		
56	1. LOW-CARBON DEVELOPMENT		
57	1.1 FY2022/23 Highlights		
58	1.2 Opportunities in Green Development		
65	1.3 Climate Change Response		
75	1.4 Dual Carbon Targets and Pathway Planning		
76	1.5 Green Operation		
81	1.6 Sustainable Finance		
83	2. SAFETY OPERATION		
84	2.1 FY2022/23 Highlights		
85	2.2 Health and Safety Targets		
86	2.3 Safety Management System		
89	2.4 Operational Safety		
93	2.5 Occupational Health and Safety		
103	2.6 Digital Security Management		
104	2.7 Contractor and Supplier Safety Management		
107	2.8 Stable Gas Supply		
112	3. SOCIAL CONTRIBUTION		
113	3.1 FY2022/23 Highlights		
114	3.2 Rural Revitalization		
117	3.3 Relocation for Local Residents		
120	3.4 Social Responsibility		
124	4. SERVICE GUARANTEE		
125	4.1 FY2022/23 Highlights		
125	4.2 Product Quality Assurance		
128	4.3 Intellectual Property Protection		
128	4.4 Digital Transformation		
130	4.5 Customer Care		
134	5. ENVIRONMENTAL PROTECTION		
135	5.1 FY2022/23 Highlights		
135	5.2 Environmental Management System		
137	5.3 Resource Utilization and Waste Management		
139	5.4 Water Resource Management		
141	5.5 Biodiversity Conservation		
149	6. EMPLOYEE CARE		
150	6.1 FY2022/23 Highlights		
151	6.2 Employee Rights Protection		
154	6.3 Talent Acquisition and Retention		
157	6.4 Employee Training and Development		
164	6.5 Well-Being of Employees		
167	7. SUSTAINABILITY OVERVIEW		
174	8. CONTENT INDICES		
174	HKEX ESG Reporting Guide Content Index		
181	GRI Standards and CASS-CSR4.0		
186	China Gas ESG Policy List		

REPORT PROFILE

REPORT PROFILE

This report is the seventh sustainability report (the “Report”) published by China Gas Holdings Limited (stock code: 384.HK) (the “Company”, together with its subsidiaries and project companies, collectively referred to as the “Group” or “China Gas”). This report provides open and transparent disclosure of the Group’s activities and operating performance on different sustainable development fronts over the past year, and demonstrates the Group’s strategy and commitment to sustainable development. The Group publishes sustainability reports on an annual basis for public access and review to continuously improve the transparency of information disclosure.

REPORT SCOPE

The Report covers the sustainability performance of China Gas Headquarters and all companies under operational control of the Group for the period from 1 April 2022 to 31 March 2023 (the “Reporting Period” or “FY2022/23”). Detailed contents are formulated with reference to the materiality assessment, stakeholder engagement and other relevant disclosure guidelines. For details of the Group’s business development and consolidated financial statements, please refer to the Company’s Annual Report 2022/23 (the “Annual Report”). Unless otherwise specified, the information of contractors and subcontractors is not reflected in this report.

REPORTING STANDARDS

This report is in accordance with Appendix 27 *Environmental, Social and Governance Reporting Guide* (“ESG Reporting Guide”) of the *Rules Governing The Listing of Securities* issued by The Stock Exchange of Hong Kong Limited (the “HKEX”), with reference to the *GRI Disclosure Guidelines* (“GRI Standards in 2021”), *Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises* (“CASS-CSR4.0”) of the Chinese Academy and Social Sciences and the Sustainable Development Goals (“SDGs”) of the United Nations. This report is based on the four reporting principles of materiality, quantitative, balance and consistency as mentioned by HKEX in its *Environmental, Social and Governance Reporting Guide*. It aims to cover all substantive issues objectively and comprehensively and demonstrate the Group’s commitment and determination to follow the best international practices. A complete content index is included in the last chapter of this report for quicker reference.

INFORMATION COLLECTION AND REPORTING

The Group has established an internal supervision mechanism. The contents and data reported in this report are sourced from the documents and statistics provided by various departments of the Group. With reference to the Group’s relevant policies and systems, the monitoring, management and operational data provided by relevant departments and subsidiaries are consolidated and summarised. Certain amounts and information included in this report have been subject to rounding adjustments. To ensure that the information presented in this report is as accurate and reliable as possible, the Group has established an internal regulatory mechanism and a review procedure. The content of this Report has also been reviewed by the senior management of the Company and approved by the sustainability committee of the Company (“Sustainability Committee”) and the board of directors of the Company (the “Board”).

HOW TO ACCESS

This report is available in both Chinese and English electronic versions and has been uploaded to the HKEXnews website (www.hkexnews.hk) and the website of the Company (www.chinagasholdings.com.hk). In the event of any inconsistency or discrepancy between the Chinese version and the English version, the Chinese version shall prevail; in the event of any conflict or inconsistency between this report and the annual report, the annual report shall prevail.

FEEDBACK

China Gas values the opinions of its stakeholders. Your valuable opinions on the content and format of this report are a driving force for the Group's continuous improvement. If you have any questions or suggestions, please contact investor@chinagasholdings.com.hk to help us continue improving our ESG performance.



MESSAGE FROM THE CHAIRMAN



Always committed to “Converging in Harmony & Benefiting Communities”, we have built on the past achievements to reach where we are today, pressing ahead for generations to come. As an enterprise for the country, the people, the Group, and ourselves, we mapped out our strategies and ventured on, towards a better life for all. Blessed with a fast-growing economy at home, we are translating ourselves into a vital player and powerhouse for China’s green energy.

We, well-positioned with the national Dual Carbon goal, keeping pace with external changes and the technology transformation, have been embracing fresh moves with due priorities for natural gas, our flagship business. That is how we are keeping our main business in healthy growth while striding boldly forward in green and low-carbon energy segments. This financial year, we invested heavily in diversifying our integrated energy portfolio, delivering business highlights including low-carbon hospitals, low-carbon logistics and zero-carbon factories. Resources well pooled and leveraged from upstream to downstream, we partnered with many within and beyond the ecosystem, in distributed photovoltaics (PV), Building Integrated PV (BIPV), energy storage & charging, green hydrogen, biomass energy and new energy system solutions, etc. Such partnerships armed us with mutual complementarity, integrated resources, and ever-growing competitiveness in R&D.

And our progress on operations continues as well. As a top trans-regional integrated-energy service provider in China, we constantly upgrade how we operate in line with how the sector and the market evolve, in a way more prudent and result-oriented. At China Gas, this means further optimizing our management regulations for safety operations, boosting the safety awareness of our staff, digitalizing our safety management for real-time monitoring and warning of business scenarios, through which we focus on performing while transforming our safety management, hence our well-secured gas supply.

Defined by our people-centered commitments, we have always been moving fast to modernize China’s agriculture and rural life in response to its Rural Revitalization. The previous fiscal year witnessed, for instance, our further moves in rural gas storage tank station and MicroGrid construction. We also developed the very first LPG MicroGrid gas supply platform in China, where gas supply is centralized and individually delivered to households under distributors’ remote monitoring. Hence, suburban and rural life is now supercharged by this game-changing technology, instead of the conventional gas supply models, as part of our contributions to lay the groundwork for a rural life clean and convenient. Together, we’re working every day towards a beautiful countryside of happiness both locally and nationally.



Social responsibility, core to who we are as a company, guide our actions and moves. At such an ever-growing enterprise where things are being scaled up, more needs to be done and more value to be created for the society. In FY2022/23, the Group entered into the first social responsibility syndicated loan agreement in the Greater China region with multiple banks overseas, all for our gas-to-coal conversion in Northern China, to grow our businesses sustainably with high quality. Here, our nonstop investments for social values are always deemed as drivers for our corporate value and business growth towards sustainability.

Going forward, you'll enjoy a China Gas story about communities better off and development more sustainable fueled by our policy-following activities. To grow and expand without forgetting our tenets, we will remain committed to being a force for good in the communities we serve. In such development healthy and sustainable, we are creating timeless value with quality services, always "Human-first Towards Centenary".

Mr. LIU Ming Hui

Chairman of the Board and President of the Group



CORPORATE PROFILE

CORPORATE PROFILE

China Gas is one of China's the largest cross-regional integrated energy suppliers and service providers. Focusing on China, it is primarily engaged in the investment, construction, and operation of city and township gas pipeline infrastructure, gas terminals, storage and transportation facilities, and gas logistics systems to deliver natural gas and liquefied petroleum gas (LPG) to residential, industrial and commercial users. The Group also constructs and operates compressed natural gas (CNG)/liquefied natural gas (LNG) refilling stations while developing and applying natural gas and LPG technologies. In addition, leveraging its extensive gas consumer base, it has developed a full-fledge portfolio of value-added services, distributed PVs, electricity distribution, and charging stations to create a diversified business structure.

As of 31 March, 2023, the Group has secured over 661 urban piped gas projects with concession rights in 30 provinces, municipalities, and autonomous regions. Additionally, it operates over 533 natural gas (CNG/LNG) vehicle and vessel refuelling stations, over 106 LPG terminal distribution projects, 1 CBM development project, 32 long-distance natural gas pipeline projects, 7 LPG terminals, 7 large petrochemical storage bases, 1 offshore transportation fleet, and several onshore dangerous transportation fleets. The total gas pipeline network exceeds 550,000 kilometres, with an annual natural gas sales volume of 39.2 billion cubic meters, over 50 million piped gas and bottled LPG users, and gas supply covering an urban population of over 200 million.

CORPORATE VISION AND MISSION



VISION: HUMAN-FIRST TOWARDS CENTENARY

- China Gas aims to integrate the expectations of stakeholders (society, customers, shareholders, and employees) into its corporate vision, fostering a community of shared destiny where it strives to develop together with stakeholders, building a century-old enterprise in sustainable operations.
- China Gas seeks to excel in corporate history, scale, service quality, brand effect, and contribution, earning recognition through the test of time and continuously deepening its foundation for better development momentum.

MISSION: CONVERGING IN HARMONY AND BENEFITING COMMUNITIES


- China Gas upholds the mission and responsibility of “Converging in Harmony and Benefiting Communities.” Anchored by its natural gas business, the Company pursues continuous growth and development.
- China Gas believes that in integrating its advantages, capital, talents, and wisdom to achieve harmonious development, by improving living standards, promoting national economic development, fulfilling social citizenship responsibilities, and seeking public happiness, it is enabling a better life for all.

BUSINESS OVERVIEW

Natural Gas Business

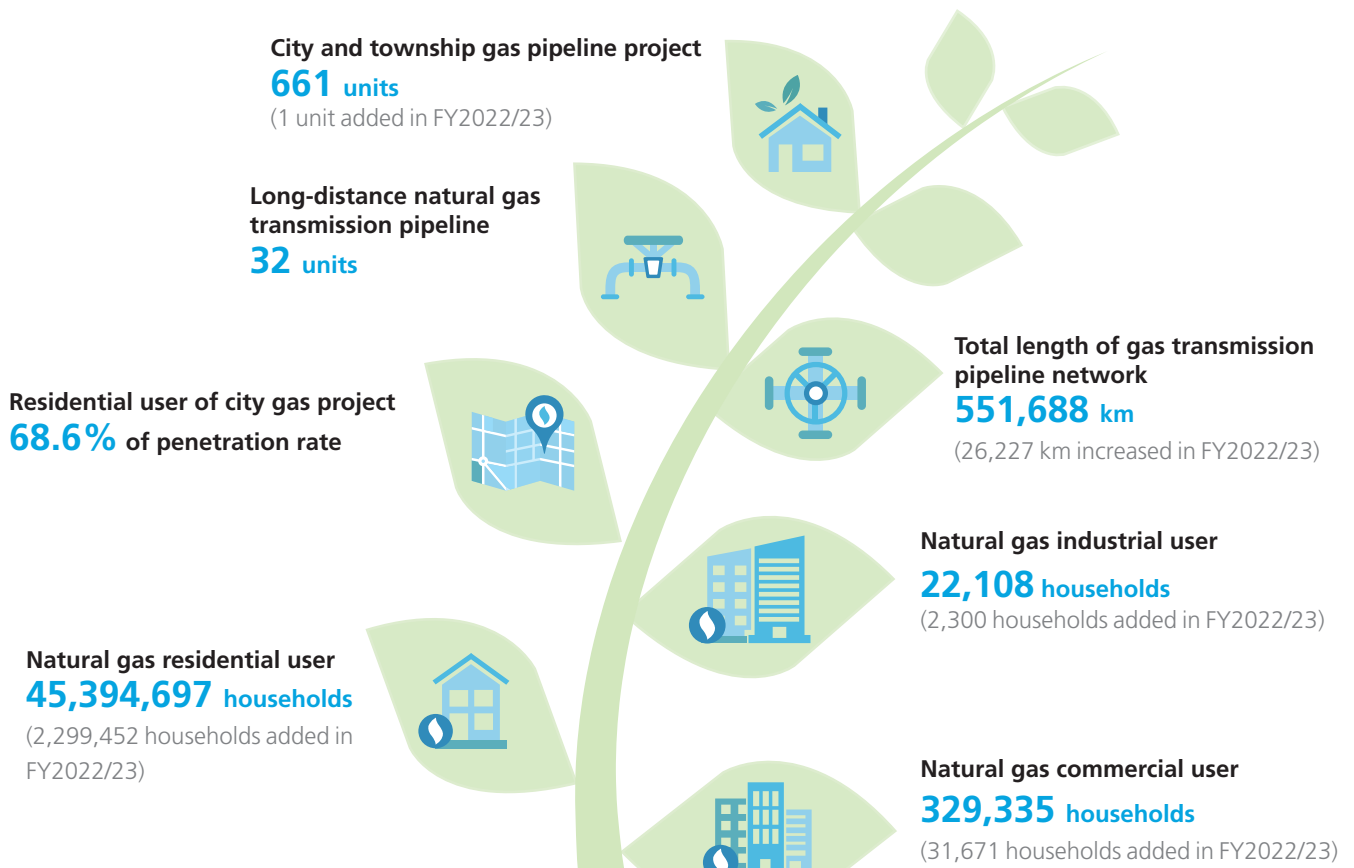
China Gas has invested in various piped gas projects with concession rights, natural gas trading, and gas for vehicles and vessels in China since the implementation of cross-regional long-distance pipeline projects such as the West-East Gas Transmission and the Sichuan-to-East Gas Transmission by the State. The Group focuses on promoting the healthy development of its flagship natural gas business to improve the environment and enhance the quality of life for users. Through the development of its natural gas business, the Group offers efficient, green, and clean low-carbon energy to inject vitality into the world economy's growth, helping powering the society from an industrial civilization to an ecological civilization.

As of 31 March 2023



CNG/LNG refilling station for vehicles and vessels
533 stations

As of 31 March 2023



CORPORATE PROFILE

BUSINESS OVERVIEW

Natural Gas Business

Natural Gas Pipeline Network Construction and User Connection

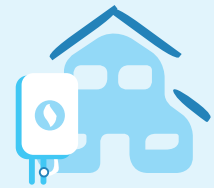
China Gas primarily sells natural gas through city and township pipeline networks, trade, and direct supply pipelines. The Group constructs main and branch pipelines for urban natural gas, connects natural gas pipelines to residential, industrial, and commercial users, and charges users connection fees and gas bills.

Gas-to-the-Countryside Project

China Gas, in active respond to the national call for air pollution control, is engaged in the “coal-to-gas” projects and China’s “beautiful countryside” project by signing contracts with 8.42 million households for gas replacement in rural area, contributing to the country’s “Blue Sky Protection Campaign”. Since 2017, China Gas has successively signed strategic cooperation agreements with Hainan Province, Hubei Province, Anhui Province, Heilongjiang Province, Jilin Province, Guangdong Province, Yunnan Province and Qinghai Province to jointly promote the “Gas-to-the-Countryside Project”. In collaboration with the Ministry of Housing and Urban-Rural Development of the People’s Republic of China, China Gas has built model villages for joint development of poverty alleviation and the construction of beautiful and liveable rural areas. China Gas has developed the first small-scale propane storage tank gas supply system in China, incorporating intrinsic safety and digital operation management, which features over ten patented technologies. China Gas’s rural MicroGrid gas supply system was well received by experts as “a revolutionary technology that transforms the energy consumption structure in rural areas for decades”.

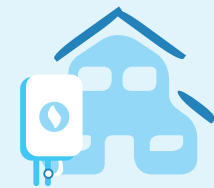
As of 31 March 2023

Newly connected residential users **2.299 million households** (urban gas connected 2.072 million households)



Accumulative township residential users connected to gas pipelines amount to **8,424,697 households**

(including approximately 227,363 newly connected in FY2022/23)



BUSINESS OVERVIEW

Natural Gas Business

CNG/LNG Refilling Stations for Vehicles and Vessels (Gas for Vehicles and Vessels)

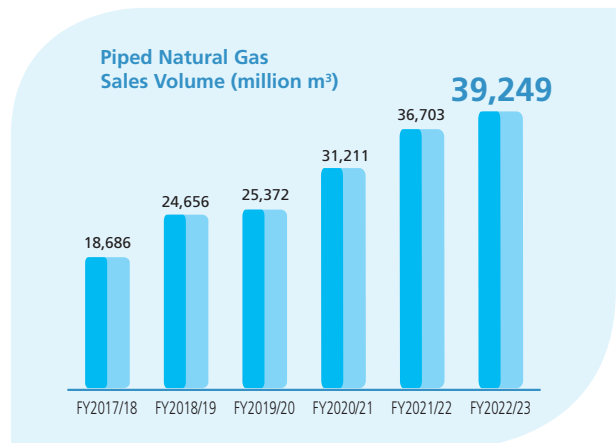
China Gas currently operates 533 vehicle gas refuelling stations, which can provide refuelling services for more than 200,000 natural gas vehicles daily. We are in close cooperation with major domestic LNG suppliers to explore new business models and promote the healthy development of clean energy.

China Gas, committed to promoting the construction and development of “green water transportation and low-carbon ports.”, is leading the application of LNG in the domestic water transportation industry. China Gas is the first to successfully transform the LNG-powered vessel in China, and built the first shore-based gas filling terminal by the Yangtze River, selected as a pilot project for the application of LNG in the water transportation industry by the Ministry of Transport of the People’s Republic of China. The Group has connected the upstream, midstream, and downstream of the Yangtze River water LNG filling networks and promoted the comprehensive utilization of LNG, shore power, and distributed clean energy at ports. The Group plans to accelerate the deployment of ship refueling projects in coastal areas and important tributaries, such as the Yangtze River, Pearl River, Jinghang trunk and coastal areas, Yangtze River Delta, and Pearl River Delta, aiming to achieve diversification of its gas sources.

LNG Distribution Business (Natural Gas Trading)

China Gas Hongda Energy Trading Co., Ltd. (“China Gas Hongda”), a wholly owned subsidiary of China Gas, is responsible for the Group’s internal and external operation and execution of the Group’s natural gas trading strategies. Through extensive cooperation with internationally renowned energy companies and China’s oil majors and liquefaction plants, China Gas Hongda has established a platform for integrating various resources. It conducts energy trading through various channels of energy such as domestic and imported gas for trading online and offline. During the Reporting Period, the Group signed several long-term agreements with overseas LNG resource parties, involving an annual import volume of 3.7 million tons of LNG, further optimizing the structure of gas sources, ensuring a stable supply of gas sources, and making meaningful contributions to global climate goals.

To ensure the smooth operation of LNG trading, China Gas Hongtu Logistics Co., Ltd., China Gas’s wholly owned subsidiary, is responsible for the LNG trading business of the Group and the LNG supply guarantee for all project companies. It has established a nationwide sales network and supply chain system through continuous innovation of trade patterns, expansion of resource channels, and optimization of operation management. This enables the Group to fulfil its social responsibility towards a lower-carbon, cleaner, and more environmental-friendly future.



OPERATIONAL LOCATIONS OF NATURAL GAS

1. INNER MONGOLIA AUTONOMOUS REGION

Hohhot, Wuzhen Banner, Baotou, Helingeer County, Tuoketuo County, Tuzuo Banner, Wuchuan County, Alashangmeng Wusitai Industrial Zone, Wutelaqian Banner, Liangcheng County, Denkou County, Jining District, Ulanqab City, Dongshan Industrial Park, Ningcheng County, Hohhot Shengle Economic Zone, Qingshuihe County, Urad Middle Banner, Ejina Horo Banner, Yuanbaoshan District in Chifeng, Chifeng Economic Transformation and Development Pilot Zone, Xinghe County, Bahrain Right Banner

2. XINJIANG UYGUR AUTONOMOUS REGION

Horgos Economic Development Zone, Huocheng County Economic Development Zone

3. HEBEI

Shijiazhuang Gaocheng, Cangzhou Development Zone, Nanpi County, Qinghe County, Wangdu City, Tangshan Nampo, Leping County, Xinle, Pingshan County, Fengnan District of Tangshan, Neiqiu County, Bohai New Zone, Cangzhou High-tech Zone, Tang County, Handan Jinan New Zone, Luquan, Quyang County, Raoyang County, Botou New Zone, Laishui County, Dingzhou, Dingxing County, Yutian County, Yutian Town and Caitingqiao Town of Yutian County, Changli County, Weixian County, Xiahuayuan District, Chengnan County, Wuqiao County, Ningjin County, Linzhang County, Zaoqiang County, Longyao County, Xingtang County, Gucheng County City Area, Gucheng County Administrative Jurisdiction, Nangong City, Jize County, Xinhe County, Xingtai, Kangbao County, Zanhuang County, Yu County Economic Development Zone, Nanhe County, Julu County, Linxi County, Xian County, Guangping County, Baixiang County of Xingtai City

4. GANSU

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

5. TIANJIN

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

6. SHANXI

Shuozhou City, Xiangning County in Linfen City

7. 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 District of Jinan City, Rongcheng City, Haiyang City, Wendeng City, Rushan City, Weifang Free Trade Zone, Jiaxiang County, Ningyang County, Laiyang Economic Development Zone

8. NINGXIA HUI AUTONOMOUS REGION

Zhongwei, Guyuan City

9. HENAN

Xinyang, Jiaozuo City, Qinyang City, Wuzhi County, Xiuwu County, Luohe City 7 Projects, Xiping County, Jiuyan 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, Mengzhou City, Wen County, Puyang County, Puyang Industrial Zone, Tangyin County, Nanyang City Wolong District, Suiping County, Shangcheng County, Ningling County, Xi County, Luoshan Town, Neihuang Town, Puyang Town, Yanjin Town, Changyuan Town, Gongyi Town, Nanyang Town, Luoning Town, Zhengyang Town

10. SHAANXI

Baoji, Qishan County, Yulin, Linyou County, Shangnan County, Heyang County

11. JIANGSU

Nanjing Jiang Bei, Pizhou, Yangzhong, Pu Kou District, Nanjing, Jiawang District, Xuzhou, Xinyi, Xuzhou, Yangzhou City, Taixing East District, Lianyungang Haizhou Economic Development Zone, Nanjing Jingqiao, Donghai County, Tongshan, Sihong County City Center, Sihong County, Guannan County, Nanjing ChangLu Industrial Park, certain villages and townships of Sihong County

12. ANHUI

Wuhu, Huainan, Shouxian, Suzhou, Wuhu County, Nanling County, Huoshan County, Fengtai County, Wuwei County, 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, Hefei Binghu New District She County, Huinan Town of Wuhe County, Linbei Village, Xinji Town, Toupu Town, Wuhe Economic Zone

13. HUBEI

Yichang, Xiaogan, Hanchuan, Yingcheng, Yunmeng, Suizhou, Tianmen, Dangyang, Wuhan Jiangnan, Laohekou, Danjiangkou, Yuanan, Dawu County, Run County, Wuxue 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, Yunxi County, Xiaogan High-tech Zone, Chongyang County, Honghu Economic Development Zone of Wuhan, Yunxi County

14. ZHEJIANG

Hangzhou Xiaoshan District, Taizhou, Jinhua, Hangzhou Jiangdong Development Zone, Daishan Economic Development Zone, Yueqing City, Xiushan Village of Zhejiang

15. CHONGQING

Yubei

16. JIANGXI

Nanchang Wanli, Xinfeng County, Wuyuan County, Yihuang County, Xinfeng Industrial Park, Nancheng County, Quannan County, Shangyou County, Jinyuan New District in Yichun City

17. HUNAN

Yiyang, Youxian, Zhangjiajie, Yiyang Datonghu, Yiyang City New Zone, Huaihua National Agriculture and Technology Zone, Anhua County, Zhijiang Dong Autonomous County, Baojing County, Huishang Industrial Zone, Taojiang County, Huishangang Concentrated Industrial Park of Yiyang, Chaling County

18. FUJIAN

30 cities/regions including Sanming City, Shaowu City, Wuping County, Taining County, Qingliu County, Youxi County, Datian County, Jianning County, Huaan Economic Zone, Ninghua County in Sanming, Jianning County Xiangfei Industrial Park

19. GUIZHOU

Kaili City

20. YUNNAN

Dali Haidong New Zone, Baoshan City, Lvchun County

21. GUANGXI ZHUANG AUTONOMOUS REGION

Nanning, Yulin, Qinzhou, Liuzhou, Fangchenggang, Nanning ASEAN Development Zone, Laibin, Baise, Bobai, Chongzuo, Guiping, Luchuan, Tiandeng County, Dahua County, Hechi, Tianlin County, Cenxi, Napo County, Liucheng County, Luocheng Mulao Autonomous County, Yulin Environmental Protection Industrial Park

22. GUANGDONG

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



23. HAINAN

Qiongzong Li-Miao Autonomous County

24. HEILONGJIANG

Harbin, Jiamusi, Mudanjiang, Daxing'anling Jiagedaqi, Huachuan County, Tangyuan County, Huanan County, Suibin County, Tongjiang, Mudanjiang Jiangan Development Zone, Nongkenbaoquanling, Raohe County, Qitaihe Jinsha New Zone, Mulan County, Tieli Chengguan, Fuyu County, Boli County, Luobei County, Yichun City Xinqing District, Jixi, Lingdong District in Shuangyashan, Heihe City, Nongken Hongxinglong District, Wudalianchi City, Xunke County, Qingan County, Sunwu County, Shuangyashan City, Tailai County, Acheng, Anda, Bin County, Wuchang, Zhaoyuan County, Fangzheng County, Jiansanjiang, Yilan Economic Development Zone

25. JILIN

Fusong, Baishan City, Changbai Mountain International Tourist Resort Zone, Jingyu County, Fuyu City, Zhenlai County, Gongzhuling City National Agricultural Science and Technology Park, Jiaohe City, Huadian City, Dongfeng County, Lushuihe Town and Quanyang Town in the administrative region of Fusong County, Changbai County

26. LIAONING

Shenyang City, Fushun, Jinzhou Economic Hi-Tech Development Zone, Shenyang Sujiatun, Dalian Jinzhou Development Zone, Liaoyang, Gaizhou, Zhuanghe City, Zhuanghe Industrial Park, Pulandian, Liaoyang Economic Zone, Liaoyang Taizi River, Xinbin County, Jinzhou Longxiwan New Zone, Qingyuan County, Fushun County, Yixian Qilihe, Changhai County, Jinzhou Dayou Economic Area, Yingkou Bohai Tech City, Jinzhou City, Kuandian Manzu Autonomous County, Dalian Puwan Economic Zone, Dandong City, Fengcheng City

27. BEIJING

Beijing Mentougou District, Beijing Economic-Technological Development Area

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-to-East Gas Pipeline
 - China-Russia Natural Gas Pipeline
 - China-Myanmar Natural Gas Pipeline
- (not drawn to scale)

661
Piped Gas
Projects

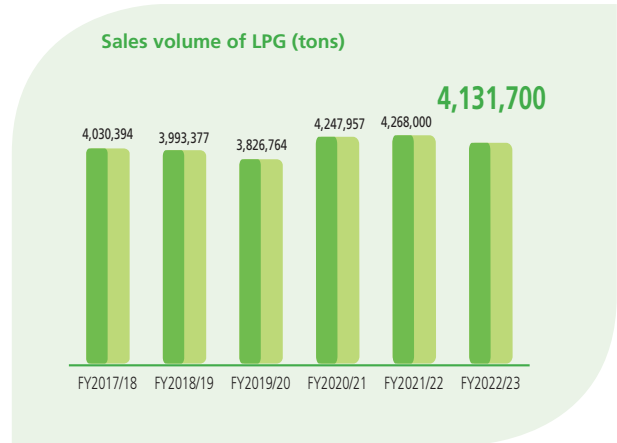
15
Provincial Capital
Cities &
Municipalities

CORPORATE PROFILE

BUSINESS OVERVIEW

LPG Business

As the largest integrated LPG service provider in China, China Gas has the most extensive LPG import and distribution network throughout the country. The Group is constructing and operating 7 large-scale petrochemical product terminal storage and logistics bases on the southeast coast of China. These bases have a total annual throughput capacity of over 12 million tons, with a total storage capacity of over 800,000 cubic meters for LPG. The annual import and distribution volume of LPG exceeds 4,130,000 tons. China Gas has also expanded its presence across the entire liquefied hydrocarbons industry chain to align with the development trend of clean energy and lightweight raw materials.



In the upstream sector, building upon the existing domestic coastal LPG shipping fleet, China Gas has established a large VLGC ocean shipping fleet, along with dozens of professional hazardous chemical transportation fleets supported by an advanced logistics management system. In the downstream sector, China Gas operates over 106 LPG terminal distribution projects and more than 863 stores, ranking first in China in terms of sales volume and bottled gas user base. Leveraging these strengths, the Group plans to intensively deploy in core areas such as Guangdong, Fujian, and Zhejiang by leveraging gas sources, as well as expand presence in core cities like Beijing, Tianjin, and Shanghai in its trade-retail synergy. Additionally, the Group has engaged in deep processing through collaboration with domestic chemical giants. The joint propane dehydrogenation project has been successfully put into operation. “China Gas Baijiang” serves as a dedicated brand for China’s gas bottled gas business, growing as a leading brand with the highest penetration rate in the country’s LPG industry. This brand has been the benchmark in China’s LPG retail development and model innovation. In FY2022/23, China Gas focused on exploring upstream and downstream resources to achieve a significant breakthrough in the LPG business.

Moving forward, China Gas will construct more coastal and riverside terminals, supporting storage tanks and chemical bases, for improvements in its logistics and transportation capabilities, and the development of an intelligent distribution network. In this way, it can integrate its advantages in resources procurement, ocean shipping, terminal handling, tank storage, industrial park processing, land distribution, and a national intelligent distribution network. These efforts will promote the integration of retail and establish a comprehensive and efficient industrial ecological value chain based on industrial and auxiliary civilian use.

Smart MicroGrid LPG Gas Supply System

China Gas has developed the first smart MicroGrid LPG gas supply system platform in China. This platform has revolutionized how gas is supplied in rural areas, transforming it from “bottled supply and storage under self-management” to “centralized gas supply, smart MicroGrid for scattered households, and remote online monitoring of enterprises.” The Group has signed strategic agreements with Yunnan Province, Qinghai Province, three prefecture-level cities, and 28 counties and districts to implement this innovative gas supply system.

The gas supply system for rural gas storage tanks and MicroGrid, as an integral component of rural public infrastructure, contributes to the development of clean energy usage by farmers, the growth of the agricultural industry, and the protection of the rural ecological environment. It also aligns with the goals of carbon peak and carbon neutrality, rural revitalization, and agricultural modernization.

As of 31 March 2023

Large storage and logistics base for petrochemical product terminals constructed and under construction

7



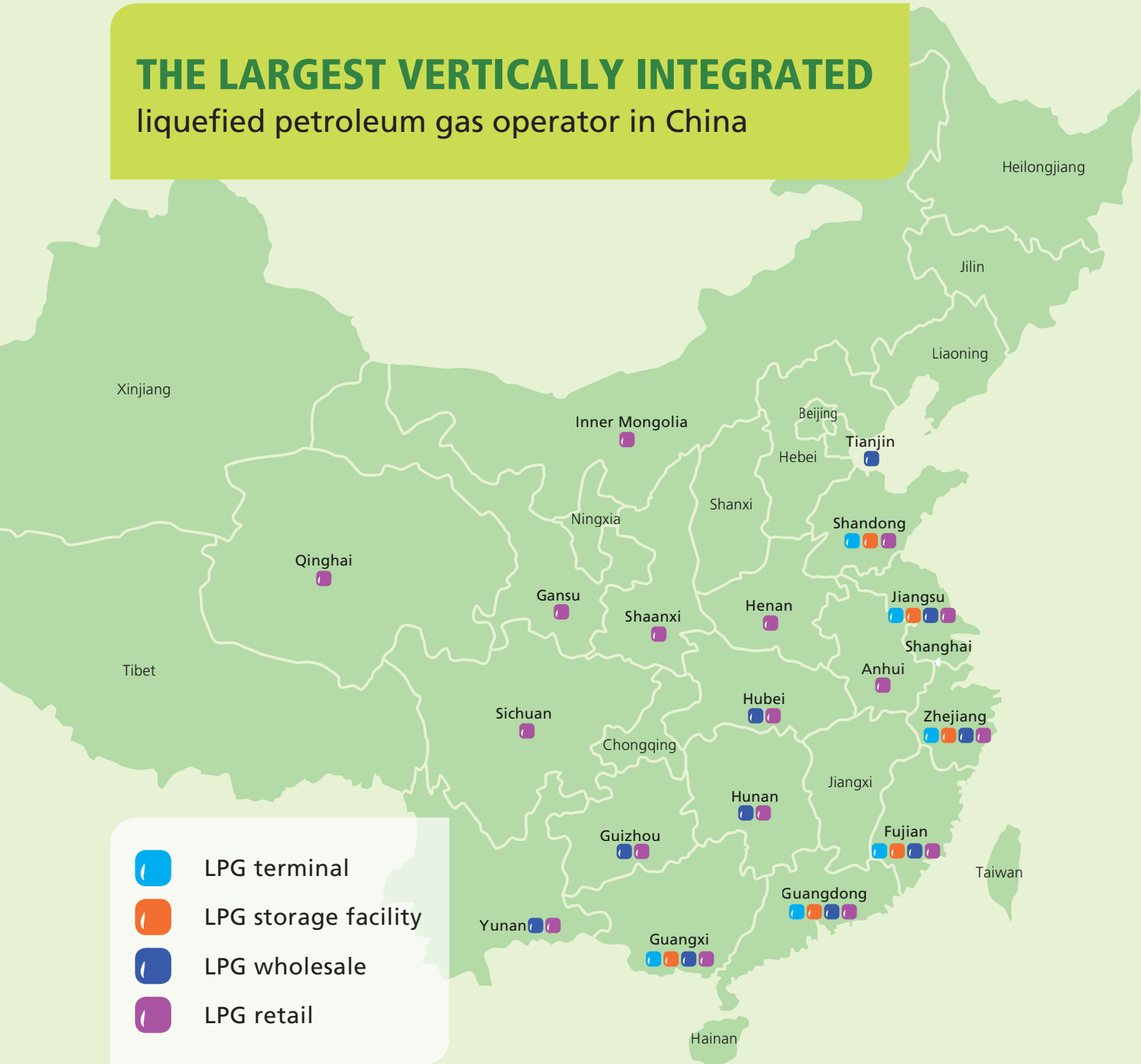
Accumulated LPG distribution projects

106



OPERATIONAL LOCATIONS OF LPG

THE LARGEST VERTICALLY INTEGRATED
liquefied petroleum gas operator in China



CORPORATE PROFILE

BUSINESS OVERVIEW

Value-added Services

Building upon its own endowment, the Group meticulously carves around its strategic direction and further promotes its value-added services to scale up this very business. It is building four major centers (Shenzhen Yipin Smart Headquarters, Hangzhou New Retail Operation Center, Product and Intelligent Manufacturing Center, Carbon Peaking and Neutrality Center) and seven major segments (product manufacturing, carbon peaking and neutrality e-commerce, technology, trade, investment as well as home service), making its way towards its VAS growth in all respects. The Group builds an incredibly safe, smart, savory and carefree home scene for users, supplies quality kitchen items such as kitchen appliances, water filters and security products, provides gas & safety inspection services and home appliance cleaning services, to meet diverse and individual needs of customers, facilitating their immersion in more joy and happiness at home. At present, the Group's value-added business, with a national presence in more than 700 cities of 30 provinces, municipalities and autonomous regions, offers 32 kinds of opportunities and scenarios to directly reach customers including online services, offline payment, customer registration, safety checks, and meter reading. China Gas VAS, with products and services directly from nearly 30,000 grid managers for over 50 million households and commercial and industrial (C&I) users of natural gas and LPG, covering a population of 200 million.

Within the domain, the Group has forged private domain service grids based on its extensive user base to directly reach users through gas services provided more frequently, growing trust and stickiness of customers from in-depth interactions with them, towards the largest product-service portfolio best and most-suited for customers. Leveraging its advantageous natural resources and capabilities, the Group carefully designs user interaction scenarios, develops its private domain traffic pools and maximizes conversion rates.

Operating in a professional and market-oriented fashion, China Gas is striding forward in brand building, competitiveness enhancement of its conventional pillars with yet more footprints across China and growth quality promotion in such businesses. Moreover, the Group gives full play to the advantages of China Gas's grid via its new retail model of grid-based business for stores as well as the omni-channel business layout. Drawing on the fission model and bestseller model of social e-commerce, and the scene model of new retail stores, the Group innovates its integration of VAS online and offline and the blending of social networking and stores to improve user experience and better meet consumer needs. Bettering their life in kitchens, at tables and beyond, the Group accompanies them day and night with exquisite and cost-effective products and tailor-made services, its new impetus for sustainable and healthy growth. Growing its VAS into its second growth engine, the Group intends to yield more returns by further scaling up this very business.

Main Products:

Gas Stove

Gasbo's stoves prioritize safety and quality, equipped with fire-extinguishing protection devices. They set an industry standard for safety. Additionally, Gasbo offers energy-efficient and environmentally-friendly stoves, including inner flame gas stoves that save 15% more energy than conventional models. All Gasbo gas stoves can achieve precise thermal power adjustment of more than 4.0. With efficient heat exchange and above National Level-II Standards for Energy Efficiency, all with its original design of near-suspension oxygenating, these stoves effectively reduce carbon monoxide emissions and contribute to a greener and healthier lifestyle.



BUSINESS OVERVIEW

Gas Water Heater

Gasbo's gas water heaters, above National Level-II Standards for Energy Efficiency, feature high-efficiency ionic fire protection devices, rapid induction protection in 0.1 seconds, and 4D multi-body safety protection systems. They also incorporate safety technologies such as anti-ironing and child lock.



Wall-Mounted Gas Water Heater

Gasbo's wall-mounted furnaces not only provide hot water for bathing but also offer independent heating functions in winter. Users can enjoy heating anywhere, anytime, without relying on centralized heating. The products boast 20 safety protection designs, including Level-III Anti-freeze Protection, anti-drying protection, accidental flameout protection, excessive heat protection, and water pump anti-blockage measures.



Yipin Smart Living

Yipin Smart Living Technology Limited operates an e-commerce platform that provides one-stop smart living services for millions of households in China. Starting with household gas business, the Yipin Smart Living APP integrates multiple resources and offers various services, including those of product sales, community convenience, financial management, and home life O2O. The aim is to build a smart city public service platform. The Yipin Smart Living APP provides users with access to numerous products and services such as LPG ordering, gas bill payment & top-up services, food specialties, kitchenware, home appliances, and air ticket booking. With nationwide sales channels, professional service teams, standardized logistics and distribution services, and 24/7 customer service, the platform ensures a smooth and convenient shopping experience on mobile devices.



CORPORATE PROFILE

BUSINESS OVERVIEW

New Energy and Integrated Energy

Given China's much focus on the "Carbon Peak & Carbon Neutrality" strategy, China Gas plans to capitalize on the trend and seize opportunities to operate in various fields such as "source-network-load-storage." to achieve coordinated supply and closed-loop management of electricity, gas, heat, and cooling systems. The Group will also enhance digital empowerment, leverage the opportunity presented by new energy development to form an effective combination of the "Internet of Things (IoT)" and "multi-energy coupling." China Gas aims to build a dual-carbon business ecosystem with unique China Gas characteristics. The Group is committed to growing its businesses in natural gas distributed energy, PV power generation, electricity distribution and sales, central heating, charging piles, hydrogen energy, and other businesses in China. It is also developing integrated energy utilization that provides users with high-efficiency integrated energy solutions and meets the differentiated needs of different customers in terms of gas, heating, electricity, and cooling.

China Gas aims to innovate and create a green and low-carbon energy supply system. We have established an energy storage center and a virtual power plant that integrates distributed energy as well as a large number of demand-side load units. This three-level trading structure offers various services for the power grid, optimizing resource integration and control, reducing energy waste and carbon emissions. At the same time, in line with local policies, the Group actively constructed urban distributed energy storage centers to ensure the stable operation of virtual power plants.

Solar Energy Storage and Charging, Building Integrated PV System ("BIPV") & Power Generation

In response to the national "Dual Carbon Declaration", China Gas has actively promoted the development of national power and new energy, engaged in distributed PV power generation, energy storage systems, charging pile businesses, and the promotion of BIPV power generation and green building construction. In FY2022/23, the Group has launched 14 PV projects, with a total of 5.5 billion kWh of electricity transactions, operating 10 integrated energy efficiency businesses with integrated energy sales of 5.52 billion kWh.

Utilization of Hydrogen Energy

China Gas is comprehensively deploying its hydrogen energy business to support the country's goals of "carbon peak" and "carbon neutrality." In terms of hydrogen energy manufacturing, the Group is utilizing hydrogen by-products from LPG chemical projects to produce purified hydrogen, in collaboration with China National Offshore Oil Corporation (CNOOC) to research, develop, and apply skid-mounted natural gas hydrogen production technology. Moreover, in collaboration with leading PV enterprises, China Gas conducts research on hydrolysis hydrogen production technology for PV power generation. In terms of hydrogen energy storage and transportation, China Gas applies its extensive experience in CNG and LNG storage and transportation processes, along with its professional transportation fleets, to study and apply hydrogen energy storage and transportation technology. Finally, in terms of hydrogen energy application, China Gas will build integrated energy supply stations for oil, gas, electricity and hydrogen by taking advantage of its nationwide business network, extensive user base and 533 gas filling stations.

Heating and Distributed Energy

China Gas operates two distinct heating projects: the southern heating projects and the traditional heating supply project in Northern China. China Gas urban heating was innovatively proposed by China Gas to meet the increasingly urgent winter heating demand in non-traditional heating areas. Focusing on small-sized residential buildings or public buildings, it uses distributed energy of diverse types, green and low-carbon technologies and other innovative technologies to fulfill the integrated energy supply needs of buildings, also with digital intelligent building energy supply and human settlement environment control systems. China Gas urban heating features the innovatively developed heating engineering technology system with the Group's own characteristics, running distributed energy stations in individual communities, schools, hospitals, shopping malls, and office buildings as units for centralized heating, managing the entire system through intelligent heating cloud management. Urban heating only needs to use open spaces, roofs or basements of the existing residential areas, factory buildings or buildings to build energy stations to for cooling and heating, which can be delivered to each family through the intelligent heat supply and distribution system, cutting energy losses in pipes. During the process, the indoor temperature is adjusted by the indoor intelligent temperature control system. Compared with other energy supply methods, China Gas urban heating has significant advantages in safety, stability, comfort and affordability. China Gas Northern Heating Project is a comprehensive regional heating solution that China Gas co-operates with and promotes with local governments and real estate properties in response to insufficient central heating load in winter in traditional heating areas, the banning of coal-fired boilers, and the rigid demand for heating in the construction of new rural areas in cities and townships, also with regional distributed energy stations and the intelligent heating systems, which is supported by decentralized construction of energy stations in units of single urban districts, independent public construction projects, and merged villages for centralized heating under intelligent management through remote intelligent heating systems.

China Gas urban heating is now in strategic cooperation agreements with more than 70 cities in Shanghai, Jiangsu, Zhejiang, Anhui, Hubei, Hunan, Jiangxi, Sichuan, and Chongqing. These agreements cover a contracted area of more than 450 million square meters, serving approximately 80,000 heating service users. Over 301 projects are currently in operation, under construction, or in planning for construction. The projects have been well received across the local governments, society, and property owners. As of March 31, 2023, China Gas urban heating boasts 436 projects under construction or in operation, including 125 of urban heating with an area of 1.65 million square meters; 303 traditional heating projects covering an area of 8.66 million square meters with annual heat sales of 2.2 million GJ; 8 industrial steam companies, with annual sales of 650,000 tons of steam.

Opportunities emerging from its urban heating business and the restructuring of its traditional heating energy will drive China Gas's sustainable growth in the long run as well as the expansion of its new business ecosystem.

Digital Business

China Gas, in active response to China's call for "accelerating digital development and building a digital China", is committed to empowering its own business development with digital technology. The Group aims to reshape its energy transmission and distribution networks, supply and service models to provide customers with services and products more accurate, convenient, and intelligent. This digital transformation supports the high-quality development of all business within the Group. Additionally, China Gas continues to explore and implement new business models, incubating new profit growth drivers and contributing to the fulfilment of the Group's strategic goals, in which digital platforms serve as the enabler.

CORPORATE PROFILE

Internally, China Gas has prepared infrastructure for digital transformation. Centering on smart gas and smart new energy, the Company prioritizes smart operations, energy IoT, and big data platforms. Through the deep integration of digital technology and business scenarios, China Gas has established industry-leading platforms such as the Operation Management Platform (OMP) platform and smart gas platform. Leveraging its industry leadership, the Company drives the digital development of the industry. It collaborates with external partners to tap the value of industry scenarios, building data-based service platforms to enhance the ultimate customer value proposition. Meanwhile, China Gas actively participates in the construction of upstream and downstream digital ecosystems, promoting digital transformation and development within the industry while driving overall efficiency improvement.

In such moves, China Gas Smart Gas has implemented a smart gas comprehensive management platform and built a demonstration project in Wuhu. Wuhu China Gas Smart Gas Co., Ltd. is a comprehensive intelligent gas management system with smart stations as the highlight, city gas and station as the core, with three pillars of safe operation, gas source scheduling and convenient services. Since completion, it has been recognized by experts from multiple ministries, provinces, and cities. In terms of safe operation, the source-network-terminal security data is being aggregated and analyzed for automatic warning to realize digital intelligence in security management. In terms of gas source scheduling, through insights into gas consumption trends and matching supply, sales, and inventory data, it delivers refined scheduling of gas sources. In terms of collaboration with the government, it is fully connected with the government-side city lifeline, Sharp Eyes (Xueliang Project), dangerous goods transportation, and other systems, as a demonstration project of urban operation and management.





In FY2022/23, China Gas has, through significant efforts, excelled in various areas including environmental protection, social contributions and governance.

Environmental



New energy output:

- In FY2022/23, the installed capacity of PV self-investment power generation reached 24.3 MW;
- The installed capacity of PV EPC projects reached 50.4 MW

Dual carbon digital platform launched:

- Dual carbon digital platform launched with records of auto-energy control and renewable energy, and with carbon inventory data management system in place

Social



Health and safety:

- Investment in production safety expected to reach 2.175 billion RMB, exceeding the requirements of the Ministry of Finance and the State Administration of Safety Supervision ("*Administrative Measures for the Extraction and Use of Enterprise Safety Production Expenses*"*) (《企業安全生產費用提取和使用管理辦法》)
- China Gas's OMP production and operation management platform has been fully deployed and launched. Nearly 400 project companies have been launched, all in sound operation
- The number of work-related injuries per million hours of all employees fell to a historical low of 0.01, and that of all employees and contractors is within 0.75

Supply chain management:

- Number and proportion of local suppliers: 224, **100%**
- Number and proportion of suppliers obtained the Environmental Management Systems (EMS) Certification (ISO 14000 series): 210, **93.75%**
- Number and proportion of suppliers obtained the Occupational Health and Safety Management System certification (OHSAS 18001/ISO 45001): 207, **92.41%**

Social contribution:

- Total amount of donation: **HK\$5,437,000**

1 OMP intelligent management platform leverages IoT and digital technology to help the Group improve its operational management and achieve a comprehensive safety control system.

FY2022/23 PERFORMANCE HIGHLIGHTS

Governance



Corporate Governance:

- Conducted a training session on climate and environmental governance for Board members to enhance their understanding of sustainable development.
- Established a Transformation Office in April 2022, responsible for implementing the group's transformation and reform decisions, coordinating and promoting the efficient implementation of transformation and reform.

Anti-corruption:

- Total number of employees trained on anti-corruption: **77,335**
- Total length of anti-corruption training: **124,599** hours
- Number of concluded legal cases regarding corrupt practices: **0**
- Obtained ISO 37301 Compliance management systems certification

CHINA GAS'S ESG-RELATED AWARDS AND EXTERNAL RECOGNITIONS

During the financial year, China Gas received numerous awards and certifications in recognition of its efforts and achievements in ESG-related issues. Here are the notable external recognitions:



In August 2022, the Group was awarded the Outstanding Brand Image Award and the Green Development "Star" Company Award at the 2022 Corporate Sustainability Summit.



In December 2022, the Group was awarded the "Outstanding Award for Green and Sustainable Loan Issuer – Visionary Social Loan Framework" and the "President of Climate Disclosure Initiative" at the Hong Kong Green and Sustainable Finance Awards 2022 Award Presentation Ceremony organised by the Hong Kong Quality Assurance Agency.



FY2022/23 PERFORMANCE HIGHLIGHTS



In February 2023, the Group was awarded the “Best Social Loan” by the Asset, an authoritative financial media in the Asia-Pacific region for its 3A series of awards.



China Gas became the first and only Chinese member enterprise in Program the Oil & Gas Methane Partnership 2.0 (“OGMP 2.0”) of the United Nations Environment Program (UNEP), pledging to help reduce methane emissions and mitigate global climate change.



FY2022/23 PERFORMANCE HIGHLIGHTS

AWARDS FOR SUBSIDIARIES

Award	Award-winning Project Company
2022 Outstanding Award for Emergency Response to Flammable Liquid and Hazardous Chemicals in the Skill Competition of Guangzhou Hazardous Chemicals Professional Rescue Team	Guangzhou China Gas City Gas Development Company Limited
2022 Advanced Unit of Piped Gas Development in Guangzhou City Gas Industry	Guangzhou China Gas City Gas Development Company Limited
2023 Jiangxi Gas Industry Skill Competition Group 3rd (Customer Service Officer)	Nanchang China Gas City Gas Development Company Limited
First Prize of "Safety Production Month" Corporate Safety Skills Competition 2022 awarded by Safety Production Committee of Shapotou District, Zhongwei City & Fire Safety Committee of Shapotou District, Zhongwei City in June 2022	Northwest Region/Ningxia Shenzhong Natural Gas Development Company Limited
The Advanced Unit of Hohhot Safety Production Month for Seazen Ruyi under the Customer Service Department in June 2022	Northwest China Hohhot China Gas City Gas Development Company Limited
Advanced Unit for Comprehensive Emergency Rescue Drill for Earthquake in Baoji City	Northwest Region Baoji China Gas City Gas Development Company Limited
2022 Advanced Unit for Work Safety in Qishan County	Northwest Region Baoji China Gas Caijiapo Company
2022 Advanced Unit for Special Equipment Safety Management issued by Xinyang Market Supervision Administration	Huangchuan County China Gas City and Township Gas Development Company Limited
Second Prize of 2023 Liaocheng City "Competition Skills Proportion Contribution Competition for Pioneer Construction of New Liaocheng" Gas System Skill Competition	Liaocheng Houde Gas Company Limited
2022 Advanced Unit for Special Equipment Safety Management awarded by Xinyang Market Supervision Administration	Guangshan County China Gas City and Township Gas Company Limited

STATEMENT OF THE BOARD

“Converging in Harmony and Benefiting Communities” is the corporate mission of China Gas, reflecting its commitment to sustainable development. The Group conducts business operations in a responsible and transparent manner, with a sound sustainability corporate governance structure dedicated to managing work related to sustainable development. China Gas strives to create value for shareholders, customers, employees, and stakeholders in society.

As the highest organization within the Group’s governance structure, the Board places great importance on sustainable development issues and holds the highest decision-making power in this regard. The Board is responsible for decision-making, deployment, and guiding concerning major sustainability issues and reviews of the progress of various sustainability-related goals. To strengthen monitoring and management of the Group’s sustainability work progress, a Sustainability Committee has been established to assist the Board. The Sustainability Committee, with its own leading group and office, comprises senior management and executives from various functional and operational departments. This ensures effective coordination and implementation of sustainability work. For details on sustainability corporate governance and the responsibilities of various sustainability-related organizations, please refer to “Corporate Governance” of this Report.

The Group conducts materiality assessments annually, prioritising sustainability issues by gathering opinions from various stakeholder groups. The Board actively participates in discussions on determining the material issues of sustainable development. It verifies the priorities, scopes, boundaries, and completeness of material issues together with the management to identify the sustainability issues that are most important to China Gas’s business operations and concerned by stakeholders the most. Based on the assessment results, the Group formulates sustainable development strategies and management approaches, continuously improving its sustainable development strategies and management system, and incorporating sustainable development factors into its decision-making and daily operations. For details on the analysis of material topics and their results, please refer to “Materiality Assessment” of this Report.

This Report has been reviewed by the Group’s senior management and approved by the Board of Directors and the Sustainability Committee on June 26, 2023, respectively, ensuring the accuracy and reliability of the information provided. Under the leadership of the Board, the Group will continue to review the progress of sustainable development, monitor the effectiveness of relevant policies and practices, and fulfil its corporate citizenship.



Responsible Governance



- 25 Sustainability Strategies
- 37 Corporate Governance
- 43 Risk Management
- 44 Business Ethics
- 47 Information Security Management
- 50 Supply Chain Management





China Gas strictly abides by the regulatory laws and regulations of China and the Hong Kong Stock Exchange for listed companies, constantly improves the internal control rules and regulations, and continually enhances its internal governance structure, to realize its vision of sustainable development governance and regulate its own practices.

SUSTAINABILITY STRATEGIES

China Gas actively promotes the formulation and implementation of sustainable development strategies to meet the requirements and expectations of various stakeholders regarding environmental, social, and governance aspects.

The strategy encompasses the following key directions:

- To Set Up Sustainable Development Goals: to set up goals in alignment with the United Nations Sustainable Development Goals (UN SDGs);
- To Strengthen Stakeholder Engagement: to build up smooth stakeholder communication mechanisms, actively incorporate the perspectives and opinions of various stakeholders to identify material ESG issues;
- To Conduct Materiality Assessments: to identify and update the sustainability issues of China Gas annually;
- To Empower External Cooperation: to seize market opportunities, form strategic partnerships for sustainable development, and jointly move to a lower-carbon future.








RESPONSIBLE GOVERNANCE

Sustainable Development Goals

The Annual Progress of UN SDGs

Sustainable Development Goals	Strategies And Actions	Relevant Section
<p>SDG 1: No Poverty</p>  <p>To end poverty in all forms everywhere.</p>	<p>Upholds the mission of “Converging in Harmony and Benefiting Communities” to shoulder its social responsibility. The Company is actively involved in poverty alleviation to help vulnerable groups as an active promoter of charitable activities.</p>	<p>Social Responsibility</p>
<p>SDG 3: Good Health and Wellbeing</p>  <p>To ensure healthy lives and promote well-being for all at all ages.</p>	<p>Prioritizes operational safety and places emphasis on enhancing employees’ safety awareness and ensuring the safety and health of customers. Additionally, the Company promotes employees’ self-care and addresses health-related issues through measures such as providing occupational health checks. These actions contribute to the overall wellbeing of employees.</p>	<p>Operational Safety</p> <p>Well-being of Employees</p>
<p>SDG 5: Gender Equality</p>  <p>To achieve gender equality and empower all women and girls.</p>	<p>Ensures equal pay for both men and women and provides equal opportunities for career development. It also ensures that female employees are fully protected by maternity and lactation leave regulations.</p>	<p>Well-being of Employees</p>
<p>SDG 7: Affordable and Clean Energy</p>  <p>To ensure access to affordable, reliable, sustainable and modern energy for all.</p>	<p>Offers customers affordable PV energy solutions, contributing to environmental initiatives “Blue Sky Protection Campaign.”</p>	<p>Low-carbon Development</p>
<p>SDG 8: Decent Work and Economic Growth</p>  <p>To promote sustained, inclusive and sustainable economic growth, full and productive employment and decent jobs for all.</p>	<p>Provides competitive welfare and implements an incentive and encouraging remuneration system to ensure employees receive fair remuneration and benefits.</p>	<p>Employee Rights Protection</p>
<p>SDG 9: Industry, Innovation and Infrastructure</p>  <p>To build resilient infrastructures, promote inclusive and sustainable industrialization and drive innovation.</p>	<p>Supports innovative projects such as the coal-to-gas projects in rural areas, expands the LPG industry chain, and offers integrated clean energy solutions, also offering distributed energy, centralized heating, and PV power generation services in various markets and regions.</p>	<p>Low-carbon Development</p>



Sustainable Development Goals	Strategies And Actions	Relevant Section
<p>SDG 10: Reduced Inequalities</p>  <p>To reduce inequality within and among countries.</p>	<p>Responds to national policies and participates in the coal-to-gas projects in remote areas and collaborates with local governments to promote rural revitalization strategies. By ensuring rural residents enjoy a similar quality of life to their urban counterparts, China Gas helps reduce the economic and environmental gap between cities and towns.</p>	<p>Rural Revitalization</p>
<p>SDG 11: Sustainable Cities and Communities</p>  <p>To make cities and human settlements inclusive, safe, resilient and sustainable.</p>	<p>Facilitates the construction of smart cities by utilizing the Operational Management Platform (OMP). This platform enables dynamic management of existing businesses, accurate decision-making, monitoring, and early warning systems, ensuring stable gas supply and operational safety.</p>	<p>Stable Gas Supply Operational Safety</p>
<p>SDG 12: Responsible Consumption and Production</p>  <p>To ensure sustainable consumption and production patterns.</p>	<p>Ensures that suppliers comply with relevant laws and regulations to maintain sustainability. Moreover, China Gas focuses on deepening its natural gas business and expanding the LPG industry chain to become a responsible clean energy operator, incorporating business ethics in its operations.</p>	<p>Business Ethics Environmental Protection</p>
<p>SDG 13: Climate Action</p>  <p>To take timely actions to combat climate change and its impacts.</p>	<p>China Gas responds to climate change through urgent actions to combat its impacts. The Company's main business involves natural gas operations, and it actively contributes to mitigating climate disasters and crises caused by global warming. China Gas achieves this by advocating for the coal-to-gas projects and investing in renewable energy solutions.</p>	<p>Climate Change Response</p>
<p>SDG 15: Life on Land</p>  <p>To protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation and halt biodiversity loss.</p>	<p>China Gas actively works towards promoting biological diversity. Particular attention is given to preserving natural habitats along pipelines and areas with high ecological value to fully protect the ecological environment surrounding project areas.</p>	<p>Biodiversity Conservation</p>
<p>SDG 17: Partnerships</p>  <p>To strengthen the means of implementation and revitalize the global partnership for sustainable development.</p>	<p>Strategically cooperates with government departments and industry companies in different regions. By signing long-term strategic cooperation agreements and establishing shared experimental bases and exchange platforms, China Gas promotes efficient implementation of local energy projects. These efforts is for increasing the utilization rate of city and township natural gas.</p>	<p>Rural Revitalization</p>

RESPONSIBLE GOVERNANCE

On the basis of the above-mentioned actions and strategies, we set sustainable development goals in line with business conditions, and continue to monitor and implement measures to achieve the goals.

China Gas Sustainable Development Goals



- | | |
|------------------|--|
| Greenhouse Gases | <ul style="list-style-type: none">• To achieve carbon peaking by 2030, carbon neutrality by 2050• To reduce greenhouse gas emission intensity in 2030 by 50% compared to that of 2021 |
| Energy | <ul style="list-style-type: none">• To reduce energy use intensity continuously |
| Waste | <ul style="list-style-type: none">• To enhance the process of collecting and integrating waste data |
| Water Resources | <ul style="list-style-type: none">• To reduce water consumption by 16% with 2020 as the baseline year and 2025 as the target year |



- | | |
|--------------------------------|---|
| Occupational Health and Safety | <ul style="list-style-type: none">• To maintain an accident rate of 0%• Annual number of work-related fatalities: 0• Annual customer-related accident: 0• To ensure the rate of work-related injuries per million working hours for both employees and suppliers in 5 years is within 0.75 |
| Supply Chain Management | <ul style="list-style-type: none">• To maintain 100% local suppliers |




- | | |
|------------------------|--|
| Operational Compliance | <ul style="list-style-type: none">• To prevent major non-compliance issues such as corruption and environmental violations |
|------------------------|--|



Stakeholder Engagement

The Group emphasizes on establishing strong and long-term relationships with its stakeholders. China Gas recognizes that its major stakeholders include shareholders, investors, creditors, financial analysts, employees, government and regulatory authorities, community groups, customers, business partners, suppliers, etc. In developing our corporate sustainability development plan, we actively consider the opinions of these stakeholders and strive to establish a comprehensive development strategy.

China Gas communicates with various external stakeholder groups through the following communication channels, enabling us to gain a deeper understanding and respond to their expectations and requirements.

Stakeholders	Communication Channel	Expectations and Requirement	Response from China Gas
 <p>Shareholders, investors, creditors and financial analysts</p>	<ul style="list-style-type: none"> • General meetings • Annual reports, interim reports, announcements and circulars • Investor roadshows • Investor/analyst/creditor meetings • Investor/analyst/creditor visits • Phone calls/emails 	<ul style="list-style-type: none"> • Excellent performance • Continuous and stable growth • Clear operational strategy • Efficient corporate governance • Timely and accurate information disclosure 	<ul style="list-style-type: none"> • Good profitability and competitiveness • Continuous improvements in corporate governance • Regular disclosure of business information
 <p>Employees</p>	<ul style="list-style-type: none"> • Work conferences/Feature conferences • Training programs • Employees' congresses • Internal publications • Team building activities • Face-to-face meetings • Complaint mailbox • WeChat groups and official account 	<ul style="list-style-type: none"> • Equal employment opportunities • Clear career development and promotion opportunities • Healthy and safe working environments • Comprehensive education and training systems 	<ul style="list-style-type: none"> • Diversified recruitment • Staff events • Care for employee health • Trainings • Online and offline learning platforms
 <p>Government and regulatory authorities</p>	<ul style="list-style-type: none"> • Researches and meetings on special topics • Environmental impact assessment reports • Environmental monitoring reports • Daily reporting and communication • Industry association activities • Relevant forums and exchanges • On-site inspections • Phone calls/emails 	<ul style="list-style-type: none"> • Daily communication • Information reporting • Regular inspection • Thematic presentations • Government-enterprise cooperation projects • Participation in the formulation of relevant policies 	<ul style="list-style-type: none"> • Higher safety standards • Better risk management • Compliance with relevant laws and regulations • Business activities in line with needs of the industry and regional economic development • Safe, stable and efficient energy supply models • Active responses to government policies

RESPONSIBLE GOVERNANCE

Stakeholders	Communication Channels	Expectations	Actions from China Gas
 <p>Business partners and suppliers</p>	<ul style="list-style-type: none"> • Supplier conferences • WeChat groups and official account • Supplier training programs • Strategic cooperation plans • Supplier performance communication meetings • Phone calls/emails 	<ul style="list-style-type: none"> • Open and transparent procurement processes • Local sourcing • Fair and equitable tendering 	<ul style="list-style-type: none"> • Open tendering • Supplier management systems • Policies in constant improvement • Management efficiency in constant improvement
 <p>Customers</p>	<ul style="list-style-type: none"> • Telephone service hotlines • Community service stations • Online customer service systems • Customer satisfaction surveys • WeChat groups and official account • China Gas “Smart Living” Platform 	<ul style="list-style-type: none"> • Safe and stable energy supply • High-quality and efficient services 	<ul style="list-style-type: none"> • Customer safety checks • Timely responses to customer requests • Quality customer services • Customer satisfaction surveys
 <p>Community groups</p>	<ul style="list-style-type: none"> • Press releases/ Announcements • Community promotion campaigns • Safety and science activities • Social welfare volunteering activities • On-site visits/tours • Stakeholder engagement plans 	<ul style="list-style-type: none"> • Safe operation • Contributions to community development • Public welfare activities • Contributions to a harmonious society • Contributions to public welfare 	<ul style="list-style-type: none"> • Charity donations • Charitable activities • In-depth community building • Help for the poor and the needy • Participation in community volunteer services • Organization of charity and environmental activities

Materiality Assessment

The Group conducts regular materiality assessments at least once a year to identify and update the sustainability issues that are of utmost concern to China Gas’s business operations and stakeholders every year.

In FY2022/23, the Group took the following key steps in its materiality assessment:



RESPONSIBLE GOVERNANCE

Based on stakeholder interviews, peer focuses, and industry trend analysis, with thorough exchanges on and understanding of each business influence on stakeholders, we conducted a materiality analysis to identify the sustainability issues that interest stakeholders the most. We combined these issues with the performance of peer companies and presented them in a matrix format. The materiality matrix is in two dimensions: "Importance to Stakeholders" and "Importance to Corporate Development," allowing us to take into account both stakeholder opinions and those of the management. Through this fiscal year's analysis, we identified a total of 32 material issues and prioritized them quantitatively. Among these, 18 were identified as highly material, 13 as material, and 1 as generally material. We will respond to the identified material issues in later sections, to show China Gas's management strategies and performance.





Materiality Issues

Subject	Ranking	Issue
Economy	1	Safe and stable supply of gas
Economy	2	Company governance and operational compliance
Employees	3	Occupational health and safety
Economy	4	Anti-corruption
Employees	5	Rights and well-being of employees
Employees	6	Training and Development
Environment	7	Climate change and greenhouse gas emission management
Customers	8	Customers' health and safety
Society	9	Disaster/Emergency plans and responses
Society	10	Community engagement, impacts, assessments and investments
Economy	11	Economic performance
Employees	12	Diversity, anti-discrimination and equal opportunity
Employees	13	Internal communication
Employees	14	Employee satisfaction and productivity
Society	15	Product quality management
Society	16	Support for local development
Economy	17	Market position
Society	18	Supply chain management
Environment	19	Consumption and efficiency of resources and energy
Employees	20	Prevention of child labor and forced labor
Economy	21	Innovation and sustainable technologies
Economy	22	Anti-competitive behaviors
Economy	23	Procurement practises
Environment	24	Effluents and waste management
Customers	25	Customer care and satisfaction
Society	26	Respect the rights of local people
Environment	27	Management of projects under construction
Environment	28	Biodiversity
Customers	29	Protection of customers' privacy and information security
Environment	30	Water consumption and efficiency
Society	31	Protection of intellectual property rights
Environment	32	Waste recycling

RESPONSIBLE GOVERNANCE

External Cooperation

China Gas has actively pursued strategic partnerships and collaborations with peer companies and cooperative units. These partnerships are built upon principles of mutual trust, mutual benefit, and win-win outcomes. The aim is to leverage synergies, seize market opportunities, and jointly develop new businesses through innovation. By fostering external cooperation, China Gas seeks to enhance its sustainable development efforts and create shared value for all stakeholders involved.

Cooperation with Government

Case 1: Construction Project of Identification Analysis System for Second-level Node in Gas Industry



In August 2022, the Guangdong Communications Administration and China Gas Digital Development Department collaborated on the “Construction Project of Identification Analysis System for Second-level Node in Gas Industry.” The project aimed to conduct innovative research on key technologies related to the industrial internet identification system and deploy the construction of a second-level node for identification analysis in the gas industry.

The secondary node of the industrial internet identification analysis system plays a crucial role in connecting the national top node of identification analysis with enterprise identification nodes and application systems. This system is essential for promoting the construction, application development, and industrial ecological development of the identification analysis system. The construction and promotion of secondary nodes can accelerate industry clustering, foster the ecological cultivation of the gas industry, and facilitate digital transformation and the transition to new growth drivers. The project’s construction will become a significant component of the gas industry’s industrial internet analysis system and an infrastructure supporting the interconnection of industrial internet networks within the industry. Furthermore, the establishment of a pan-interconnection, low-latency, high-reliability network will connect various components of the gas system, such as equipment, materials, systems, labor, warehousing, logistics, and users, benefiting the national economy and people’s livelihoods.

The successful signing of this project signifies a significant step taken by the Digital Development Division in the introduction and application of new technologies and the development and utilization of data resources. It will vigorously promote the construction of the industrial ecosystem, facilitate the development of the Group’s core business, and continuously explore new business models.





Strategic Cooperation Relationship of Natural Gas

Case 2: China Gas Hongda Energy Trading Co., Ltd. (China Gas Hongda) entered into a LNG purchase and sale agreement with Yuanyun Natural Gas



During the year, China Gas Hongda, a wholly-owned subsidiary of China Gas, entered into an LNG purchase and sale agreement with Yuanyun Natural Gas. Pursuant to the agreement, Yuanyun Natural Gas will supply 700,000 tons of LNG per year to China Gas through offshore delivery via the Charles Sturt Lake LNG Project for a period of 25 years.

Liu Ming Hui, Chairman of the Board and President of the Group, stated that the signing of this agreement demonstrates China Gas's commitment to further developing its natural gas business and achieving diversification of natural gas sources. China Gas aims to meet the growing demand in the domestic natural gas market and contribute to the country's goal of "carbon peak and carbon neutrality" through strategic cooperation, thus promoting the development of the clean energy business.

Case 3: Signing two 20-year LNG long-term agreements with Venture Global



At the beginning of the year, China Gas announced that its wholly-owned subsidiary, China Gas Hongda, entered into two 20-year LNG purchase and sale agreements with Venture Global LNG. Pursuant to the Sale and Purchase Agreement, Venture Global will supply 1,000,000 tons of LNG annually to China Gas through two LNG projects located in Louisiana, namely Plaquemines LNG and CP2 LNG.

China Gas is dedicated to providing customers with reliable, safe, efficient, and low-carbon LNG. The strategic cooperation agreement with Venture Global will not only expand the enterprise's natural gas resource pool but also enhance the supply guarantee capacity, promoting the steady development of the Group's clean energy business. Furthermore, long-term cooperation with international enterprises will contribute to new production capacity in the global LNG market, supporting energy security and environmental progress in Asia and Europe.

RESPONSIBLE GOVERNANCE

Co-Development of New Business

Case 4: China Gas Taixing Light Hydrocarbon Deep Processing Project (Phase I) Interim Acceptance Ceremony



In August 2022, the interim acceptance ceremony for the first phase of the China Gas Taixing Light Hydrocarbon Deep Processing Project was held at the site of the Taixing Project in Taixing Economic Development Zone, Jiangsu. The completion and delivery of this project signify the transition from the construction stage to the trial run stage, marking the official initiation of the first strategic cooperation project between the two sides.

The Taixing Light Hydrocarbon Deep Processing Project is the inaugural physical chemical project undertaken by China Gas and Yanchang Petroleum in the Yangtze River Delta. It serves as a significant measure for Taizhou City, China Gas, and Yanchang Petroleum to implement the national regional development strategy and undertake the pivotal role of driving the extension of the industrial chain. The project construction is in two phases, with the first phase consisting of a propane dehydrogenation device with a capacity of 600,000 tons/year and supporting public facilities. The interim acceptance of the first phase will enable Taixing to establish an integrated circular economic development model for the olefin industry chain and downstream new materials. It will serve as a noteworthy model for the shareholders in deploying industrial projects in line with market demands and joint venture growth. Additionally, it will further enhance the industrial competitiveness of shareholders from both sides, consolidating their leading roles within the industry.

The project, as the pioneer in the southern district of Taixing Economic Development Zone, now equips with hydrogen pipeline networks for securing a stable supply of material, all available for hydrogen supply. China Gas has also signed the Framework Agreement on Extending the Hydrogen Supply in China Gas Light Hydrocarbon Deep Processing Project with HongbaoLi Chemical and Yida Chemical on an annual hydrogen consumption of 12,000 tons

By fulfilling the rapidly growing demand for olefin raw materials, the project also provides a safe and high-quality energy guarantee for civil and commercial users. Furthermore, it consolidates the positioning of China Gas as a unique owner and leader of the entire industry chain in China, with the most extensive industrial supply and sales network covering the mainland.





CORPORATE GOVERNANCE

During the fiscal Year, China Gas continued to optimize its sustainable development management system, incorporating environmental, social, and governance factors into the Company's decision-making and daily operations. These efforts aim to promote the sustainable development of the Company. Corporate governance is enhanced by formulating and updating relevant board policies and improving sustainability management processes.

Board Structure, Directors' Roles and Responsibilities

As the head of the organization's governance structure, the Board assumes responsibility for the leading, supervision and control of the Group's strategic planning and annual work plan and monitors their implementation. Through various board committees, the Board manages the overall strategy of the Company, sets goals, formulates corporate governance practices and policies, reviews internal control and risk management systems, accountable to the shareholders for enhancing shareholder value.

In terms of sustainable development, the Board oversees the ESG issues including but not limited to climate-related matters. It evaluates the progress of ESG targets, formulates management approaches and strategies, affirms and manages material ESG issues, and identifies relevant risks. The Board also reviews the progress towards environmental, social, and governance goals to lead the sustainable development of the Group. Additionally, the Board has a climate-related issue reporting mechanism and designates responsible persons or committees for the assessment and management of climate-related issues, promoting the Group's efforts to mitigate and adapt to the impact of climate change.

Board Diversity Policy

The Company has adopted Board Diversity Policy to ensure a balance of skills, experience, and diverse perspectives appropriate for the Group's business. The Company believes that the active engagement of non-executive directors and independent non-executive directors in the management and decision-making of the Board and its committees strengthens the objectivity and independence of the Board. A diverse composition of the Board brings a variety of experience and skills to the Group, providing a holistic perspective that enhances corporate decision-making.

The Board has adopted Board Diversity Policy based on the recommendation of the Nomination Committee. This policy outlines the approach to achieving diversity among Board members. When recommending nominations to the Board for approval, the Nomination Committee considers the merit and contribution that selected candidates will bring, with due regard for a range of diversity perspectives, including but not limited to gender, age, cultural and educational background, ethnicity, professional experience, skills, knowledge, and length of service.

As of 31 March 2023, there were 3 female members on the Board, representing 20% of Board members, and 5 independent non-executive directors, representing 33% of Board members. In the future, the Board will actively consider and gradually increase the proportion of female directors and independent non-executive Directors.

RESPONSIBLE GOVERNANCE

Board Remuneration Linked to Sustainability Performance

To motivate the Board and senior management to focus more on environmental, social, and governance matters, the Group links the remuneration of Directors and senior management to sustainable development performance indicators. These indicators include but are not limited to business operation safety, carbon neutrality, energy conservation and emission reduction, technological innovation, and other relevant issues. The Company conducts an annual value creation assessment of senior management, with ESG indicators being a crucial factor influencing the assessment results.

The Group further implemented ESG performance assessment and incentive measures for regional companies and member companies. The annual value creation assessment is based on indicators such as carbon emission management, biodiversity protection, environmental and health safety, renewable energy utilization, customer satisfaction, anti-corruption, compliance operation, and climate risk governance. The results directly affect the total incentives of regional companies and member companies, ensuring the practical fulfillment of key ESG goals and measures, and strengthening sustainable governance capabilities.

Sustainable Development Management

In 2020, we established a Sustainability Committee to enhance the Group's sustainability management and monitor its sustainability progress. The Committee is currently chaired by Dr. MA Wei Hua², an independent non-executive director of the Company, with members including Mr. LIU Ming Hui (the executive director, chairman of the Board, and President of the Company) and Mr. ZHU Wei Wei (the executive director of the Company), to manage and monitor the Group's sustainable development. The Group has established the Sustainability Committee Leadership Group and the Sustainability Committee Office under the Sustainability Committee for assistance in coordinating, implementing, and monitoring the Group's sustainability work.

The working group of the Sustainability Committee consists of senior management and executives from different departments within the Group, including the Board Office, Capital Management Department, Audit and Supervision Department, Legal and Compliance Department, Safety Supervision Department etc.

In addition, the Board of Directors and the Sustainability Committee regularly receive training on ESG themes. In April 2023, China Gas invited external consultants to conduct a Board training on climate and environmental governance for members of the Board of Directors, continuously improving the management's awareness and understanding of sustainable development.

2 Dr. Ma joined the Company in February 2022. He was appointed by the United Nations Development Program (UNDP) Department in China as a Special Advisor and Chairman of the Sustainable Finance Advisory Committee in March 2019. He was also appointed by UNDP as a member of the Sustainable Impact Investment Global Steering Committee in April 2019. Dr. Ma works together with the committee members, Mr. Liu Ming Hui (the executive director, chairman of the Board, and President of the Company) and Mr. Zhu Weiwei (the executive director and managing vice president of the Company), to lead and supervise the Group's sustainability work and enhance the level of governance in sustainable development.

Sustainability Committee Structure and Responsibilities

Under the Sustainability Committee, there are the Sustainability Committee Leadership Group and the Sustainability Committee Office, which oversee two carbon working groups, a methane control working group, a rural coal replacement working group, and a safety monitoring working group.



Sustainability Committee Leadership Group

- Oversee overall sustainability planning under the leadership of the Board
- Identify and assess sustainability issues, risks and opportunities
- Explore sustainability policies and strategies
- Review and evaluate the Group's sustainability performance
- Review and optimise the Group's sustainability management and structure
- Supervise and review the work of the Sustainability Committee Office
- Convene meetings to review the Group's sustainability performance and identify areas for improvement

Sustainability Committee Office

- Allocate resources and coordinate the work of the sustainability departments.
- Perform daily tasks related to the Group's sustainable development including data collection, reporting, analysis, and auditing of environmental, social, and governance information.
- Maintain active contact and communication with the Group's stakeholders.
- Organize meetings to discuss sustainability report work and review any identified deficiencies.
- Report relevant work progress to the Sustainability Committee.



RESPONSIBLE GOVERNANCE

Dual Carbon Working Group

Main duties:

- Assessing the Group's total greenhouse gas emissions and establishing achievable dual carbon goals
- Reviewing the Group's GHG emissions and its implementation of emission-reduction measures for the fulfilment of dual carbon goals
- Exploring new business opportunities in the dual carbon field and identifying potential areas for business growth

Methane Control Working Group

Main duties:

- Verifying the Group's overall methane emissions and setting targets for methane emission reduction
- Conducting physical testing and research on methane emissions at the Group's gas facilities and collecting materials of methane emission factors in urban gas industry to improve data transparency
- Joining methane emission reduction alliances and organizations to gain industry expertise
- Analysing advanced methane emission reduction technologies and updating the Group's implementation plan
- Developing technical standards for methane emission reduction to drive industry advancements

Rural Coal Replacement Working Group

Main duties:

- Formulating policies and strategies for the Group's rural gas market development
- Coordinating user installations and monitoring progress towards installation targets
- Addressing market-oriented gas pricing and pass-through issues and other urgent and challenging issues in rural areas
- Establishing a market-oriented training system and enhancing business capabilities
- Monitoring changes in the macro-economy, gas industry policies, upstream-to-downstream industries, retail users and more, to explore policy supports and market opportunities for China Gas's rural business growth

Safety Monitoring Working Group

Main duties:

- Identifying national laws and regulations, policy requirements, rules and regulations related to safety, and formulate safety principles, plans and standards in line with China Gas' actual situation, lead the Group's continuous improvement in safety, as well as inspect on health and safety violation incidents towards better safety and regulation violation inspections
- Collecting and analysing data on production safety, environmental protection, quality, and occupational health incidents
- Overseeing the Group's quality control and environmental protection, occupational health management
- Coordinating safety management activities, conducting inspections, assessments, training, providing guidance and services, and overseeing and collecting information of safety activities



Establishment of Transformation Office

To enhance the promotion of transformation and reform, the Group established the Transformation Office in April 2022. The Office's role is to implement the Group's decisions and deployments for transformation and reform, and to coordinate and facilitate the efficient implementation of these initiatives. Led by Chief Transformation Officer (served by Chief Operating Officer Mr. ZHU Wei Wei and Vice President Ms. LIU Chang), the Transformation Office consists of three specialized working groups: the working group for organizational structure and function optimization, the working group for decision-making process and hierarchical authorization system optimization, and the working group for assessment and incentive mechanism optimization. These working groups, formed by core personnel from the Strategic Development Department and the Human Resources Department, drive the management reform of the Group. The Transformation Office provides regular progress reports to Chief Transformation Officer, makes key decisions, and monitors project implementation based on weekly meetings to ensure timely progress and control of milestones.

Regional Management and Control Mode

In order to enhance the efficiency of sustainable development management, China Gas is implementing a regional management and control model consisting of "headquarters, regional operation management centers, operation management groups/project companies." This model involves strengthening the headquarters, consolidating regional operation management centers, and empowering operation management groups and project companies. The Group has delegated more authority to regional operation management centers, operation management groups, and project companies, and streamlined processes to gradually achieve a "two-level closed-loop" management approach. Under this model, the headquarter provides strategic guidance, the regional operation management centers handle management and operations, and the operation management groups and project companies focus on local operations. This approach stimulates creativity and vitality at all levels, ensuring that the management mechanism aligns with the Group's business development.

Headquarters



The headquarters of China Gas are responsible for formulating the Group's strategies, policies, systems, and standards. It plays a vital role in decision-making, core executive management, budget control, investment and financing management, as well as supervision and control functions. The headquarters also focuses on providing strategic guidance and empowerment, and aims for a balanced management approach that supports diversified business operations.



Regional operational and management centers



The regional operational and management centers are entrusted with the main management functions of the Group. They are accountable for the return on capital employed and responsible for making territorial business decisions and the management.



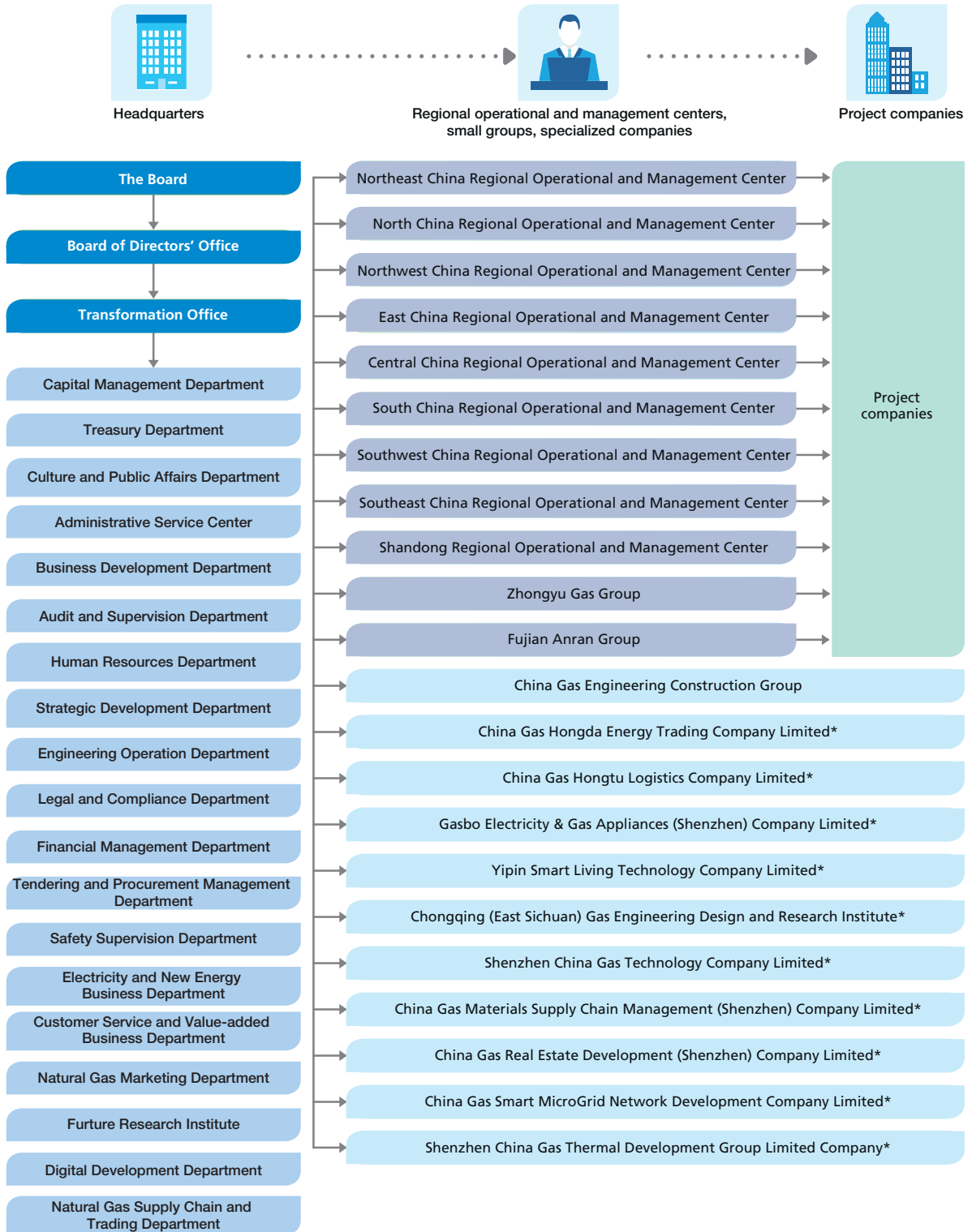
Managed group/Project companies



As profit centres and independent accounting units, they are subject to strategic leadership and management of the Group's headquarters and regional operational and management centres while enhancing its self management capabilities and increasing profitability of various businesses at the same time.

RESPONSIBLE GOVERNANCE

Organizational Structure of the Group under the Regional Management and Control Model





RISK MANAGEMENT

China Gas has established a well-performing risk identification and management system and formulated the *Comprehensive Risk Management* system and the *Risk Control Manual* to standardize processes and responsibilities at all levels. This is for further optimization of internal control systems, risk reporting mechanisms, etc., for better mechanisms of internal supervision and balances to ensure the protection of rights and benefits of shareholders.

The Corporate Governance and Risk Control Committee, led by the Board, is responsible for overseeing the risks in business operations and financial management, as well as ensuring effective corporate governance under the leadership of the Board. The committee actively promotes internal risk self-assessment and employs dedicated risk management personnel in project companies to ensure the implementation of the risk management system.

The Group continuously improves its corporate governance and internal control by collaborating with internal audit teams and seeking professional opinions from independent third parties. During the Reporting Period, the Group assessed and managed various risks, including policy risks, resource risks, safety risks, ESG risks, business ethics risks, and corporate image risks. Through the implementation of different measures and policies, the Company responded to and mitigated the potential losses associated with these risks.

Risk	Impact	How we responded
Policy risk	China is actively promoting the implementation of “dual carbon” policies, which primarily engages the energy industry	<ul style="list-style-type: none"> Committed to promoting new business, including natural gas distributed energy, PV power generation, distribution and sales of electricity, central heating, charging piles, and hydrogen energy.
Resource risks	Natural gas price hikes and reserves	<ul style="list-style-type: none"> Deploying natural gas strategy and entering into long-term agreements with partners to stabilize the Group’s natural gas supply capacity.
Security risks	Accidents, illegal construction, or accidents caused by mismanagement	<ul style="list-style-type: none"> Established monitoring centers, pipeline surveying and mapping companies, and pipeline inspection companies in China to improve safety levels. Hiring third-party safety assessment companies for operation, monitoring, and testing duties. Established and improved occupational health management systems and operating procedures including <i>HSE Management Manual of China Gas</i>, <i>Procedures for Seven High-risk Operations of China Gas</i>, <i>Implementation Approaches of HSE Management Rating of China Gas’s Project Companies</i>, <i>China Gas Safety Supervision Center Management System</i>, etc.
ESG risks	Climate risks, environmental pollution, etc.	<ul style="list-style-type: none"> The Board is the highest organization of the Group’s governance structure for sustainable development and has the highest decision-making power. The Board, assisted by the Sustainability Committee, continuously improves the Group’s sustainability performance. Formulated <i>Climate Change Policy</i> and environmental protection goals to reduce greenhouse gas emissions and strive for carbon neutrality by 2050. Established <i>Biodiversity Conservation Policy</i> to minimize habitat disturbance degradation, and indirect impacts on habitats on habitats during operations. Follow statutory processes of environmental impact assessment and construction risk management guidelines and stringently implemented the Group’s Guideline of Environmental Influences Valuation Reports and Guideline of Engineering Construction Risk Control with before initiating any engineering projects to identify potential impacts on and risks for the environment from projects.

RESPONSIBLE GOVERNANCE

Risk	Impact	How we responded
Business ethics risks	Misconducts including bribery and corruption	<ul style="list-style-type: none"> Formulated Anti-bribery and Anti-corruption Policies, strengthened the implementation of anti-corruption work, conducted anti-corruption promotion and training for all employees, and required suppliers to adopt anti-corruption policies to foster a clean corporate culture
Corporate image risks	Incidents leading to negative corporate image	<ul style="list-style-type: none"> Cooperating with local government for rescue and aftercare work in incidents, as well as cooperating with relevant national government investigations Enhanced security measures and inspections to prevent recurrence of similar incidents

BUSINESS ETHICS

China Gas prioritizes corporate ethics and conduct as the topmost concern. We are committed to strengthening internal compliance control, business ethics, integrity, and self-discipline systems to establish a robust corporate culture.

Business Standards

China Gas strictly adheres to the Anti-Unfair Competition Law of the People’s Republic of China and the Prevention of Bribery Ordinance of Hong Kong, with strict standards concerning integrity, anti-corruption, anti-malfeasance and beyond.

To enhance the governance and internal control of our subsidiaries against corruption to lower operational risks, we have formulated the Anti-Bribery and Anti-Corruption Policy, the Internal Audit and Supervision Management System, the Internal Supervision and Reporting Management System, the Integrity and Diligence Manual, the Construction Material Supplier Management System, and the Anti-Corruption Work Regulations of China Gas. To prevent employees from accepting bribes or non-monetary benefits in any form, provided by suppliers, subcontractors, and other business associates, we have established the Basic Code of Conduct for Employees, the Regulations on the Supervision and Punishment of Employees’ Misconduct of China Gas, and the Regulations on Anti-corruption of China Gas. Together with the Regulations on Employees’ Reward and Punishment of China Gas and the Regulations on Red and Yellow Lines Management of China Gas, these regulations further strengthen the control of corruption and other misconduct. Notably, there were no corruption lawsuits during the Reporting Period.

The Audit and Supervision Department conducts an annual assessment plan to conduct timely assessments of internal departments and projects, ensuring operational compliance and their conformity with commercial and ethical standards. The assessment includes two aspects: the number of completed audit projects and the timeliness of the report. These assessments are broken down on a monthly basis and evaluated quarterly, with a minimum of 40 items assessed during the Reporting Period. Additionally, when relevant reports are received or issues are identified during routine or special audits, the Audit and Supervision Department conducts further special audits or investigations.



Anti-Corruption Governance

To effectively combat corruption, China Gas has established the Integrity Inspection Post and Integrity Affairs Post, to effectively fulfil its supervisory responsibilities and maintains mutual communication and cooperation with each module of the Audit and Supervision Department. Furthermore, the Audit and Supervision Department conducts anti-corruption prevention publicity activities, enhancing all employees' awareness of the importance of integrity and anti-corruption practices.

The Group maintains a zero-tolerance approach towards any corrupt practices. All corruption cases are reported to the Audit and Supervision Department for approval after investigation. We do not tolerate any misconduct. Should an employee be found engaging in acts of corruption, the Company will handle the case in accordance with the Regulations on Staff Reward and Punishment of China Gas, which includes but not limited to dismissal (termination of employment contracts). In cases where legal violations occur, appropriate legal actions will be taken. Remedial measures will be promptly implemented after any corruption incident, including evaluation of the involved and affected units or departments.

Anti-Corruption Management in Procurement

To ensure the compliance of our procurement operations, the Group has implemented various measures for anti-corruption management. Firstly, anti-corruption requirements and policy terms are incorporated into our annual procurement contracts. We also conduct regular anti-corruption training with all contractors and other business contacts before cooperating with them to publicize and implement anti-corruption or Bribery and other matters to ensure that they understand the importance of anti-corruption and comply with relevant regulations. Additionally, specific management requirements and regulations are issued during important holidays through WeChat, procurement platforms and supplier communication platforms to send out reminders on anti-corruption holiday celebration and further regulate procurement activities. To maintain transparency and accountability, the Audit and Supervision Department conducts routine audits and special investigations throughout the procurement process. If any violations are identified, appropriate disciplinary actions will be taken against the individuals involved in accordance with the Regulations on Employee Reward and Punishment of China Gas. During on-site supplier reviews, both parties are required to sign the "Sunshine Audit Agreement", which is then filed for record. This measure ensures the transparency and traceability of the review process.

Complaint Reporting Procedures and Monitoring Methods

China Gas is dedicated to establishing fair and transparent complaint reporting procedures and implementing monitoring methods. We have formulated the Whistleblower Protection Policy to provide reporting guidelines and channels, encouraging employees to raise concerns within the Group and safeguard its interests. Employees can report suspected misconduct through various channels, including the WeChat official account, email, phone call, or letter. The Anti-corruption Office is responsible for accepting and registering reports, directly reporting to the President and Chief Executive Officer of the Group to ensure their work's independence and incident handling. Privacy and security of whistleblowers are protected, and reporting acceptance and investigation teams have received professional training to safeguard the whistleblowers' personal information and reported data. The whistleblower protection mechanism extends to suppliers and contractors, in addition to employees. Any violation of confidentiality provisions will be strictly punished. In cases involving criminal offenses, appropriate legal actions will be pursued. Each department has established independent reporting methods and measures, ensuring reporting channels through multiple avenues. For example, the Engineering Management Department has established a working group for the rectification of engineering cadres and implemented a self-inspection and self-correction process for engineering leaders, along with a dedicated reporting mailbox. The Audit and Supervision Department has set up an "Anti-corruption Direct Train" to receive reports and complaints on corruption and violations of regulations and disciplines, allowing employees to report to the Audit and Supervision Department through multiple methods, such as China Gas's "Integrity Ding Tips."

RESPONSIBLE GOVERNANCE

Case 1: All employees signed the Letter of Undertaking of Integrity and Self-Discipline of Engineering Personnel

To enhance the integrity management of the Group's engineering staff at all levels and strengthen their awareness of red and yellow lines, the Group has implemented a requirement for all engineering staff (including probationary and temporary staff) and supervisors to sign the *Letter of Undertaking on Integrity and Self-discipline of Engineering Staff* at the beginning of each fiscal year, as per the *Regulations on the Management of Integrity and Self-discipline of Engineering Leaders*. The *Letter of Undertaking* is categorized into three levels. The first level includes staff from project companies, members of the supervision unit, and the project's reporting personnel companies to the project company. The second level includes the project company's director and the project's reporting personnel to the groups under China Gas's management. The third level encompasses the project director from the management group or directly managed company, as well as the project's reporting personnel companies and project operation department reporting to the regional management centers. Currently, all engineers in eight regions have completed the signing of the *Letter of Undertaking*, demonstrating their commitment to integrity and self-discipline in their roles.



Case 2: Distribution of Red and Yellow Lines and Ten Prohibitions

In order to strengthen the Group's engineering construction management and effectively prevent violations of the Red-Yellow-Line in business management, the engineering operation department has revised the Red-Yellow-Line business management regulations, which have been issued as Ten Prohibitions in the form of official documents. These revised project management regulations aim to enhance the legal awareness and compliance understanding of project management personnel, ensuring the orderly and standardized implementation of the Group's project management system.





Internal Integrity Education and Training

The Group have implemented comprehensive anti-corruption, compliance training, and integrity education programs internally to foster employees' anti-corruption awareness and promote ethical conduct. The Audit and Supervision Department organized over 30 anti-corruption training sessions in various forms, covering major operating regions, departments, and both new and existing employees. As part of our online learning platform, we conducted five "Sword Action" sessions, with more than 220,000 employees participating in online anti-corruption and bribery awareness training. Furthermore, we organized "China Gas Integrity in Our Hearts, Rejecting Corruption from the Start" (「燃廉於心 拒腐如始」) anti-corruption publicity campaigns and solicited contributions from employees through various forms, including videos and articles. We received over 150 submissions from nine regional operation and management centers. The Audit and Supervision Department conducted a total of 19 on-site and online anti-corruption training meetings, tailored to different training participants and attended by approximately 6,600 trainees. During the Reporting Period, all employees, including any form of contract such as temporary workers, part-time workers or interns actively participated in anti-corruption training, with more than 100,000 person-times engaging in training activities in various formats, totalling 124,599 hours of anti-corruption training.

To reinforce our anti-corruption culture, we regularly publish anti-corruption articles and reminders on China Gas' official integrity account, the "Integrity Ding Tips" and "Hot Flags in Focus" sections, as well as the "Blue Stars" on the Group's OA homepage. These efforts aim to cultivate a culture of anti-corruption within the Group, with over 30,000 people following China Gas' anti-corruption official account. We published approximately 88 articles and videos on various platforms.

In our commitment to maintaining an ethical business environment of integrity, China Gas avoids to be involved in political contributions, as well as strictly prohibits employees from making donations or sponsoring organizations and activities that violate laws or international conventions, engage in terrorist activities, or discriminate against religious or gender groups. Notably, there were no such donations or sponsorships made during the Reporting Period.

Anti-corruption training provided to employees

Total length of anti-corruption training	FY 2022/23	FY 2021/22	FY2020/21
Senior Management (hours)	4,984	1,235	498
Middle-level management (hours)	13,706	12,353	4,980
General staff (hours)	105,909	86,468	34,860

INFORMATION SECURITY MANAGEMENT

Protecting customer data privacy and ensuring the security of personal information is a top priority for the Group. China Gas strictly adheres to national and regional laws and regulations, including the Customer Rights and Interests Protection Law, E-commerce Law, Cybersecurity Law, and Guideline for Internet Personal Information Security Protection.

Cybersecurity Management

China Gas is well aware of the importance of internet and information security to the society today and the concern of all sectors of society for information security management systems. The Group has established the Digital Development Department, and a professional company under the Digital Development Department has set up an Information Security Department to be responsible for network security management and internet security governance. The general manager of the Digital Development Department and the members of the Information Security Department have internet security experience and the Certification for Cyber Security Competence (CCSC). Ms. LIU Chang, vice president of the Group, is the member of the board of directors responsible for overseeing the network security strategy of the Group. She has experience in internet security and has obtained a CCSC network security certificate. The Digital Development Department has established a weekly meeting mechanism to report the overall progress of network security governance to the vice president, uses the system to monitor project progress, tracks implementation, review the network security process, and supervises the internet security strategy.

RESPONSIBLE GOVERNANCE

China Gas has obtained the ISO27001 information security management system certification, and uses various internet security management measures such as encryption technology, firewall technology, backup data, and strengthening network security prevention education in accordance with ISO27001 specifications to ensure network security. Contingency plan testing for information security accidents, regular emergency plan testing, recording and publishing emergency drill summary reports and improvement measures are also in place to continuously improve network security governance capabilities.

Customer Privacy Protection

To standardize information security management and specify the Group's authority and guidelines for protecting customer information, we have developed documents such as the *Privacy Policy* and the *Protection of Customer Data Privacy*. These documents provide specified information of the Group's use of customer information and guidelines for its protection. In case customers discover any personal information leakage, they can file complaints to China Gas through email, phone call, and other channels. To ensure employees have a clear understanding of information security management requirements, we regularly provide information security promotion materials and training to employees across various regions and departments. We have designated specific personnel or departments responsible for privacy issues to ensure the adequate protection of customer data and information privacy. Customer privacy is also integrated into the Group's privacy policy system within the risk and compliance management framework. Any personnel found in violation of privacy-related regulations are subject to zero-tolerance policies and disciplinary actions.

In the previous financial year, the Group published the official document "*Strengthening the Confidentiality of User Privacy*," which included the 363 Notice on "*Standardizing the Behaviour of External Provision of User Data Information*." This document re-emphasized and standardized the provision of external user information, clarifying applicable scenarios, recipients, and the approval processes, further reinforcing the confidentiality of user privacy.

In line with our commitment to protecting customer privacy, the Group issued the *Code of Conduct for Compliance of China Gas* during the Reporting Period. This code explicitly prohibits the collection of unit or personal information through fraudulent or illegal means, and emphasizes that information collected, stored, and used in accordance with the law or agreed upon should be kept strictly confidential and not sold to third parties. To regulate the Group's provision of data or data interfaces to government, banks, and other entities, and safeguard customer privacy, the Digital Development Department, together with the Legal and Compliance Department of the Risk Control Center and the Engineering Operation Department of the Natural Gas Excellence Center, formulated *the Regulations on the Management of External Data or Data Interfaces of China Gas Group (Trial)*, which was released on 3 October 2022. The document's first article highlights "the protection of the rights of China Gas Holdings Limited, customer data security, personal privacy, and the enhancement of data compliance management". Currently, the Legal and Compliance Department is preparing to issue comprehensive data compliance regulations in FY2022/23, which will provide more systematic and specific regulations regarding customer privacy policy.



	<p>Hard disc network</p> <p>To ensure the security of back-end services, we have implemented cloud service products that utilize firewall DDoS high-level defense and vulnerability scanning, among other technical measures.</p>	<p>Communication security</p> <p>We have adopted the HTTPS security protocol to establish secure communication channels between customers and our servers. This protocol prevents third parties from obtaining and cracking data during transmission.</p>
	<p>Data encryption</p> <p>We have employed strong intensity encryption techniques to protect highly confidential information during storage. This ensures that criminals and hackers are unable to steal or decipher the encrypted data.</p>	<p>Management system</p> <p>A strict and comprehensive authorization management system is in place to control access to data and information within the organization. Each internal employee is granted access only to the data and information that aligns with their own responsibilities and authorization. Additionally, each employee is required to sign a confidentiality agreement to prevent the disclosure of any user's personal information to the public.</p>
	<p>Customer lifecycle management</p> <p>We have developed a customer relationship management system that integrates market analysis, customer service, value-added services, and call management. This system enhances the efficient management of customers and provides a foundation for informed decision-making.</p>	<p>Customer Relationship Management (CRM) System</p> <p>We have implemented a comprehensive CRM system to enhance customer satisfaction and customer loyalty.</p>

According to the *Information Security Rating Protection Management Measure* and other regulation, the Group has engaged external evaluation agencies to conduct rating protection evaluations for our CRM customer service platform, OMP operation management platform, China Gas Supervisory Control And Data Acquisition (SCADA) cloud platform, and China Gas informatization system, all of which have received favourable evaluation results. The Group has also procured network security enterprise property insurance to cover security and non-compliance incidents related to our network system servers and network data. Over the past three years, the Group has had no network or customer information security incidents or fines.

Information Security Management Training

The Group conducts annual information security management trainings for relevant employees to enhance information security and raise awareness among all employees. In November 2022, the Digital Development Department of China Gas organized a network security awareness campaign under the theme of "Internet Connects All, Security Prevention Depends on All" in response to the national network security awareness initiative. We have hired training providers for the network safety awareness improvement sessions with the necessary qualifications, including ISO 27001 and Certified Information Security Profession (CISP). Through this initiative, the cybersecurity awareness of our colleagues has significantly improved. Participants have acquired cybersecurity protection skills, greatly enhancing the cybersecurity defences of the Group's employees. The Digital Development Department will continue to promote network security knowledge and optimize internet security skills, taking practical actions to protect network security and serve as the first line of defence.



RESPONSIBLE GOVERNANCE

Information Security Management System Certification

The Group has passed two level-III information system internet security protection certifications and four level-II information system internet security protection certifications, and obtained the ISO27001 information security management system certification and passed its annual audit. These certifications not only demonstrate our ability to control information security, also to provide more secure and reliable protection for customers and stakeholders. The Group will continue to strengthen information security management to safeguard the interests of customers and stakeholders.

SUPPLY CHAIN MANAGEMENT

We have established long-term and stable partnerships with excellent suppliers, and are committed to helping them improve their management and comprehensive strengths, and jointly achieve high-quality and sustainable development, hoping to create a sustainable supply chain. We believe that only by forming close cooperative relationships with suppliers can we provide customers with high-quality and efficient services and products.

China Gas adheres to the principles of legal compliance, fairness, and justice in selecting and managing suppliers. Incorporating the Bidding Law of the People's Republic of China, and the Anti-Unfair Competition Law of the People's Republic of China, and other relevant regulations, we have established comprehensive systems such as the Engineering Materials Supplier Management System, Contractor Management Policy, Supplier Code of Conduct, Bidding Management System, and China Gas Supplier Reward and Punishment Management Measures to regulate the accessing, selection, evaluation, and management of suppliers. We emphasize the importance of supply chain management through various supplier management systems, certifications, and a clean supplier ecosystem, and provide training for internal procurement-related personnel on the supplier management system, so they can clearly understand their respective roles and responsibilities to ensure the quality of products and services, protect the environment, and respect the rights of employees.

Supplier Evaluation and Performance Assessment

We regularly evaluate and screen suppliers. When selecting suppliers, we conduct a comprehensive evaluation based on their business reputation, service quality, price rationality and other factors, and choose suppliers with strong sense of responsibility and high professional competitiveness as our partners. We also conduct regular on-site assessments of key suppliers to continuously improve product and service quality.

China Gas uses a stringent screening process when initiating engagement with and evaluating suppliers, incorporating environmental, social, governance and business relevance into the reviews. When selecting suppliers, China Gas requires all suppliers to obtain the necessary licences and certifications according to our requirements, and prioritizes those with relevant ESG qualification certificates and third-party certifications. The supplier access procedures include information registration, pre-qualification, access inspection, review of inspection results, and application of review results. China Gas conducts on-site inspections of selected suppliers from time to time, usually on an annual basis. The assessment criteria include product quality, service quality, price, delivery time etc. These evaluations verify the suppliers' management level, technical capabilities, enterprise operation status, and continuity. The inspection methods and procedures are consistent with the supplier access inspection procedures and suppliers are graded based on annual inspection standards, assessment results provided to suppliers. Suppliers that pass the assessment are deemed qualified and can continue cooperation, while the supply of those requiring rectification suspended during the rectification period. Suppliers who successfully complete the rectification and re-inspection process is categorized as backup suppliers. Suppliers who fail the rectification and re-inspection process are disqualified. Suppliers with low scores in the annual inspection are disqualified based on the supply and demand of the materials in question.



In the selection of material suppliers, China Gas considers the following criteria to ensure their environmental and social performances align with the Company's requirements:

- **Dust Recycling:** Material suppliers must have effective dust recycling measures and equipment in place to prevent excessive dust and waste generation during the production process, ensuring proper waste disposal and environmental protection.
- **Polluted Gas Treatment:** Material suppliers must comply with national and local environmental regulations and standards, taking effective measures to reduce the emission of polluted gases and ensuring that air quality during production meets the required standards.
- **Labor Safety:** Material suppliers must adhere to national and local labor laws and standards to ensure the safety and health of employees. They should provide necessary training and equipment to safeguard the well-being of their workers.
- **Environmental, Safety, and Health:** Material suppliers must have an effective environmental, safety, and health management system to address environmental and safety concerns throughout the production process. They must take necessary measures, including but not limited to waste disposal, dangerous goods management, production safety, and occupational health, to ensure the safety and health of the Company, employees, and the general public.

In order to identify potential sustainability risks in the supply chain, China Gas divides important suppliers into different categories, and formulates corresponding screening criteria and procedures for each category. During the screening process, we will focus on the performance of suppliers in terms of environment, society, governance or business relevance, and make corresponding adjustments and improvements based on the evaluation results to improve the quality and sustainability of suppliers. The methodology for screening suppliers takes into account of country-specific risks, sector-specific risks or commodity-specific risks. The company will comprehensively consider factors such as the risk of the supplier's country or region, the risk of the industry the supplier belongs to, and the risk of the specific goods or services provided by the supplier, and formulate corresponding screening methods and standards. During the screening process, China Gas also considers the performance of suppliers in terms of compliance, sustainability and quality to ensure that suppliers meet the Company's requirements and standards.

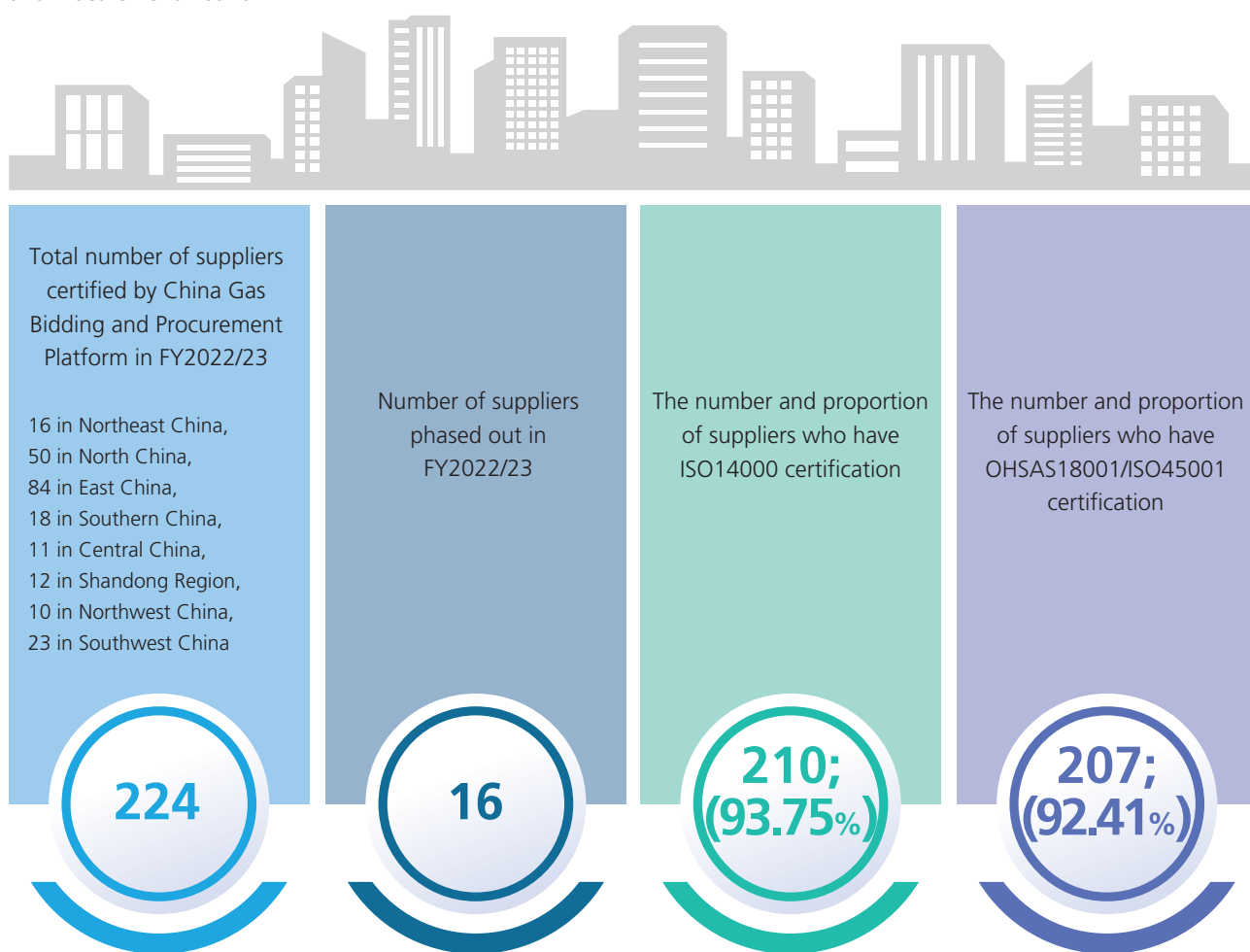
We will also irregularly select suppliers in cooperation to conduct on-site inspections every year. The assessment indicators include product quality, service quality, price, delivery date, etc. to verify whether their management level, technical ability, and the continuity of their business operations. To further promote sustainable development in the value chain, China Gas strictly manages and supervises the ESG performance of project companies and suppliers. The Group has established a comprehensive ESG supervision mechanism to monitor and manage the ESG plans of contractors and suppliers, and evaluate and give feedback on the implementation of the plans to ensure that the ESG performance of contractors and suppliers meets the requirements and standards of the Group. The inspection methods and procedures are the same as the supplier access inspection procedures, and suppliers are graded according to the annual inspection standards to ensure that they comply with the requirements of ESG elements including health and safety and environmental protection in the Supplier Code of Conduct. Those who are rated as qualified can continue to cooperate with China Gas; those who are included in the rectification period shall suspend supply during the rectification period, and will be treated as standby suppliers after passing the rectification and the re-inspection, and those who still fail the rectification and re-inspection will be disqualified; According to the supply and demand of such materials, the disqualification shall be processed.

In FY2022/23, China Gas conducted an annual assessment of 237 suppliers. Of these, cooperation with 16 suppliers was terminated for their failure of meeting the Group's inspection standards. The main audit contents included the supplier's business licence, production licence, ISO9001 certificate, API certificate, ISO14001 and ISO18001 certificates, and externally audited financial statements and corporate credit reports for the past three years. Additionally, 5 suppliers were evaluated for subsequent rectification, and rectification plans were formulated with strengthened supervision to be implemented for them. The assessment results will influence future cooperation decisions. In FY2022/23, 100 successful bidding suppliers succeeded in bidding signed the Product Quality Commitment, achieving a signing completion rate of 100%. Furthermore, China Gas conducted on-site inspections and certifications for 60 suppliers that are newly accepted and for annual review. Of these, 7 suppliers did not pass the inspection, resulting in a 100% inspection coverage rate.

RESPONSIBLE GOVERNANCE

According to the order of the annual procurement amount of materials, approximately 80% of the Group's procurement amount is attributed to material suppliers who are considered key suppliers. These suppliers receive our annual reviews, which include assessments of their quality systems, environmental management, safety management, and more. In 2022, a third-party audit was conducted on these key suppliers to ensure fair and objective results. All key suppliers met the requirements. If any supplier fails to meet the target, rectification requirements will be issued to address their deficiencies.

As of 31 March 2023, 224 suppliers have completed centralized procurement certification through the China Gas Bidding and Procurement Network.



Supplier Selection	FY2022/23	
Total number of Tier 1 significant suppliers	77	
Percentage of total spending by Tier 1 significant suppliers	61.97%	
Supply Chain Indicator	FY2022/23	FY2021/22
Supplier Compliance Rate	100%	100%
On-Time Delivery Rate	97%	92%



Fair Competition and Integrity in the Supply Chain

Suppliers' compliance with business ethics is a prerequisite for collaborating with China Gas. We prohibit suppliers from corruption and dishonesty incidents, to achieve "no association, no bribery, no shoddy, no jerry-build, no falsification, no commercial fraud, no breach of promises".

China Gas strives to cultivate a fair and transparent environment within the supply chain, opposing all forms of anti-competitive behaviour. The Group strictly adheres to national laws and regulations and corporate management system including the Anti-Unfair Competition Law of the People's Republic of China, and China Gas bidding procurement and non-bidding procurement management procedures, to avoid illegal activities such as colluded bidding and bid rigging. We constantly monitor the procurement process to ensure all internal personnel comply with the Supplier Code of Conduct and avoid relevant ESG requirements.

The Group formulated the *Supplier Reward and Punishment Management Measure* to stipulate that all suppliers must abide by all the regulations and standards formulated by China Gas during the monitoring, bidding and evaluation processes. Bribery towards the monitoring personnel, bidding personnel or committee members, or other acts that violate business ethics, such as using fraudulent means (including forged false certificates, false publicity etc.), or using improper means through internal agencies or related personnel to seek access or win bids, etc are forbidden. If the Group discovers that the supplier has violated the above-mentioned standards of conduct, it will disqualify the supplier and will not issue any purchase orders or sign any new contracts with it. The Group has the right to file a lawsuit against the supplier to pursue its legal responsibility, and has the right to require the supplier to make up for all direct and consequential losses caused by its misconduct. The basic requirements for revoking the qualification of a supplier is that within three years, it will not be able to enter the qualified supplier pool of China Gas. After the three-year period expires, re-admission can only be obtained by applying for and passing the on-site command organized by the Group according to the reality.

To ensure effective implementation of anti-corruption policies by suppliers, China Gas has implemented a series of measures to regulate them. The Bidding and Procurement Management Department conducts an annual review and signs the Sunshine Audit Agreement with suppliers during on-site reviews. This agreement requires suppliers to commit to establishing a fair and impartial on-site inspection and review process with China Gas and publicize anti-corruption requirements during on-site inspections. China Gas also holds an annual top supplier meeting to reiterate the business ethics outlined in the Supplier Code of Conduct and promote anti-corruption requirements. Suppliers are required to sign for confirmation. Furthermore, anti-commercial bribery clauses are included in the annual contracts signed by both parties. These clauses stipulate that employees of both parties and their families, relatives, and friends shall not seek any form of benefits by taking advantage of their positions. Suppliers are required to be aware of and comply with the stipulated anti-corruption and bribery regulations under all circumstances and may face penalties for breaching the terms.

RESPONSIBLE GOVERNANCE

Quality Supervision of Supplier Products and Services

China Gas has always been committed to providing high-quality products and services while strictly monitoring and managing the quality of suppliers' products and services. To further improve the quality of suppliers' products and services, priority is given to suppliers who share the concept of sustainable development with the Group to ensure the traceability and sustainability of products and services provided by suppliers. Suppliers are required to comply with ISO45001 standards at all times.


The main measures include planning and establishing a three-level logistics system to reduce point-A-to-B transportation from the production site of suppliers to the construction site. The Group aims to establish a complete logistics system for efficient and environmentally-friendly management of the entire supply chain, reducing logistics links and improving logistics efficiency and quality. Additionally, efforts are made to simplify product packaging materials and optimize transportation methods, promoting bulk transportation to reduce logistics and transportation costs. The introduction of a product certification system, along with the review of sample materials and drawings, helps identify variations in product configuration, design, and manufacturing among suppliers. This enables the Group to refine procurement technical standards, enhance procurement quality requirements, strengthen sampling inspections of purchased products, and ensure that they undergo strict testing, supervision, and evaluation, to provide best protection of user benefits.

We conduct trial testing for all annual centralized collective procurement products, with a focus on product certification and change control for quality management. The Group conducts tests in strict accordance with national and industry standards and performs comprehensive analysis and evaluation of the test results to ensure that the product quality meets the required standards.

For materials and equipment with higher degrees of standardization and lower impacts on production and operation, third-party institutions are engaged for testing. Although these materials and equipment have smaller impacts on product quality and performance, they still undergo testing to ensure compliance with China Gas's quality requirements and standards. For non-standard products and equipment with a significant operational impact, China Gas collaborates with various departments of the Group to conduct on-site centralized testing of bidding samples, assessing the satisfaction of product performance with respect to operational needs. The focus is on product reliability, stability, and safety, and appropriate adjustments and improvements are made based on the test results to enhance product quality and performance.

In FY2022/23, China Gas strengthened its management and control of collective procurement products. All annual centralized procurement products underwent rigorous testing and were properly sealed. Any technical changes to the products after winning the bid are strictly managed through change management procedures to ensure that the quality and performance of the products align with China Gas's standards. In bidding, China Gas organized six large-scale centralized evaluations for key suppliers, covering laser inspection vehicles, household and industrial alarms, pressure regulating equipment, flow meters, gas leakage detection equipment, valve well leakage detection equipment, and more. Well-known testing institutions were invited to conduct on-site inspections to verify the quality level of each manufacturer, supporting industry suppliers in improving their quality control capabilities. During the cooperation process, China Gas organizes case study sharing sessions with all suppliers, providing warnings to other manufacturers to prevent quality risks.

Case 1: Strengthening quality control in production process



To ensure the quality of products, the Group implements on-site supervision and engages third-party units to carry out supervision and inspection projects. In the first half of FY2022/23, a total of 14 projects were commissioned to third-party units for supervision and inspection. These projects primarily focused on critical equipment such as high-pressure steel pipes, pipe fittings, self-closing valves, and LNG gasification station equipment. Through such successful and effective control of major quality risks associated with key equipment, product quality and safety have been significantly enhanced.



Supply Chain Sustainable Guidance and Training

The Group's Bidding and Procurement Management Department is responsible for providing guidance and training related to the Group's material procurement management business, offering special support and training to key project companies and suppliers. In FY2022/23, China Gas coordinated internal and external resources to conduct online and offline peer-to-peer training for approximately 234 key project companies and suppliers, with over 1,234 participants. Training materials were also provided to project companies. In FY2022/23, the "Quality Year" activity continued, encompassing comprehensive quality management (TQM), supplier key process control, lean production promotion, education, and training. Post-management training was provided to suppliers, assisting them in continuously improving their quality management skills.

To enhance business partners' awareness and understanding of ESG, China Gas conducts training and education activities. This empowers suppliers to play a role in ESG projects and actively participate in and promote ESG management and supervision. In FY2022/23, code of conduct and ESG training was delivered to all, achieving the coverage rate of 100%. Regular reviews and updating of standards will be carried out, mechanisms established to identify environmental and social risks, reducing the negative impact of procurement on the environment and society.

1. Low-Carbon Development



- 57 1.1 FY2022/23 Highlights
- 58 1.2 Opportunities in Green Development
- 65 1.3 Climate Change Response
- 75 1.4 Dual Carbon Targets and Pathway Planning
- 76 1.5 Green Operation
- 81 1.6 Sustainable Finance



1. LOW-CARBON DEVELOPMENT

China has incorporated “Carbon Peak and Carbon Neutrality” into its national development plan, signalling the imminent need for low-carbon transition in society. China Gas actively responds to the national strategic deployment by integrating the “dual carbon” goal into its own development plan. We have formulated a green and low-carbon transition plan to promote the high-quality development of our and actively participated in this year’s CDP response and other related work to respond to the demand for climate change and carbon-related information disclosure. In our production and operation processes, we are driving our own green and low-carbon transformation through the following measures to contribute to the dual carbon goal:

- Responding to climate change by proactively identifying climate risks and opportunities and assessing operational and financial impacts
- Setting carbon emission targets and committing to achieving carbon peak by 2030 and carbon neutrality by 2050
- Continuously optimizing our energy structure, gradually transitioning toward a clean, low-carbon, safe, and efficient energy mix
- Strengthening carbon emission management and promoting various carbon reduction initiatives across multiple aspects and stages
- Conducting researches on low-carbon technologies to provide solid support for the low-carbon transformation
- Developing low-carbon innovative businesses and facilitating the transfer, utilization and industrialization of low-carbon technological achievements
- Promoting sustainable finance to mobilize market forces and support sustainable development

1.1 FY2022/23 HIGHLIGHTS



Improving LPG Smart MicroGrid Gas Supply System

- Utilized China’s first pump tank truck, developing the technical route for smart MicroGrid network business



Developing external low-carbon cooperation and exchange

- Participated in the technological exchange of the Methane Emission Control Alliance of Oil and Gas Enterprises in China
- Joined the United Nations Methane Agreement
- Engaged in green research and development cooperation with scientific research institutes, enterprises, and industry associations



Establishing low-carbon operation models

- Established a carbon management service center
- Acquired a professional heat pump equipment manufacturing and system construction enterprise and established Beijing Chinagas Sencreat Technology Co., Ltd.



Accelerating low-carbon initiatives

- Invested in the construction and operation of biomass boiler equipment
- Converted industrial boilers from coal-drive to gas-drive
- Vigorously promoted and employed new energy vehicles
- Built energy-saving and environmentally-friendly smart zero-carbon industrial parks
- Promoted the development of new energy power generation projects, including distributed PV, building integration PV (BIPV), and wind power



Vigorously developing green finance

- Obtained assessment and certification from United Equator for the first tranche of green medium-term notes in 2022, maintaining a G1 green rating throughout the validity period of the notes
- Signed a three-year social responsibility syndicated loan of an amount equivalent to US\$500 million with several overseas banks

1. LOW-CARBON DEVELOPMENT

1.2 OPPORTUNITIES IN GREEN DEVELOPMENT

In recent years, China Gas has utilized the advantage of its platform and stayed in line with national policies, to focus on energy structure transformation and industrial upgrading, seizing new opportunities for green development. The Group is committed to combining clean energy with the development of local industries to promote green and low-carbon development in cities.

Green Enhancement of City Gas

China Gas continues to explore the feasibility of adding hydrogen to natural gas transmission and distribution pipelines, and gradually uses hydrogen to replace part of natural gas, with a view to providing lower-carbon and clean energy for city gas users. In the future, we will analyze the policy trends of the hydrogen energy industry, based on the actual development pattern of the Group, and gradually promote the application of hydrogen-doped natural gas pipeline transmission.

Case: Natural Gas Pipeline Hydrogen Blending Project of Tianmen China Gas



The natural gas pipeline hydrogen blending project of Tianmen China Gas utilizes local green hydrogen resources in Tianmen City on the basis of the existing natural gas stations. This project involves the installation of natural gas hydrogen blending devices at the stations, allowing for the supply of hydrogen-blended natural gas to the pipeline networks outside the stations. Through this initiative, we aim to transition the existing gas pipeline network system towards zero-carbon gas. It is expected that the proportion of hydrogen blending will reach 5% of the existing natural gas pipeline network, with an annual hydrogen blending capacity of 1.1 million m³ initiated, achieving the goal of “bringing hydrogen into thousands of households.”

LPG Smart MicroGrid Gas Supply System

In 2022, China issued the “Guidelines for Social Capital Investment in Agriculture and Rural Areas (2022)” and initiated the Five-Year Action for the Improvement of the Rural Habitat Environment, which clearly stated the requirement to “promote gas to the countryside and support the construction of safe and reliable rural gas storage tank stations and MicroGrid network gas supply systems”, to vigorously promote the construction of clean energy projects in rural areas.

Taking advantage of this policy trend, China Gas has continued to explore a new model of rural “gas network” construction in northern and rural areas. The company has developed China’s first LPG MicroGrid network gas supply system based on intrinsic safety and digital operation and management. This system incorporates technologies such as the Internet of Things, intelligence, and cloud platforms to transform the original gas supply model of “bottled supply, storage, and self-management” into a pipeline gas supply model. With small storage tank gas supply, dedicated tanker truck distribution, and remote online monitoring by enterprises, the system reconstructs the LPG supply chain, significantly reducing carbon emissions generated by long-distance transportation of bottled gas. It leads rural residents towards a low-carbon lifestyle.

1. LOW-CARBON DEVELOPMENT

Case: Registration of China Gas's First LPG Pump Tank Truck in Qinghai

On 7 July 2022, China Gas's first LPG pump tank truck was officially registered in Qinghai and obtained the road transportation license on 15 July. This marks the first approved use of a pump tank truck in China. The technical pathway of China Gas's smart MicroGrid network business has now been connected, covering the entire LPG chain from storage and distribution to transportation, unloading, and usage. This achievement plays a crucial role in promoting the comprehensive implementation of the LPG tank gas supply system. Furthermore, it lays a solid foundation for the promotion of natural gas in rural areas and the construction of safe and reliable rural gas storage tank stations and MicroGrid network gas supply systems.



Boiler Energy Low Carbon Transformation

As a traditional heat source, coal-fired boilers burn coal during the heating process, generating a large amount of greenhouse gases and harmful air pollutants, which have a serious impact on air quality and climate change. Against the background of green and low-carbon transformation, China Gas is committed to reducing the consumption of fossil fuel energy in the operation of distributed heating projects, vigorously promoting the development of clean energy equipment such as natural gas boilers, biomass boilers and heat pumps, helping downstream customers in the value chain reduce greenhouse gas emissions, reducing the negative impact on the environment.

Case 1: Invest in the Construction and Operation of Biomass Boiler Equipment

To accelerate the adjustment of the energy structure, China Gas partnered with Guangdong Dinghui Energy Co., Ltd. to invest in the construction and operate biomass boiler equipment. This initiative aims to increase the proportion of renewable energy in the energy structure by utilizing agricultural and forestry residues as boiler fuel. The project has completed pre-compliance procedures, including the environmental assessment and the safety assessment. The installation of gasifiers, boilers, environmental protection equipment, self-control, and process parts has been completed, and ignition and trial production commenced on 1 April 2023. Currently, the average daily steam supply is 160 tons, contributing to the large-scale utilization of efficient and clean China's biomass resources.

1. LOW-CARBON DEVELOPMENT

Case 2: Coal-to-gas Conversion for Industrial Boilers



China Gas actively responded to the government's call for "coal-to-gas" conversion and vigorously promoted green energy-saving power production equipment. In 2022, Shanxi Jiaocheng Company of China Gas carried out the renovation of coal-fired boilers to steam boilers and hot water boilers to replace the coal consumption of 1276.8 kg/h (standard coal), which greatly improved energy efficiency and effectively promoted the green and low-carbon development of cooperating enterprises.

Case 3: Establishment of Beijing Chinagas Sencreat Technology Co., Ltd.* (北京中燃森創科技有限公司)



To address the challenges posed by rising fossil energy prices and reduce the high energy consumption and carbon emissions associated with extensive use of natural gas boilers, China Gas increased its investment in replacing energy-intensive facilities and equipment. As part of this initiative, China Gas acquired Senchuang Zhonghui (Beijing) Thermal Power Technology Co., Ltd., a professional heat pump equipment manufacturer and system construction enterprise. Through this acquisition, China Gas established Beijing Chinagas Sencreat Technology Co., Ltd.

Supported by the China Environmental Protection Industry Research Institute and Beijing Science and Technology Innovation and Development Research Institute, Senchuang Zhonghui (Beijing) Thermal Power Technology Co., Ltd. focuses on the research, development, and promotion of clean energy technology, particularly in the energy-saving, instruction and operation of cooling and heating projects. Through years of research and exploration, the Company has developed a closed-type heat source tower heat pump system. Its core technology, "closed-type heat source tower heat pump technology," has obtained three invention patents. Senchuang Zhonghui is committed to providing customers with efficient and intelligent green energy solutions.

The establishment of Beijing Chinagas Sencreat Technology Co., Ltd. has enhanced China Gas's equipment manufacturing segment, bolstered the competitiveness of its integrated energy business, and promoted the low-carbon development of energy consumption in engineering construction within the framework of dual carbon targets. China Gas's contribute to the fulfillment of China Gas' goal of becoming a world-class integrated energy supply service provider and an urban-rural integrated green operator.

1. LOW-CARBON DEVELOPMENT



New Energy Development and Deployment

China Gas strategically aligns its business layout with the dual carbon goals, promoting the transformation of its own business to be low-carbon and efficient. We aim to create a replicable and marketable model for low-carbon development of our own, serving as a benchmark for the industry. Leveraging our extensive market network and user advantages from gas projects in major cities, we will accelerate the development of green and low-carbon fields, including PV, charging stations, power sales, energy storage, and integrated energy solutions. Additionally, we will integrate digital intelligence, virtual power plants (VPP), and green finance to upgrade our businesses, positioning ourselves into a green and low-carbon integrated energy service enterprise.

Case 1: Active Promotion of PV, Building the Image of a “Green City Operator”



- **PV Market Research**

To meet the development needs as a “green city operator”, China Gas conducted comprehensive market researches in six key cities: Nanjing, Hangzhou, Wuhu, Wuhan, Nanning, and Guangzhou (CongHua District). The research focused on large-scale enterprises and city gas users, considering factors such as roof size, power consumption, enterprise nature, and project feasibility. Based on these researches, China Gas identified market development goals and targeted high-quality enterprises for collaboration. Additionally, China Gas explored industrial energy-saving, energy storage, and PV projects based on the specific needs of users, resulting in the signing of 24.3MW of high-quality roof distributed PV projects.

- **Construction of PV Management System**

China Gas continued to promote the construction of management system for PV projects. This included the formulation of over 10 guidelines and technical specifications such as the Guidelines for the Administration of Construction Sites of PV Projects, the Standards for Quality Inspection and Acceptance of PV Projects, and the Guidelines for the Implementation Process of China Gas Distributed PV Power Station Projects. By establishing these guidelines and conducting online operation training, China Gas aimed to enhance the safety, quality, and efficiency of PV project management and build a team of skilled personnel in PV engineering management.

- **PV Technology Development Cooperation**

China Gas has entered into comprehensive strategic cooperation agreements with leading companies in the field of new energy, including LONGi, Three Gorges Corporation, SPIC, and Yunnan Investment Group. These partnerships aim to promote the research, development, application, and promotion of new energy technologies, particularly in areas such as distributed PV, PV building integration and household PV system etc..

1. LOW-CARBON DEVELOPMENT

Promoting Low-carbon Transition in Supply Chain

While actively promoting the low-carbon transformation of its own businesses, China Gas is also committed to providing customers with low-carbon and clean products and services, and leading customers to build a low-carbon future.

Carbon Reduction Requirements of Upstream Suppliers

China Gas will actively promote carbon reduction among upstream partners, and empower upstream partners to make a low-carbon transition by setting relevant cooperation requirements and carbon reduction incentive mechanisms.

- Set up green procurement standards, require suppliers to provide data on product carbon emissions, promote the establishment of carbon emission management systems by suppliers, and facilitate the implementation of carbon reduction actions by suppliers;
- Require or advocate suppliers to set carbon neutrality related targets, carbon reduction and emission control targets, energy use efficiency, etc., as scoring items in bidding documents to guide suppliers to actively fulfill carbon neutral targets;
- Require or advocate suppliers to be engaged in internationally recognized CDP questionnaires, ESG rating and TCFD report disclosure etc., to guide them to improve their carbon management;
- Jointly conduct low-carbon themed activities or relevant training with suppliers to raise their awareness and competency of carbon reduction.

1. LOW-CARBON DEVELOPMENT



Carbon Reduction Empowerment for Downstream Suppliers

China Gas will build a regional dual carbon digital management platform system, a virtual power plant that aggregates new energy sources and a large number of demand-side carbon reduction assets through a distributed energy storage system, a new low-carbon energy supply system, and gradually realize a coordinated supply guarantee between electricity, gas, heating and cooling systems across regions, providing optimized energy deployment and smarter carbon reduction solutions for urban and rural buildings, industrial parks and transport users, and helping in low-carbon urban and rural construction.

➤ *Build a regional dual carbon digital platform system*

In terms of low-carbon services, China Gas strives to be an “energy steward” for customers. We have established a zero-carbon environmental energy research institute in collaboration with the Shanghai Environment and Energy Exchange and set up urban carbon service centers in the Yangtze River Delta and the Greater Bay Area. These initiatives enable us to provide customers with carbon accounting, carbon management, carbon asset development, and other services. Leveraging digital technologies such as digital twins and energy carbon management platforms, we aim to build a D+E visualized operation and management platform to create a green and low-carbon industry value chain for customers, helping society reduce carbon emissions from power consumption.

Case: Establishment of a Zero-Carbon Environmental Energy Research Center and a City Carbon Service Center to Assist Customers in Enhancing Carbon Management Capabilities



To implement the national vision of carbon peak and carbon neutrality, China Gas has established a zero-carbon environmental energy research center and a city carbon service center, to manage the Group’s own carbon emissions, and signed a strategic cooperation agreement with the Shanghai Environment and Energy Exchange to build a carbon neutrality ecosystem and consulting service platform for the gas industry. China Gas explores innovative service models related to carbon emission databases in the gas industry, the construction and certification of carbon management systems for gas enterprises, the establishment of carbon emission lifecycle databases, carbon price pass-through mechanisms, and the capacity building of the carbon market.

- Provide various forms of external cooperation such as verification, consultation, and research services. These services enable China Gas to offer downstream gas users supporting services of data, including carbon inventory, carbon footprints and carbon labels.
- Provide services for carbon management system development and certification, carbon neutral capacity building, white paper information dissemination, and carbon emission reduction technology and project development for governments and enterprises. The Group also collaborates with financial institutions to explore innovations in carbon finance business. These efforts aim to promote the low-carbon development of the gas industry in line with the dual-carbon targets, while enhancing the industry’s capabilities to cope with global carbon trade barriers.

1. LOW-CARBON DEVELOPMENT

➤ *Developing Smart Low (Zero)-carbon Park*

Based on government policy requirements and the actual needs of our clients, China Gas introduces low-carbon renewal and renovation of industrial parks based on a variety of energy supply measures, incorporating BIPV, energy storage, heat pumps, heating and cooling recovery, renewable water utilization, carbon capture, energy-saving integrated process packages for industrial high-energy-extensive equipment, etc., to create smart low-(zero)-carbon parks. In terms of optimizing the design of technical solutions, we have provided international standard zero carbon park solutions for leading European and American companies ranked among the Fortune 500, as well as small-scale low carbon park solutions for the processing of agricultural products such as grains, fruits and vegetables, herbs, tea and tobacco for villages in the less-developed poor and backward areas.

Case: The First Zero-Carbon Park Project in the Guangdong-Hong Kong-Macao Greater Bay Area, Facilitating the Green and High-quality Development of the Greater Bay Area



In May 2022, China Gas partnered with the Guangdong Conghua Economic Development Zone to initiate its first zero-carbon park cooperation project in the Guangdong-Hong Kong-Macao Greater Bay Area. The project involves the construction of a dual-carbon and energy efficiency management platform utilizing digital twins, cloud computing, big data, and other technologies. By developing renewable energy and introducing green electricity, the park aims to become an energy-saving and environmentally-friendly smart zero-carbon industrial park smart and low-carbon. This collaboration promotes the green and high-quality economic and social development of the Guangdong-Hong Kong-Macao Greater Bay Area, towards the vision of energy conservation, carbon reduction, and efficiency improvement.



1. LOW-CARBON DEVELOPMENT



1.3 CLIMATE CHANGE RESPONSE

In recent years, there has been a global consensus to address climate change as the global climate risk has intensified due to the frequent extreme weather events. The Group is committed to addressing the risks and impacts from climate change, including setting carbon neutrality targets and pathways and conducting climate risk assessments.

During the financial year, following the recommendations of the Task Force on Climate-related Financial Disclosures (“TCFD”), China Gas disclosed its plans and achievements in addressing climate risks in four major areas, namely “Governance”, “Strategy”, “Risk Management” and “Metrics and Targets”. We further completed climate change scenario analysis and selected important project companies from city groups to conduct more in-depth entity level climate risk assessments to evaluate the impact of climate risks on the Group’s businesses, so as to formulate appropriate plans to mitigate the impacts of climate risks respectively.

Governance

China Gas has incorporated the governance of climate-related risks and opportunities into all dimensions of the Group, including the Board, management and various departments. As the highest of the Group’s governance structure, the Board is responsible for coordinating sustainable development tasks and has the highest decision-making power for related work. The Board also makes decisions, deployments and guides on material sustainability issues, including climate risk-related issues and strategies. The Board meets at least four times a year on a regular basis and the Sustainability Committee reports to the Board on the discussion of climate-related risks and opportunities identified. This fiscal year also witnessed the Group’s formulation of the *Climate Change Policy* as a guidance for its climate change responses, reviewed and approved by the Safety Management Committee and the Sustainability Committee. In addition, to strengthen the Board members’ awareness of climate-related issues, the Board has received training on the Task Force on Climate-related Financial Disclosures during the fiscal year to strengthen their understanding of the roles and responsibilities in addressing climate-related work.

The Group’s Risk Control Committee, chaired by Mr. JIANG Xin Hao an independent non-executive director of the Company, is primarily responsible for strengthening climate-related risk management under the leadership of the Board and conducting internal risk assessments to identify the impacts of risks on the businesses. In addition, we established the Sustainability Committee for monitoring the materiality of climate-related issues and developing strategies to mitigate losses from climate-related risks to ensure that the Group reports climate change-related targets and performance in an accurate and transparent manner. In addition, under the Sustainability Committee, there are the Sustainability Committee Leadership Group and the Sustainability Committee Office to assist the committee in coordinating, implementing and supervising the Group’s sustainability-related work, so that the sustainability activities can be effectively coordinated and implemented. For more details, please refer to the section headed “Sustainable Development Management” in this Report.

1. LOW-CARBON DEVELOPMENT

Strategy

During the financial year, we further evaluated China Gas's climate-related opportunities and risks under different climate scenarios, with the aim of identifying risk factors that have a significant impacts on the Group's businesses. Given the 1.5°C and 4°C warming above pre-industrial, we have identified potential physical and transition risks, including physical risks such as strong winds/typhoons, fluvial floods, extreme temperature, global warming, as well as transition risks such as policy and legal, market and reputation risks. These risks may result in an increase in the Group's operating costs, and decrease in revenue due to operational disruptions, decreases in staff productivity, etc.

Risk type	Risk	Impact on business, strategy and financial planning	Period	Mitigation and Adaptation Measure	Risk level
Physical (Acute)	Fluvial flooding	Climate change will exacerbate the rise of water in areas near the river, making flooding and submergence more frequent, which will damage assets and infrastructure and increase the cost of repairing damaged facilities. The interruption of operations caused by floods may lead decreases in business, resulting in decreases in revenue.	Medium-to-long term	<ul style="list-style-type: none"> Make every effort to prevent flooding in accordance with the existing procedures during flood warning, and increase inspection on leakage and drainage of infrastructure Explore business interruption insurance to cover all potential and actual losses 	Very high
	Coastal flooding	Climate change will exacerbate the rise of water stages in coastal areas, making flooding more frequent, which will damage assets and infrastructure and increase the costs of repairing damaged facilities. The interruption of operations caused by floods may lead to decreases in business, resulting in a decreases in revenue.	Medium-to-long term	<ul style="list-style-type: none"> Make every effort to prevent flooding in accordance with the existing procedures during flood warning, and increase inspection on leakage and drainage of infrastructure Explore business interruption insurance to cover all potential and actual losses 	Very high
	Extreme precipitation	Climate change will exacerbate the number of days with heavy rainfall during the year and increase the maximum rainfall during the year. As a result, the risk of flooding in infrastructure will also increase, which will damage assets and infrastructure and increase the costs of repairing damaged facilities. Strong rainfall may result in delays in operations, resulting in a decrease in revenues.	Medium-to-long term	<ul style="list-style-type: none"> Make every effort to prevent flooding in accordance with the existing procedures during flood warning, and increase inspection on leakage and drainage of infrastructure Explore business interruption insurance to cover all potential and actual losses 	High

1. LOW-CARBON DEVELOPMENT



Risk type	Risk	Impact on business, strategy and financial planning	Period	Mitigation and Adaptation Measure	Risk level
	Strong Wind/ Typhoon	In the event of strong winds/ typhoons, revenue losses will be caused by extensive stagnant water from heavy rain, service interruption (gas supply and transmission) and operation interruption. Strong winds/ typhoons will also cause property and infrastructure damage (gas pipelines and gas supply facilities), increase maintenance costs and strengthen equipment costs to cope with extreme weather events.	Short-term	<ul style="list-style-type: none"> Develop strong wind/ typhoon response plans Enhance protective measures, carry out regular inspections and reinforce facilities that may pose accidental hazards due to strong wind Explore business interruption insurance to cover all potential and actual losses 	Very high
	Landslide and mudslide	Landslides and mudslides increase the risk of damage to infrastructure (gas pipelines and gas supply facilities) and service interruptions (gas supply and transportation), increase the costs of repairing damaged facilities and reduce revenues.	Short-term	<ul style="list-style-type: none"> Closely monitor of hillside and road conditions during rainy season Regularly inspect and reinforce infrastructure 	Medium
	Drought	Increased frequency of drought leads to water scarcity, which may affect the operational efficiency of the business and result in a decrease in revenue.	Long-term	<ul style="list-style-type: none"> Implement water conservation measures to improve water efficiency in operations 	Very low
Physical (Chronic)	Sea level rise	Rising sea levels may increase the risk of flooding, sea water erosion and other damages to coastal areas, cause damages to assets and infrastructure and delays in operations, increase the costs of repairing damaged facilities, and result in a decrease in revenue.	Long-term	<ul style="list-style-type: none"> Assess emergency management procedures Conduct relevant training to enhance employees' awareness of coping with floods and other disasters 	Potential risk

1. LOW-CARBON DEVELOPMENT

Risk type	Risk	Impact on business, strategy and financial planning	Period	Mitigation and Adaptation Measure	Risk level
	Extreme Temperature	<p>Extreme Heat</p> <p>Prolonged high temperature or extreme hot weather may affect the health of employees. Employees who work outside may suffer from heat stress-related diseases (such as heat stroke and heat rash), which may reduce the productivity of employees and increase the number of lost days. At the same time, extremely hot weather may overheat the equipment, accelerate the aging of the equipment and reduce its durability, resulting in potential declines in overall productivity.</p> <p>Extreme Cold</p> <p>Continuous cold weather may lead to permafrost, causing buried pipes to lift, resulting in safety hazards and increased expenditure on cold and freeze-resistant improvements on corporate pipeline networks.</p>	Long-term	<p>Extreme Heat</p> <ul style="list-style-type: none"> Strengthen employees' awareness of heat stress related diseases through policies, guidelines and exercises Provide more cooling facilities for employees Use more heat resistant materials in equipment Implement artificial cooling measures for equipment and facilities <p>Extreme Cold</p> <ul style="list-style-type: none"> Develop emergency response plans for winter operations and establish emergency response teams Strengthen pipeline inspections Install insulation equipment such as electric tracing heat, water bath boilers, etc., and purchase materials to ensure stable gas supply such as anti-freeze liquid 	Medium

1. LOW-CARBON DEVELOPMENT



Risk type	Risk	Impact on business, strategy and financial planning	Period	Mitigation and Adaptation Measure	Risk level
	Global warming	<p>The increase in the average temperature leads to more hot days, which affects the health of employees and the durability of equipment, resulting in potential declines in overall productivity.</p> <p>Global warming also leads to increases in the frequency of extreme weather (e.g. strong winds/cyclones, extreme precipitation, etc.) events, resulting in damage to property and infrastructure, increased interruption of operations, and thus decreases in revenue and economic losses.</p>	Long-term	<ul style="list-style-type: none"> Strengthen employees' awareness of heat stress related diseases through policies, guidelines and exercises Provide more cooling facilities for employees Use more heat resistant materials in equipment 	Medium
Transition risk	Policy and legal risk	<p>China will limit the use of fossil fuels in its businesses. It is necessary to further adjust the production energy mix, develop renewable energy, and fulfil local government requirements to set more aggressive carbon intensity targets, while tightening carbon market quotas or imposing carbon tax increases operating costs and risks.</p> <p>The tightening of various laws and regulations will increase the cost of data monitoring and disclosure of China Gas, and bring compliance risks to it of information disclosure.</p> <p>The Group is required to effectively manage the performance of the business environment and ensure relevant compliance, otherwise it may face litigation risks.</p>	Medium to long term	<ul style="list-style-type: none"> Closely monitor market trends and government policy trends 	High

1. LOW-CARBON DEVELOPMENT

Risk type	Risk	Impact on business, strategy and financial planning	Period	Mitigation and Adaptation Measure	Risk level
	Market Risk	As the Central Government set the "Dual Carbon" objective, promoted and optimized emission reduction laws and regulations, with substantial supports for the use of renewable energy, the market and customers are increasingly preferring green economy and electrification products.	Medium-to long-term	<ul style="list-style-type: none"> Implement energy saving measures Prioritize the possibility of using renewable energy when developing new projects 	Medium
	Reputation Risk	The potential damage to a company's reputation could have a knock-on effect through customer brand perception. As customers' interest in green products and services increases, maintaining the existing business model hinders the retention of existing customers and the development new customers.	Medium-to long-term	<ul style="list-style-type: none"> Closely monitor customers' satisfaction and the Group's reputation 	Medium



Risk Management

To better understand the climate-related risks faced by China Gas' project companies and make corresponding countermeasures against climate risks in advance, we invited a third-party consultancy firms to conduct scenario analysis and in-depth climate risk assessments for the project companies in this financial year. The assessment focused on analysing the transition and physical climate risks. Physical climate risks include strong winds and cyclones, fluvial floods, extreme temperature, global warming and extreme precipitation. We have taken reference to the representative concentration pathway ("RCPs") of the Intergovernmental Panel on Climate Change ("IPCC"), adopted the appropriate scenario assumptions of RCP2.6 and RCP8.5, i.e. the scenarios of warming of below 1.5°C and 4°C above preindustrial level, and considered the short (0–5 years), medium (5–10 years), and long (over 10 years) term impact of climate risk, and conducted a rigorous analysis of its severity, likelihood and vulnerability. After assessing the risk information, we assessed the relevant financial impact and implemented corresponding mitigation plans to follow the HKEX's *Guidance on Climate Disclosures*. For details, please refer to the following cases.

Case: Financial Assessment of Climate-related Risks of Wuhu Project Company



For Wuhu Project Company, we identified physical risks such as extreme temperature and flooding that have a significant impact on the business production and operation process.

1. Extreme Temperature (Extreme heat)

➤ Significant Risk Impacts:

- *Extension of project construction cycle*
Affected by high temperature, new construction and skid-mounted vehicles cannot carry out normal road transportation services, which affects the Company's business revenue. In addition, the gas pipeline reconstruction projects involve outdoor construction and work at height, such as excavation and laying, road landfill, piling, etc., also need to be suspended, leading to an extension of the construction cycle. It may affect the implementation of the Company's strategic plan and lead to an increase in financing costs such as loans.
- *Hazards to employees' health*
More high-temperature days will also affect the normal outdoor activities of employees, such as meter reading and safety inspection. Continuous high temperature or extreme hot weather has an impact on the health of employees. Employees who work outdoor may suffer from diseases related to heat stress (such as heat stroke and heat rash). In order to mitigate these risks, measures such as purchasing heatstroke prevention items and drugs will increase the Company's labor cost expenditures.

1. LOW-CARBON DEVELOPMENT

Case: Financial Assessment of Climate-related Risks of Wuhu Project Company



➤ General Risk Impacts:

- *Impact on sales of natural gas*
Affected by the high temperature, the demand for natural gas as fuel decreased due to factors such as the decrease in consumption willingness of residents, resulting in a decrease in revenue from sales of natural gas.
- *Increase of LNG gasification*
High temperature may lead to higher heat transmission of LNG storage tanks, which is easier to generate flash gas and increase the gasification volume. In order to ensure the safety of storage tanks, priority is given to release them into the urban pipeline network, resulting in an increase in the cost of gas supply.
- *Damage to equipment and facilities*
Affected by extreme high temperature, the ageing of resistant rubber parts and electronic devices installed in explosion-proof boxes in certain outdoor gas facilities will be accelerated and even disrupt stop operation for failure, which reduces operational efficiency, resulting in increases in operating costs and asset impairment.

➤ Strategy to Respond to Extreme Heat:

In response to the impact of extreme heat, Wuhu Project Company strengthened the inspection of outdoor equipment and used automatic equipment for real-time monitoring. In addition, manual intervention is applied to lower the temperature of equipment and facilities, such as replacement of engine oil for compressors in summer, cleaning of heat exchangers in advance, installation of sunshade shed and exhaust fans for equipment and facilities, installation of the spraying system for steel ball tanks and LNG storage tanks, and replacement of heat-resistant accessories for equipment.

In order to minimize the safety risks of employees in a high-temperature environment, the Wuhu Project Company has established a system to deal with extreme heat by adjusting the working hours of employees. In addition, the Wuhu Project Company actively uses automatic equipment to monitor equipment and facilities to ensure operational efficiency while reducing the outdoor working hours of employees. The Wuhu Project Company also provides employees with heatstroke prevention items and high-temperature subsidies.

➤ Financial Impact of Significant Risks:

Cost of response:

1. In FY2022/23, the expenses for heatstroke prevention and cooling item for employees of Wuhu Project Company amounted to approximately RMB430,000.

Case: Financial Assessment of Climate-related Risks of Wuhu Project Company

Extreme Temperature (Extreme Cold)

➤ Significant Risk Impacts:

- *Damage to equipment and facilities*

The continuous low-temperature regulator causes ice congestion, which leads to equipment suspension and safety hazards. In addition, the safety of underground pipelines is affected by the freezing of underground soil in extreme cold weather due to throttling and high flow rate in individual sections of the terminal. Meanwhile, extreme cold disasters including snowstorms may cause equipment and facilities to be buried and need to be cleaned and reinforced. These risks will increase the financial cost in operation and maintenance such as temperature stabilization of equipment and facilities, cold and freezing transformation of pipe network, cleaning and reinforcement, thereby increasing the operating costs.

➤ General Risk Impacts:

- *Impact on Sales of CNG and LNG*

The road was frozen due to low temperature weather, which affected the gas supply and transportation of CNG and LNG vehicles, resulting in loss of revenue.

- *Impact on Construction and Maintenance*

The freezing of roads affects the efficiency of pipeline network construction, maintenance and rush repairment, which indirectly affects the Company's operational revenue.

➤ Strategy to Cope with Extreme Cold:

In response to the impact of extreme cold, the Wuhu Project Company adopted multi-route transportation planning and design at the early stage of the design and planning to avoid the gas suspension due to extreme cold weather. At the same time, the Wuhu Project Company strictly follows the notice requirements issued by the government to deal with extreme temperatures, formulates emergency plans for winter operations, sets up emergency organizations, and strengthens pipeline inspections. In addition, the Wuhu Project Company ensured the stability of gas supply by strengthening weather monitoring, increasing the input of facilities to ensure maintenance of the equipment (e.g. electric heating and water bath boilers), and purchasing materials such as vehicles and compressor antifreeze fluid.

➤ Financial Impact of Significant Risks:

Cost of response:

1. The investment cost for replacement of electric tracing for pressure regulator heating, water bath pot for BOG/EAG heating during LNG gasification, and anti-freeze for CNG compressor is approximately RMB197,000 per year.
2. In the event of snowstorm, the financial investment for strengthening facilities and equipment such as house and gas station roofs amounted to approximately RMB30,000.

1. LOW-CARBON DEVELOPMENT

Case: Financial Assessment of Climate-related Risks of Wuhu Project Company



2. Flooding

➤ Significant Risk Impacts:

- *Disruption of Pipeline Operation*

Wuhu is located in the downstream of the Yangtze River. As it is rainy season during June to July every year, there may be waterlogging in some areas. Flooding may affect the pipelines laid along the bridge and crossing the rivers and dams, or even damage, resulting in safety risks and hidden dangers. In the event of leakage, partial area will stop gas supply and wait for maintenance. In addition, there are potential safety hazards in slope pipelines due to soil erosion and gas supply pipelines exposed to landfilling by landslides. In response to these risks will increase the investment in facility maintenance and labor costs, thereby increasing the operating costs.

➤ General Risk Impacts:

- *Damage to Station and Transportation Facilities*

Riverine flooding may cause damage to the pressure regulating stations and other gas supply facilities other than the pipe network, resulting in disruption of operations. In terms of outbound logistics, while reducing the efficiency of skid vehicle transportation and personnel commuting, floods may also lead to the water inflow of transportation vehicles, resulting in the failure of refuelling operation.

➤ Flood Response Strategy:

During the rainy season, The Wuhu Project Company prepared flood prevention materials in advance and strengthened inspection. The Wuhu Project Company has also formulated an on-site work plan for extreme weather, an emergency plan and a clear emergency organization structure, so as to activate the plan immediately in the case flooding flood and reduce the losses caused to the Company.

➤ Financial Impact of Significant Risks:

Cost of response:

1. In response to heavy rainfall and flooding, there are frequent of pipeline inspection, emergency pumping, 24/7 monitoring of dams to prevent pipe bursts and other emergency actions increased labor costs by approximately RMB105,000.
2. Heavy rainfall caused the soil erosion pipelines to be landfilled again, and the cost of engineering maintenance was approximately RMB70,000.

The Group will continue to analyze the impact of climate risks in depth and assess the resulting financial impact from multiple perspectives. Looking ahead, we will gradually expand the scope of climate risk assessment, and conduct more frequent risk assessments on project companies and business locations to ensure that China Gas is capable of coping with the challenges brought by climate change.

1. LOW-CARBON DEVELOPMENT



Indicators and Targets

In order to actively respond to the severe challenge of climate change, China Gas published the “China Gas Carbon Neutrality Action Report” in 2022 as one of its responses focusing on GHG emission reduction. The report covers seven major actions of green energy, energy conservation and innovation, low-carbon logistics, smart operation, methane emission control, net zero path and green ecosystem, and three major commitments:

- Reducing carbon emission intensity by 50% by 2030 compared with the 2021 level
- Achieving carbon peak by 2030
- Achieving carbon neutrality in its own operation by 2050³

We regularly review the Group’s carbon emissions to monitor the progress and explore different carbon reduction opportunities, exploring and formulating carbon reduction initiatives towards carbon neutrality.

1.4 DUAL CARBON TARGETS AND PATHWAY PLANNING

In order to achieve the mentioned goals based on our own businesses, we have formulated seven major actions to promote carbon reduction in a multi-faceted and phased manner, so as to reduce our own carbon emissions as much as possible, and at the same time join hands with upstream and downstream partners to move towards a low-carbon, sustainable and more resilient future, creating a “joined-up” low-carbon ecosystem.

Seven Major Actions to Reduce Carbon Emissions

- **Green energy:** Actively promote the integrated application of green energy sources such as PV, wind power, hydrogen energy, and biomass energy. Gradually build a clean, low-carbon, safe, and efficient energy structure.
- **Energy-saving innovation:** Review business operations comprehensively and explore energy-saving and carbon reduction potential in each business. Promote energy efficiency through strategies such as energy gradient and multi-energy coupling utilization, replacement of energy-extensive facilities and equipment, and energy recycling.
- **Low-carbon logistics:** Build a smart logistics system, optimize the supply chain and vehicle dispatching, and reduce carbon emissions caused by vehicle idling. Maximize the use of clean energy vehicles, such as electric vehicles and hydrogen vehicles, while ensuring safety.
- **Intelligent operation:** Utilize the Internet of Things to perceive energy network data on a real-time basis. Drive intelligent decision-making and scheduling to improve operational efficiency and reduce carbon emissions during operations.
- **Methane emission control:** Promote the transformation of old pipeline networks, optimize engineering technology and production operations, strengthen methane emission control monitoring of gas pipelines and storage facilities, and explore the construction of a smart city gas pipeline network operation system.

³ The business scope covers urban gas business, value-added service business, China Gas Energy business, electric power and new energy business, digital development business, etc.

1. LOW-CARBON DEVELOPMENT

- **Net zero pathway:** Explore and implement Carbon Capture, Utilization, and Storage (CCUS) projects. Focus on Chinese Certified Emission Reduction (CCER) development projects to achieve carbon offsets. Establish a carbon asset management system to oversee the implementation of emission reduction strategies.
- **Green ecosystem:** Integrate green and low-carbon requirements into procurement, driving upstream suppliers to improve their green development capabilities. Undertake low-carbon transformation in urban and rural areas, providing customers with optimized energy allocation and intelligent carbon reduction solutions.

1.5 GREEN OPERATION

In accordance with the targets and carbon reduction pathways of the China Gas Carbon Neutral Roadmap, we are deepening our carbon reduction efforts, steadily promoting green operations, and gradually reducing our own operational carbon emissions.

Enhancing Energy Efficiency

Logistics emissions and methane emissions are two main sources of carbon emissions in China Gas's business operations. We have been improving and optimizing our management system and introducing energy efficiency technologies to reduce greenhouse gas emissions and help the Group achieve its carbon targets.

Low Carbon Logistics

To reduce fleet energy consumption and support sustainable transportation, the Group has implemented the "China Gas Vehicle Management System" to regulate the allocation, renewal, and procurement management of various vehicle types across its subsidiaries. Priority is given to low-emission and fuel-efficient vehicles during the procurement process, with a gradual transition towards electric vehicles.

To reduce carbon emissions, China Gas has established the smart logistics system to optimize the supply chain and vehicle scheduling. With safety as a priority, we maximize the use of clean energy vehicles, including electric vehicles and hydrogen-powered vehicles. Furthermore, we accelerate the development of supporting facilities such as charging stations, promoting the growth of a low-carbon logistics ecosystem. Our plan is to gradually replace administrative fuel vehicles with electric vehicles, aiming for 50% electric vehicle utilization by 2025 and 100% by 2029.

Case 1: Promotion of New Energy Vehicles and Transformation of Motorcycles into Electromobiles



In 2022, China Gas completed the replacement of fuel vehicles with electric vehicles in the last-mile delivery module at the terminal. The use of motorcycles for last-mile delivery was largely replaced by electric bicycles and tricycles. This transition resulted in a reduction in energy consumption from 5 L/100 km to 8 kWh per day. The saved energy consumption per unit delivery reached 15 kWh per ton, effectively improving air quality and reducing greenhouse gas emissions.

Case 2: Upgrade Gas Refuelling Stations and Promote the Renovation of Charging Piles



Since 2021, China Gas's Baoji joint venture has been increasing the number of and renovating charging stations at its gas stations. As of the end of the Reporting Period, a total of 19 charging stations with 35 operating equipment were in operation, providing essential support for green travel and new energy vehicle users.

Reduce Methane Emissions

China Gas has implemented a stringent regulatory framework to control methane emissions, focusing on scenarios such as pipeline maintenance releases, pipeline venting and blowing, and third-party damage to pipeline. We have established a methane monitoring, reporting, and verification system in our operational processes and taken multiple measures to control methane emissions. By ensuring real-time monitoring of emission reduction data, we effectively prevent methane leakage and emissions during production and operations, thereby improving overall safety levels. To achieve a maximum of 16% methane emission reduction per year, China Gas will employ the following measures:

- Strengthen intrinsic safety management of pipelines and ancillary equipment to minimize leakage.
- Install remote leakage detection devices on pipelines, pipe sections, and valve wells to enable 24-hour monitoring and immediate responses to leaks.
- Utilize indirect replacement methods during pipeline connection and maintenance to reduce methane emissions.
- Enhance the management of cathode protection systems for steel pipes, increase the frequency of anti-corrosion layer inspections, and reduce leakage due to pipeline corrosion.
- Deploy PPB-level vehicle laser methane leakage detection vehicles and Bei Dou high-precision positioning devices to proactively identify and handle leakage points.

Case: BOG Recycling to Reduce Methane Emissions in Storage and Transportation



China Gas is actively carrying out the research and application of Boil-off Gas (BOG) recovery technology to avoid methane emissions caused by the release of LNG into the atmosphere. For the BOG generated by LNG transport tankers, we use the pressure difference method or use BOG pumping equipment to recover and store the BOG escaped from the tanker to the storage tank. The recovered BOG can be directly connected to the pipeline network after pressure regulation, or it can be converted into CNG and filled with transport vehicles to avoid methane emissions and improve energy efficiency. In addition, for a small amount of BOG released from natural gas storage facilities, we directly recover them to the pipeline network through BOG pipelines and BOG heaters.

1. LOW-CARBON DEVELOPMENT

Development of Clean Energy

We consider new energy as a key investment direction, vigorously developing new energy power generation projects such as distributed PV, Building Integrated PV (BIPV), and wind power. By increasing the proportion of renewable energy in our energy consumption structure, we aim to reduce carbon emissions from our own electricity consumption. During the Reporting Period, we also signed 24.3 MW photovoltaic self-investment projects, generating 6.91 million kWh of photovoltaic power.

Building Integrated PV (BIPV)	China Gas Group Headquarters Building registered the completion of a city Landmark BIPV Demonstration Project
Distributed PV Power Generation	From 2022, distributed PV power has been developed with the roofs of the Group's office buildings, warehouses, gateway stations and gas stations, towards full-load operation in 2030
Distributed Wind Power Generation	Distributed wind power projects were invested and operated in 2023

External Green Cooperation

R&D Cooperation in Low-carbon Technology

China Gas is dedicated to enhancing the research and development of green technology through collaborations with scientific research institutes, enterprises, and industry associations. We focus on key areas of green and low-carbon development, such as biomass energy and distributed wind power, to conduct researches and increase the supply of green technologies.

Case 1: Biomass Energy Research

We actively explore the development and utilization of biomass energy and have entered into cooperation agreements with well-known domestic environmental protection enterprises, including Hangzhou Energy Environmental Engineering Co., Ltd. and China Shipbuilding Industry Environmental Engineering Co., Ltd. Through these collaborations, we conducted research on the development and utilization of biomass energy and explored business models for recycling and energy development using urban organic solid waste and livestock manure from breeding. This cooperation provides guidance and support for China Gas's future endeavours in biomass energy development and utilization, enabling it to provide customers with green and low-carbon energy solutions for sustainable production.

Case 2: Research on New Process Technology and Product of Agricultural Product Oven: New Gas-powered Tobacco Drying Rooms

In September 2022, the technical achievement review meeting for the "Research and Development of New Gas Oven Room" project, jointly undertaken by China Gas and Yunnan Jingcheng Gas, was held in Dali, Yunnan. This project introduced a new approach to the coupling and utilization of clean energy and renewable energy, replacing the traditional flue gas baking process with a circulating water heating method. This innovative method reduces energy consumption by more than 40% compared to the traditional process. Additionally, the application of LPG MicroGrid network technology provides low-cost and efficient energy supply for the flue gas oven. This project effectively promotes energy transformation and upgrading in the flue gas industry, drives rural energy mix transformation, and contributes to the high-quality development of the tobacco industry in Yunnan.

1. LOW-CARBON DEVELOPMENT



Participating in Authoritative Methane Control Organization

Case 1: Entering into the United Nations Methane Agreement



As the first Chinese enterprise member in the Oil and Gas Methane Partnership (OGMP), China Gas is committed to becoming a driving force for actual emission reduction. Based on the OGMP 2.0 framework report, we have calculated methane emissions and identified key emission sources in China Gas's operating assets. We have deployed various facilities, such as municipal pipeline networks, courtyard pipeline networks, pressure measurement stations, LNG gasification stations, user meters, long-distance pipelines, and distribution stations, to meet the OGMP's "Gold Membership" standard.

We actively share information and technology with members from different countries and conduct research and promotion of methane emission control standards based on our world-leading experience, establishing a domestic urban combustion system emission factor database, holding regular meetings with the United Nations Environment Programme and member companies to review and improve relevant data. These efforts aim to enhance the transparency of the reporting mechanism for greenhouse gas methane emissions of China Gas and the overall industry.

Case 2: Joining the China Oil and Gas Enterprises Methane Emission Control Alliance



As a member of the China Oil and Gas Enterprises Methane Emission Control Alliance, China Gas is committed to promoting the exchange of skills and experience in methane emission control among alliance enterprises, as well as alliances and other companies at home and abroad. We actively conduct research and promote relevant standards for methane emission control, aiming to enhance industry emission data standardization and transparency. By sharing excellent practices in methane control from China's oil and gas enterprises, we drive collective efforts to reduce methane emissions in the industry.

China Gas actively participates in alliance membership conferences, strengthening technical exchanges with industry peers on methane emission accounting, testing, and optimization across the oil and gas industry chain. The Group also takes part in feasibility evaluations and on-site applications of methane emission reduction technology, while promoting the establishment of on-site physical methane accounting methods.

In the future, China Gas will strengthen strategic cooperation and technology exchanges with various institutions, working together to elevate the methane emission control capabilities of China's oil and gas industry. Additionally, China Gas will actively participate in global environmental governance, contributing to the harmonious coexistence between human and nature.

1. LOW-CARBON DEVELOPMENT

Greenhouse Gas Emission and Energy Consumption Performance Data

China Gas is dedicated to enhancing the management of greenhouse gas emissions. The company strengthens the monitoring and control of these emissions. In FY2022/23, the primary sources of greenhouse gases generated during the Group's operations were fossil fuels consumed in operations, fugitive emissions from natural gas and petroleum gas transmission/transportation, Consumption of energy from project companies on distributed thermal power business for external heating non-renewable electricity consumed in operations.

Indicator	Unit	Source	FY 2022/23	FY 2021/22
Scope 1: Direct emissions of GHG (internal use)	tCO ₂ e	Fossil fuel, natural gas and petroleum gas consumed in operations and fugitive emissions during transmission/transportation	79,186.73	73,153.11
Scope 1: Direct GHG emissions (from integrated energy business)	tCO ₂ e	Consumption of energy from project companies on thermal power business for external heating	152,357.78	139,664.05
Scope 2: Indirect emissions of GHG	tCO ₂ e	Consumption of non-renewable electricity for operations	106,205.14	90,430.27
Scope 3: Other indirect emissions of GHG	tCO ₂ e	Flight travel by employees	410.85	23.76
Total GHG emissions	tCO ₂ e		338,160.50	303,271.18
Total GHG emissions (excluding integrated energy business)	tCO ₂ e		185,802.72	163,607.13
GHG intensity	tCO ₂ e/GJ of energy consumed		0.21	0.20
GHG emissions intensity (excluding integrated energy business)	tCO ₂ e/GJ of energy consumed		0.12	0.11

During the Reporting Period, the Group's total direct energy consumption amounted to 3,817,229.60 GJ, and the energy intensity was maintained at 0.002 GJ/GJ of energy sold. This energy consumption primarily includes natural gas, LPG, gasoline, diesel, and purchased electricity used for daily operations and transportation.

1. LOW-CARBON DEVELOPMENT



Statistics of direct energy consumption in FY2022/23:

Fuel	ton	Consumption in FY2022/23	Consumption in FY2021/22
Petrol	ton	7,546.69	5,108.74
Natural gas for internal use	m ³	14,236,803.05	15,357,872.35
Natural gas for integrated energy business	m ³	75,325,451.71	69,049,694.42
Diesel	ton	4,101.51	3,966.38
LPG	ton	27.83	150.53
Heavy Oil	ton	1,295.62	1,334.15
Kerosene	ton	0.02	0.30

Energy	Unit	Consumption in FY2022/23	Consumption in FY2021/22
Non-renewable electricity consumption	kWh	174,078,248.26	148,222,038.31
Renewable electricity consumption	kWh	380,500.00	337,440.80

1.6 SUSTAINABLE FINANCE

As a leading national green and low-carbon integrated energy service provider, China Gas actively explores diversified ways of green financing, obtains green financing through green bonds and green loans, and invests the funds raised in eligible green projects to help promote the green development of the society and enterprises.

China Gas launched the Sustainable Development Linked Loan in accordance with the *Sustainable Linked Loan Principles* (SLLP) (March 2022), the *United Nations Sustainable Development Goals* (SDGs), the *Environmental and Social Sustainability Performance Standards* (2012) (by International Finance Corporation (IFC)) and other relevant standards. The Group has applied for loans associated with sustainable development and has obtained the green assessment and certification report issued by United Equator⁴, which will be used to support its long-term sustainable development strategy, essential for achieving the *China Gas "14th Five-Year Plan"*.

⁴ United Equator Environmental Assessment Co., Ltd. (hereinafter referred to as "United Equator") was established in 2015 and is a subsidiary of United Credit Management Co., Ltd., one of the largest domestic credit information service institutions. It is mainly engaged in third-party evaluation and certification of green bonds, green finance consulting and environmental protection consulting, and is one of the first green bond evaluation and certification institutions that have passed the market-oriented evaluation and registration of the Green Bond Standards Committee.

1. LOW-CARBON DEVELOPMENT

Case: Signing the First CSR Syndicated Loan Project in Greater China



On 27 June 2022, China Gas Capital Management Limited, a wholly-owned subsidiary of China Gas, signed a three-year period of social responsibility syndicated loan agreement equivalent to US\$500 billion with several overseas banks. The foreign currency syndicated loan project innovatively integrated the rural coal-to-gas conversion business carried out by the Group in the northern region with the sustainable development goals advocated by the United Nations, and incorporated the compliance and performance elements of social responsibility loans in accordance with the international “Green Finance Loan Framework”, which is the first social responsibility syndicated loan in the Greater China region.

The syndicated loan was approved by the National Development and Reform Commission (NDRC) and well-received by the Hong Kong Quality Assurance Agency and many professional institutions. It also received wide attention and significant support from the market and banking institutions, and was substantially oversubscribed. The signing of the Syndicated Agreement is not only beneficial for the Group to optimise its debt structure, reduce financing costs, and promote cooperation between banks and enterprises, but also fully reflects the Group’s commitment to sustainable development, win-win development of the society and the Group.

In addition, on 25 April 2023, the Group obtained an assessment certification from United Equator for the first tranche of the 2022 Green Medium Term Notes⁵, which was found to maintain a green rating of G1⁶ for the duration of the Green Medium Term Notes.

Green Project		
Category	Specific projects	Environmental impact
Methane management	Invested in pipeline network inspection and testing, equipment maintenance and other aspects to reduce methane emissions	The natural gas actually sold by the green medium-term notes investment project in 2022 can be indirectly used to replace coal-fired heating for urban heating, achieving an annual emission reduction of 260,000 tons of CO ₂ , 46,700 tons of standard coal, 512.60 tons of SO ₂ and 119.53 tons of NO _x .

5 Green bills are the commercial bills issued, obtained, transferred, traded and financed by the parties to the bill in order to support economic activities such as climate change responses, environmental improvement, resource conservation and efficient utilization and ecosystem conservation, including medium-term notes and other types.

6 G1 is the highest level of green rating, which refers to the excellent performance of green bonds in terms of green level of investment projects, use and management of proceeds, project evaluation and screening, information disclosure and reporting, and industrial policies.

2. Safety Operation



84	2.1 FY2022/23 Highlights
85	2.2 Health and Safety Targets
86	2.3 Safety Management System
89	2.4 Operational Safety
93	2.5 Occupational Health and Safety
103	2.6 Digital Security Management
104	2.7 Contractor and Supplier Safety Management
107	2.8 Stable Gas Supply



2. SAFETY OPERATION

As China continues to raise the requirements for safety supervision and production safety, investors in the capital market also pay more attention to production safety. China Gas deeply understands the importance of the implementation of safe operation, which is constantly optimizing its safe production guarantee system. We strictly comply with national regulations. Through various safety control measures and publicity activities, China Gas responds to the requirements of external safety production trends. In order to ensure the safe operation of the enterprise, we are on the following key safety actions:

- Formulate comprehensive quantitative and qualitative safety management and control objectives, and define the direction and strategy of safety management and control
- Strengthen professional certification of external ISO safety system to protect the health and safety of employees and stakeholders in the supply chain
- Improving the safety governance structure, clarifying the responsibilities and roles of each position, and improving the quality of safety management
- Carry out safety actions for management, employees, contractors and users in an all-round way to improve their awareness of gas safety risks

2.1 FY2022/23 HIGHLIGHTS

 <p>Strengthen safety management and supervision</p>	<ul style="list-style-type: none"> • Held safety management meetings every quarter • Required all 9 regions to establish safety committees to manage the safe operation of all project companies through a 3-level structure • Monitored and provided guidance on data such as employee injury and absence • Built a three-level HSE management system structure for project companies • Implementing a safety production responsibility system for all employees to achieve measurable, traceable, and assessable safety performance • Conducted the Group's special hidden danger investigation and HSE rating audit and special audit of project companies
 <p>Improve technical standards</p>	<ul style="list-style-type: none"> • Established technical standards higher than national standards, including those of intrinsic safety provisions, and engaged national and external industry experts to provide suggestions
 <p>Plan for "Evaluation of Duty Performance of Frontline Employees"</p>	<ul style="list-style-type: none"> • For the assessment of the performance ability of first-level employees, the assessment covered the evaluation of the division of departmental responsibilities, with results linked to remuneration
 <p>Establish Training Academy: Promoting Staff Performance Certification</p>	<ul style="list-style-type: none"> • Promoted the certification of employees' performance ability, covering 11 positions including the dispatching ones
 <p>Comprehensively deploy the operation and management integrated platform ("OMP")</p>	<ul style="list-style-type: none"> • Launched OMP in nearly 400 project companies and kept sound operation

2.2 HEALTH AND SAFETY TARGETS

The Group has established quantitative and qualitative targets related to health and safety to strengthen occupational health and safety management, enhance employees' awareness and skills in this regard, and strive to create a healthy and safe working environment to provide better protection and services for employees and stakeholders along the value chain. In FY2022/23, China Gas enhanced its safety management. The number of work-related injuries per million hours of employees fell to a historical low of 0.01, and that of all employees and contractors is well below 0.75. We also recorded zero deaths due to work safety accidents and zero serious injuries of customers, maintaining the industry-leading level in all aspects. The Group also continues to review its health and safety targets. In addition to the zero-fatality target that has been continuously implemented, the Group has set a target of "ensuring the injury rate per million working hours of all employees and contractors within five years to be within 0.75", demonstrating China Gas's determination to ensure safe construction.

Safety Management Targets



Number of deaths due to production safety accidents during the financial year:

0



Number of deaths due to customer liability accidents during the year:

0



To ensure the work injury rate per million hours of all employees* and contractors maintains within 0.75 in 5 years

* Including employees in any form of contract, such as temporary workers, part-time workers or interns

2. SAFETY OPERATION

Work Goals Set in FY2022/23



Short-term goals

1. Eliminate safety accidents rated material or above;
2. Full coverage of rating review of project companies, 80% of project companies with the HSE management system audit certificate;
3. 100% utilization rate for the alert system of project companies;
4. 100% adoption of the traffic safety system of project companies;
5. 100% coverage for self-built-and-reviewed HSE safety system formulated by project companies in China Gas.



Medium-to-Long-term goals

1. High-pressure safety, safety prevention measures as new normals, in-depth safety culture, and controlled safety operation, towards the top level of safety management in the industry.
2. The Safety Supervision Department responsible for the supervision and management of contractors' health and safety, with specific implementation carried out by the supply chain company of the Group.

2.3 SAFETY MANAGEMENT SYSTEM

The Group is committed to providing employees with a safe working environment and appropriate insurance. To this end, we have established a comprehensive Safety Management System, and prepared the *Health, Safety and Environment (HSE) Management Manual of China Gas* with reference to international standards such as ISO 45001 and ISO 9001. The Manual specifies the Group's overall safety objectives of: "Prevention Foremost, Safety First", "Integrated Management, and Responsibility of All Employees" and "zero violation of regulations, zero injury and zero accident," covering safety management guidelines in transportation, capital and property, personal safety of work-related injuries, etc., to ensure the health and safety of employees and contractors. Based on the requirements of *the Manual* in terms of responsibility clarity, risk control, performance evaluation and improvement, etc., we have set measurable annual goals for health, safety, and environmental protection, with multiple specialized management systems under *the Manual*, for the fulfillment of annual goals through the effective operation of such specialized systems.

In order to strengthen safety supervision, the Group has established five monitoring centers in different regions, which are responsible for monitoring HSE safety system reviews and safety inspections, and making suggestions for improvement. At the same time, the Group has required all project companies to re-formulate safety policies and improve labor protection standards to comply with the "Three-year Action Plan for Special Rectification of Work Safety" issued by the State Council in 2019 to further strengthen its safety management system.

Health and Safety System Certification

In order to comprehensively improve its management in environment, health and safety, the Group has formulated internal and external certification systems and sound occupational health and safety policies for employees to manage occupational health and safety risks and improve performance. In terms of the internal system, China Gas takes the initiative to comprehensively plan the health, safety and environment (HSE) management system of project companies within the Group. Based on the actual situation, for innovation, we have established an HSE management system suitable for China Gas in accordance with ISO 9001 Quality Management System (“ISO 9001”), ISO 14001 Environmental Management System (“ISO 14001”), ISO 45001 Occupational Health and Safety Management System (“ISO 45001”) and other systems and national laws and regulations. We have also issued the official document for application throughout the Group in September 2020. Currently, our internal coverage rate has reached 100%.

In terms of the external system, China Gas promoted the ISO 45001 system certification implementation plan in project companies in accordance with the sustainable development goals and requirements. The Group has engaged the authoritative health, safety and environmental system consultancies in China in the certification of the HSE management system. Since June 2021, such companies have carried out system certification for the Group’s headquarters and 11 pilot project companies, gradually improving its management level in occupational health and safety.

As of FY2022/23, 46 project companies over which China Gas has operational control have obtained ISO 9001, ISO 14001 and ISO 45001 certifications. The revenue of these project companies accounted for 51% of the Group’s total revenue. We continue to carry out the system certification implementation plan or project companies, aiming to achieve 100% certification within the Group within 3 years.



ISO 45001, ISO 14001 and ISO 9001 certifications of project companies

2. SAFETY OPERATION

Safety Management System

The “China Gas HSE Management Manual” is the guiding and mandatory policy document of China Gas that listed out the HSE work standards and requirements of production and operation. It includes the arrangement of HSE objectives and plans, and requires all units and departments to formulate and publish HSE work objectives and plans for the next fiscal year annually to ensure the fulfillment of HSE objectives.

The four components of the China Gas HSE Management Manual:

Part I	This is mainly the HSE organization and business department system and HSE responsibility guidelines of China Gas, which clearly stipulates that the regions, business departments, professional companies and project companies must establish safety production committees and hold regular safety work meetings. In addition, the safety supervision departments at all levels are responsible for supervising the performance of HSE responsibilities by each department through supervision, inspection and assessment, and provide training, safety technical support and guidance to improve the overall HSE management level. In the event of an accident, the accident shall be investigated, handled and learnt from the accident to implement preventive measures.
Part II	It covers the guidelines for risk classification control and hidden danger investigation and management. The Group adopts a risk classification and control approach, requiring project companies to identify and evaluate risks at least semi-annually, establish a list of major risks, clarify responsible persons and control measures, and the safety supervision department will compile a list of major risks of project companies and supervise their implementation. We manage and control the identified risks at different levels and formulate control measures to reduce the overall risks to an acceptable level. The main person-in-charge of each project company and the person-in-charge of each business department shall inspect the risks of the contracting organization or business at least once a quarter.
Part III	It is a description of the Group’s control process, covering safety publicity and training, production and operation safety management, contractor safety management, occupational health management, environmental protection and other chapters.
Part IV	It lists the overall performance evaluation mechanism of the HSE management system, including project safety inspection, safety assessment, employee safety performance evaluation, accident management and other means, encourages project companies and employees to complete the HSE management review, accept the HSE management rating from the superior, summarize and analyze, and clarify the improvement plan and direction. After the review of all meetings of the HSE Committee, the committee will define the responsible person, implementation measures and completion due date, continuously improving the HSE management system and the HSE management level.

Other operational support management systems include but are not limited to the following:

Operation Support Documents:



“China Gas Hazard Source Management System”, “China Gas Group Risk Classification and Control Work Guidelines”, “China Gas Group Seven High-risk Operation Process”, “Project Company One-on-one Manual”, “China Gas Project Company General Manager Pre-appointment Safety Assessment Management System”, “China Gas Occupational Health Management System”, “China Gas Emergency Exercise Management System”, “China Gas Project Company Emergency Plan Preparation Guidelines”, “China Gas Safety Accident Management System”, “China Gas Safety Supervision Regulations”, “China Gas Safety Supervision and Assessment System”, “China Gas Safety Supervision Center Management System”, “China Gas Safety Supervision and Training Measures”, “China Gas Project Company HSE Management Rating Implementation Measures”, “China Gas Safety Supervision and Inspection Management Measures”, “China Gas Position Safety Performance Evaluation Management System”, “China Gas China Gas Employee Safety Scorecard Management System”, “China Gas Safety Experience Feedback Management System”.

2.4 OPERATIONAL SAFETY

The Group has always adhered to the safety policy of “Prevention Foremost, Safety First”, “Integrated Management, and Responsibility of All Employees”. By ensuring the safety of gas consumption and strengthening the safety operation through multiple dimensions, we deem safety production as our top priority.

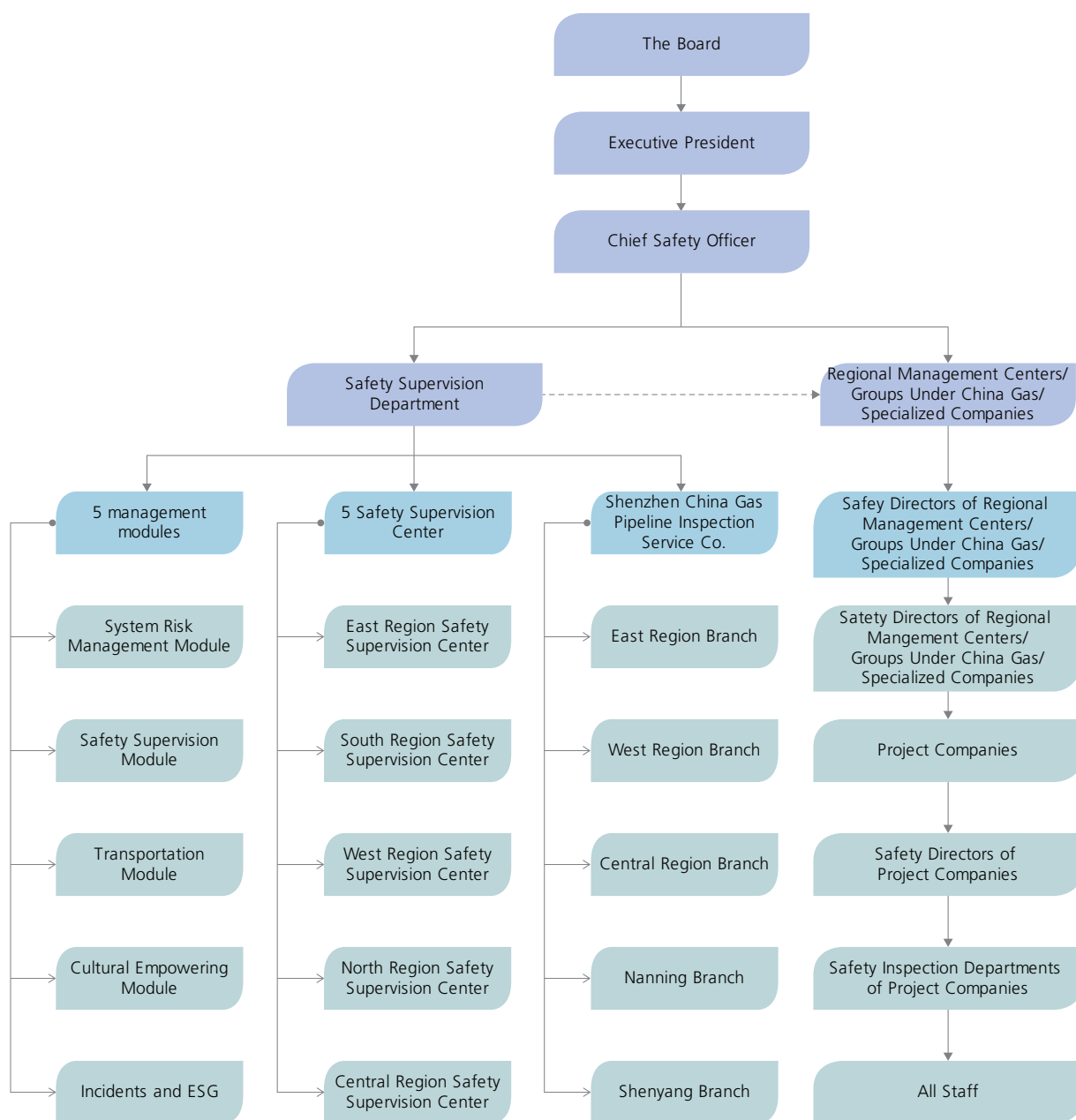
Safety Operation Management Structure

Guided by the Board, the Group’s safety management organization structure is composed of the Group’s Safety Committee. The Safety Supervision Department, the executive body of the Group’s safety management, is responsible for the implementation of work while working as the Group’s Safety Committee Office. The Department has five management modules, five safety supervision centers and Shenzhen China Gas Pipeline Testing Service Co., Ltd. The five supervision centers are responsible for supervising the implementation of the Group’s safety production policies and requirements and HSE inspections. Shenzhen China Gas Pipeline Testing Service Co., Ltd. is responsible for inspecting the operation and management of the Company’s gas pipelines, completing the testing tasks and operating indicators assigned by the Group, and proposing preventive measures to eliminate the risk of leakage according to the risk investigation of gas pipeline network leakage. In accordance with the overall requirements of “supervision, inspection, assessment, training, guidance, and service” established by the Group, the Safety Supervision Department is responsible for the safety production supervision and management of the Group. Through the establishment of a three-tier supervision system of “group — region (business department, specialized company) — project company”, we conduct safety inspections and comprehensive safety assessments, supervise all organizations to implement their main responsibilities based on the principles of “Industry, business, production and operation management is all about safety, persons-in-charge naturally responsible for safety”. We aim to improve the Group’s safety management level and prevent major responsibility accidents.

2. SAFETY OPERATION

In the Group's safety management organizational structure, management and staff at all levels have clear job safety responsibilities. All project companies must sign a safety responsibility statement at each level in each financial year in accordance with the corporate safety management objectives to ensure that all departments, organizations and employees understand and strictly implement relevant objectives, standards and measures. In addition, the operation team also regularly submits feedback on safety issues to the Safety Supervision Department to continuously revise and implement its occupational health and management system.

Safety Supervision Organizational Structure





Safety Governance Mechanism and System

We strictly implemented the *“Urban Gas Pipeline and Other Ageing Renovation Implementation Plan (2022–2025)”* issued by the General Office of the State Council, deployed and updated relevant internal policy systems and working mechanisms, accelerated the renewal and renovation of urban gas pipelines and other ageing projects, to completely eliminated potential safety hazards. By adjusting the composition of the Safety Production Committee, we have added safety production experts from the domestic gas industry, standardized the operation mechanism of the Safety Production Committee at all levels, and improved the safety management organization. To strengthen safety production supervision, China Gas has appointed safety directors and established safety inspection departments in regional operation management centers, business departments, specialized companies, operation management groups, and project companies. Additionally, we have established five safety inspection departments in Northern, Central, Eastern, Western, and Southern China to regularly supervise safety production on the front line and ensure the implementation of safety production policies and systems. We have also improved the safety production expert database, evaluated internal and external experts, and provided HSE system construction, accident investigation, safety training, and hidden danger rectification for project companies. In FY2022/23, we completed HSE rating audits and special audits for 495 project companies. The Group currently has 1,549 safety supervisors who are all qualified internal auditors, including 494 safety directors in regional operation and management groups and project companies, as well as 48 internal auditors at the Group’s headquarters.

In FY2022/23, the safety performance system has been fully expanded to urban gas business and LPG business, and pilot promotion has been conducted in engineering construction and hazardous chemical transportation business, and a total of 34,023 safety responsibility letters have been obtained. The project companies gradually carried out and implemented daily performance through the safety performance system as an effective management tool for supervising subordinate work and promoting the effective tool for department work. The Safety Inspection Department is responsible for supervising the performance evaluation of front-line employees, and the specific implementation and implementation are completed by each business department and the human resources department.

Production and Operation Management Policy

The Group has established the Production and Operation System to regulate daily employee operations. To achieve high-standard work procedures and performance targets, we have formulated detailed operating procedures and work guidelines, including the *“Long-distance Pipeline Transmission and Distribution Management System,” “City Gas Transmission and Distribution Management System,” “Equipment Management System,” “Dispatch System Construction and Management System,” “CNG, LNG, and L-CNG Gas Stations Production and Operation Guidelines,” “Production and Operation Repair System Construction Guidelines,”* and *“Gas Equipment and Facilities Operation and Maintenance Guidelines.”* Additionally, we have issued the *“Guidelines for the Preparation of Contingency Plans for Emergencies in Production and Operation”* to strengthen our response to emergencies. For special operations in different working environments, we have also established the *“Regulations on Pressure Tapping of Steel Pipeline”* and the *“Regulations on Dangerous Operations Management in Gas Transmission and Distribution System”*. The formulation of these operational management policies and standards ensures the safety of our operations.

2. SAFETY OPERATION

Safety Production and Operation Measures

The Group places great importance on production safety, prioritizing prevention and a combination of prevention and control. Various safety and risk management measures are implemented to reduce the risk of accidents. China Gas strengthens emergency response and repair capabilities, improves employees' safety awareness and skills, and ensures the safety and reliability of production and operation activities.

Special Action for Gas Safety

Since FY2021/22, China Gas Energy Group has carried out special actions such as "Comprehensive Improvement of Gas Safety," "Three-year Action Plan," and "100-day Action for Gas Safety." Special supervision and inspections on accidents and the first round of inspections have been organised and conducted. Non-compliant project companies face penalties such as dismissal and punishment with identified problems or hidden dangers and rectifications.

Safety Hazard Investigation and Rectification

China Gas issued a special action plan for hidden danger investigation and rectification to systematically address hidden dangers. We register and record hidden safety dangers, with a mechanism for rectification output, review and acceptance to ensure the implementation of rectification measures. Currently, the completion rate for hidden dangers rectification stands at 98.8%.

We encourage all employees to participate in the investigation and reporting of safety hazards, and punish relevant persons by cutting their safety issue points based on the investigation results of hidden hazards. At the same time, China Gas organized key personnel to prepare the *HSE Management System for the LPG Business of Energy Group*. The system documents cover all business segments such as those of users, bottled gas supply stations, stations, terminal and storage areas, and hazardous transportation business to ensure that the system is free from loopholes. In order to promote the HSE management rating of project companies, we have also formulated industry-leading HSE management rating standards, and conduct annual inspection and rating on the HSE management of project companies. In FY2022/23, among the 40 controlled project companies, 5 of them were rated as Grade B and 26 of them as Grade C.

Construction of Fire Protection Technology

In 2022, Guangxi Zhongyou completed the fire protection technical renovation of the station. This included adding electric valves and remote-control functions to all spray valves of storage tanks and water cannon valves, as well as implementing a water spray system on the loading platform. Water pump adapters were installed on the main fire-fighting road, and explosion-proof flame detectors, sound-light alarm devices, fire alarm buttons, and other equipment were added in the storage tank area to comprehensively upgrade the fire telecommunication system. Additionally, the automatic inspection function of fire pumps was added, and fire-fighting related sites and buildings were hardened and repaired to create a safe production environment.



Terminal Operation Management

The Terminal Business Department is responsible for implementing the Group's requirements and relevant laws and regulations. It actively promotes the special supervision of gas alarm installation for commercial and industrial customers of China Gas Energy. This includes increasing the publicity of gas safety knowledge, optimizing the business sharing platform system of China Gas, and strengthening management. The project companies, management groups, and headquarters have established a system for supervising safety inspection lists and conducting random inspections. Terminal project companies are required to conduct pre-account safety inspections for new customers before commencing gas supply as the Group constantly improves the registration procedures of retail business. Responsible personnel are assigned to supervise the implementation of assessment management for customers who fail to complete the alarm installation in time.

Improving Safety Operation Expenses

China Gas has always been attentive to production and operation safety and has increased relevant expenses year by year. Over the past three years, expenditures on regular safety production have amounted to HK\$1.18 billion, HK\$1.49 billion, and HK\$2.2 billion, respectively. In FY2022/23, the investment in production safety will reach HK\$2.4 billion, surpassing the requirements of the Ministry of Finance and the *State Administration of Work Safety on the Administrative Measures for the Withdrawal and Use of Production Safety Funds of Enterprises*.

Regular Production Safety Investment

FY2022/23	HK\$2.40 billion (9.1% higher than the previous year)
FY2021/22	HK\$2.20 billion (47.4% higher than the previous year)
FY2020/21	HK\$1.49 billion (26.3% higher than the previous year)
FY2019/20	HK\$1.18 billion (11.3% higher than the previous year)
FY2018/19	HK\$1.06 billion (10.6% higher than the previous year)

In the future, we will continue to increase investments in safe operation to comprehensively improve the safety management level of China Gas, achieving multi-dimensional, safe operation in all respects.

2.5 OCCUPATIONAL HEALTH AND SAFETY

China Gas has adopted the safety management approach of "Prevention Foremost, Safety First", "Integrated Management, and Responsibility of All Employees" to ensure gas safety and strengthen the operation safety in different dimensions, putting safe production at the first place. In addition, we have purchased safety insurance for our employees to further protect their welfare.

2. SAFETY OPERATION

Health and Safety Risk Management

The Group strictly complies with relevant national and local laws and regulations on health and safety, such as the *Work Safety Law of the People's Republic of China*, the *Social Insurance Law of the People's Republic of China*, and the *Regulations on the Administration of Urban Gas*. We implemented hierarchical management and control of health and safety risks associated with our business activities and have established a dual prevention mechanism involving hierarchical management and control of safety risks and the management of hidden dangers. China Gas has developed and improved its own health and safety risk management and control system based on the *China Gas Group Risk Classification and Control Guidelines (Trial)*. This system is implemented throughout the Group to guide and regulate project companies in establishing and enhancing their own health and safety risk management and control systems and implementing hierarchical management and control. Regional operation management centers and groups managed of by China Gas are responsible for organizing and supervising the risk management and control of each project company in the region.

To reduce the risk of accidents, the Group strictly implements safety and risk management measures. Regarding the implementation of health and safety risk management and control, project companies have developed their own system documents such as *Hazard Source Identification and Evaluation Management* and *Safety Risk Classification Management Control*, in accordance with laws, regulations, and the Group's requirements. They adopt methods such as hazard source identification and evaluation management, safety risk classification management and control, etc. These methods involve the identification of hazard sources and environmental factors in processes related to gas station operation and management, supply and sales services, and engineering construction. Major health and safety risks and significant environmental factors are evaluated and determined. Targeted control measures are then formulated and implemented across five aspects: engineering technology, management systems, training and education, individual labor protection, and emergency responses. These measures ensure effective control of health and safety risks. Following the implementation of health and safety risk identification and hierarchical control, project companies prepare the "Project Company Risk Assessment and Control Measures List" for record-keeping purposes.

Risk	Cause and Severity of Consequence	Response Measure
High-risk work at construction sites	Insufficient awareness of work risks among high-risk staff and improper wearing of protective equipment, resulting in work-related injuries.	<ul style="list-style-type: none"> Conduct safety production meetings and training sessions to promote occupational health and safety among employees. Procure qualified labor protection supplies personal protective equipment (PPE), and regularly inspect and maintain it. Enforce the requirement for operators to wear appropriate safety equipment during work.
Customer safety management risks	Inadequate investigation of hidden dangers, poor ventilation at the operation site, and improper maintenance, resulting in gas leakage and explosion.	<ul style="list-style-type: none"> Equip with inspection instruments and assist users to install alarm devices. Strictly implement and document operating procedures. Require employees to work with valid certificates and receive regular training.
Gas pipeline network facility risks	The aging natural gas steel pipes and severe corrosion and cracking, leading to pose risks such as gas leakage and explosions, and resulting in financial losses.	<ul style="list-style-type: none"> Strictly control new construction projects and refuse unqualified gas pipelines from entering operation. Provide safety knowledge and training to employees. Develop emergency plans for gas leakage incidents.



Safety Production Action Plan

To implement the nation's statements on production safety, China Gas formulated the "China Gas Implementation Plan of the Three-Year Action Plan for the Special Rectification of Production Safety" in accordance with the requirements of the State Council Work Safety Committee's "Notice on Printing and Distributing the 'Three-Year Action Plan' for Special Rectification of National Work Safety" (Work Safety Committee [2020] No. 3). The Implementation Plan aims to rectify the safety production problems existing in the Group, improve the level of safety production, and ensure the safety of employees and their property and the stable development of society. To strengthen the safe production of enterprises, China Gas has implemented the "Three-Year Action Plan for Special Rectification of Safety Production" to improve the level of safety production management and prevent accident risks.

China Gas Implementation Plan of the Three-Year Action Plan for the Special Rectification of Production Safety

2 Key Topics	<ul style="list-style-type: none"> (1) Analyze, publicize and implement President Xi's statement on production safety; (2) Implement the project company's main responsibility for safety production. These two topics aim to strengthen the understanding of production safety, promote the implementation of the concept of production safety and strengthen the fulfillment of the main responsibility of the project company for production safety.
4 Special Implementation Plans	<ul style="list-style-type: none"> (1) Special rectification on the safety of hazardous chemicals; (2) Special rectification on gas pipeline network safety; (3) Special rectification on fire safety; (4) Special rectification on traffic safety.

Three-Year Action Plan for the Special Rectification of Production Safety

4 Initiatives	<ul style="list-style-type: none"> (1) Improving safety emergency management capabilities; (2) Promoting the construction of safety protection measures; (3) Deepening safety accident management; (4) Strengthening safety education and training.
---------------	---

2. SAFETY OPERATION

Safety Emergency Plan

To enhance emergency response and repair capabilities, continuous assessments of emergency capacity are conducted, and emergency plans are revised in a timely manner. The effectiveness of “one case, one card” at working levels is improved. Special emergency exercises are carried out, covering various scenarios such as user-end leakage, third-party construction damages, major hazard source leakage, and transportation of hazardous chemicals. The emergency system is improved based on evaluation and exercise results, and emergency resources are deployed to respond to emergencies. The emergency response capabilities of 417 project companies have been established. In FY2022/23, we continue to put efforts in strengthening emergency repair capabilities and improving emergency response and repair capabilities.

Safety Guarantee Measures

To strengthen production safety management and consolidate the main responsibility of the Group, it established 10 special supervision groups led by the President’s Office. These groups, comprising 44 teams, 307 members from various departments such as Safety Supervision, Production and Operation, Customer Service Value-Added Business, Technology Management, Engineering Management, Digital Development, Procurement Management, Construction Engineering Group, and China Gas Energy, conducted comprehensive supervision in nine major regions and China Gas Energy Group. The relevant work has been completed in the FY2021/22. In addition, China Gas Hongda organized an inspection team to conduct special supervision and inspection of dangerous transportation vehicles. Inspection teams led by the President’s Office conducted cross-inspections on nine major regions and China Gas Energy Group, randomly selecting 44 project companies in January 2022. A total of 22,882 problems and hidden dangers were identified, with a 100% rectification rate for production and operation hazards. Currently, four hidden dangers in four project companies are being rectified. As of June 2022, over 97% of issues identified by safety management supervision groups were rectified. Furthermore, for FY2021/22, the five safety regulation centers completed safety inspections of project companies in piped gas, LPG and other businesses. China Gas Pipeline Inspection Co. Ltd. was established for inspections of natural gas pipelines and reporting to project companies correspondingly, so that the identified gas leakage can be properly resolved.

Safety Incident Management

To prevent accidents at the source, China Gas focuses on “two prevention” measures:

1. Strengthening the management of users by conducting gas safety publicity at least once a quarter, particularly targeting vulnerable groups such as empty-nest elderly, resettlement residents, and renters. Efforts are made to improve the intrinsic safety level of gas facilities at the user end, and the promotion of technical security devices like stainless steel corrugated pipes, self-closing valves, and gas alarms. Safety inspections are conducted with a 100% coverage rate and on an annual basis.
2. Taking measures to prevent damage to pipelines and networks by third parties through an optimized emergency response mechanism in collaboration with competent authorities of the local government. This includes the use of SCADA systems to promptly detect and handle abnormal parameters, strengthening pipeline network inspections to identify pipeline occupation and construction, and enhancing supervision at important construction sites to ensure the safe operation of pipeline networks.



Safety Education and Training

Regular safety production meetings are held to enhance employees' safety awareness. Monthly meetings are conducted to educate employees on policies related to occupational health and safety, analyse safety hazards and case studies. Safety promotion activities are carried out, and safety materials are shared with employees through online platforms, articles, and videos on the WeChat official account. More investments are made in safety equipment to create a healthy and safe working environment.

During the HSE rating review process in FY2022/23, the Group's Safety Supervision Center conducted 321 safety training sessions. Training topics included safety production laws and regulations, HSE systems, hazardous operation processes, and typical accident cases. Key personnel underwent closed book examinations, covering more than 5,367 employees. To test emergency response capabilities, 522 double-blind drills exercises were conducted, assessing comprehensive emergency rescue capabilities, on rescue timeliness, personnel capabilities, and equipment, etc.

Case: Daily First Aid Knowledge Lectures



To prioritize the health of employees and promote a culture of health, the administrative sharing Center of China Gas Holdings organized a series of daily first aid knowledge lectures in September 2022. The lectures were conducted by Dr. SONG Jiang Bin, the director of medical administration of Kexing Branch, iKang Healthcare Group. The training covered essential first aid skills, such as daily first aid and basic cardiopulmonary resuscitation. The lectures aimed to enhance employees' self-protection awareness, improve their emergency rescue capabilities, and foster a healthy cultural concept within the Group. Over 50 employees from various departments and professional companies at the Group headquarters participated in the training.

Occupational Health and Safety Data

Indicator	Unit	FY2022/23	FY2021/22
Number of people received safety training (general managers and safety management personnel)	person	1,456	1,021
Number of people received safety training (employees)	person	20,757	12,840
Number of safety emergency drills	time	8,720	4,573

Indicator	Unit	FY2022/23	FY2021/22
Rate of work-related injuries	%	0.0045	0.0055
Rate of serious work-related injuries	%	0	0.0018
Rate of work-related fatalities	%	0	0.0018
Lost days due to work-related injury	day	55	285
Total injury rate	per million hour	0.025	0.03
Number of casualties	person	0	0

2. SAFETY OPERATION

Employee Occupational Safety Assurance Measures

We pay close attention to the personal health and safety of our employees and are committed to providing a safe and comfortable working environment. To ensure the safety of employees, we require employees to be equipped with protective equipment that meets the requirements during the operation periods. According to the safety supervision mechanism, employees who do not wear or use protective equipment in accordance with the regulations are not allowed to work on the position. Employees are required to receive occupational health examinations before, during and after leaving the job position with personal occupational health monitoring files. To increase employees' awareness of occupational health and safety, we set up warning signs in workplaces, jobs positions and facilities that may cause occupational safety hazards. In addition, we identify and evaluate occupational hazards annually with a list of preventive measures that can be taken to ensure the occupational health and safety of employees.

Safety Production Month

In FY2022/23, China Gas organized the "Safety Production Month". During the Safety Production Month, 523 organizations in various regions, business departments, specialized companies, and project companies conducted 2,934 publicity activities. Over 1,210,000 publicity materials were distributed, and 1,701 articles on safety were published. On June 13, the Group organized the "Safety Warning Day", which included activities such as reflecting on accidents, identifying hidden dangers, conducting emergency exercises, providing feedback on typical accident experiences, and warning education. These activities aimed to enhance the safety awareness of all employees and raise awareness about potential accidents.

Safety Production Month in FY2022/23

Category	Unit	FY 2022/23	FY 2021/22
Emergency exercises	time	938	1,224
Safety knowledge competitions and speech contests	time	368	388
Skills competitions	time	460	256
External gas safety promotion	time	2,934	5,236
Safety training	time	7,326	6,216
Safety promotional materials distributed	thousand	1,213.3	1,000
Safety inspection activities	time	124,168 visits	2,454

2. SAFETY OPERATION

Safety Promotion Campaign

To leverage the leadership's role in promoting safety responsibilities, each project company conducted themed safety talks with employees. These talks focused on the General Secretary's discussions on safe production and the "15 Measures for Safe Production" issued by the Safety Production Committee of the State Council. A total of 526 safety talks were organized by 512 project companies. The face-to-face communication during these talks aimed to educate employees about safe production, improve their safety awareness, and ensure adherence to rules and regulations to maintain the safety of the Company and its employees.



2. SAFETY OPERATION

Case 1: Safety Assessment and Inspection Team of the Safety Committee of the State Council



During the national "Safety Production Month," the assessment and inspection team of the Safety Committee of the State Council conducted comprehensive safety assessments and inspections of China Gas' logistics companies not announced beforehand.

The assessments were carried out in accordance with the "2021 Provincial Government Safety Production and Fire Protection Work Assessment Key Indicators" and the "2021 State Council Safety Committee Member Unit Safety Production Work Assessment Key Indicators". The focus of the assessments included the implementation of important instructions for safe production, the fulfilment of responsibilities, the completion of annual work safety objectives, the implementation of measures to prevent and address major safety risks, and the progress of special production rectification.

The assessment and inspection team were divided into three groups. The first group engaged in detailed discussions with the person in charge, safety management personnel, and employees of the enterprise to evaluate the performance of the person in charge of hazardous chemical enterprises. The second team conducted on-site inspections, mainly on the monitoring and management of dangerous vehicles during transportation, the inspection of vehicle safety accessories, fire safety in parking lots, hidden danger investigation and management, emergency response measures, and the establishment of micro fire stations and their staffing. The third team inspected the implementation of recent notices on production safety management issued by the state, provincial, municipal, and county authorities. They focused on evaluating the safety responsibility management system, the dual control system, fire emergency exercises, and the provision of production safety funds. These assessments and inspections further heightened safety production awareness among all employees, strengthened the implementation of the safety production responsibility system, and maintained great vigilance in safety production.



Case 2: China Gas Cooperation with a Shenzhen Fire Brigade on Gas Safety Publicity

To fulfil the safety publicity requirements of the Group's "Thunder Action", the Group collaborated with the Fire Rescue Brigade of Yantian District, Shenzhen City to conduct gas safety publicity activities in June 2022. Through the joint efforts and coordination, a series of gas safety publicity videos were created to raise awareness among users about potential safety hazards related to indoor gas usage. The activities aimed to educate the public about gas safety and enhance their awareness of gas accident prevention.

The headquarters, all regions, and project companies actively participated in the "Thunder Action" by implementing centralized rectification and publicity measures to improve the safety of users' gas usage behaviours, reduce indoor safety accidents, and ensure the elimination of hidden dangers. The value-added customer service department conducted robust gas safety publicity and education activities to enhance the effectiveness and influence of safety publicity. Through collaboration with Shenzhen fire brigade, the correct concept of gas safety was promoted, and the Group's efforts to eliminate hidden dangers were successfully implemented.



2. SAFETY OPERATION

Case 3: Community Gas Safety Publicity Activity



To implement the important statements on disaster prevention, reduction, and relief, and to promote regulations on gas usage among residents in the area, China Gas Energy's project companies conducted gas safety publicity activities in various communities.

In May 2022, China Gas collaborated with several companies to carry out multiple gas safety publicity campaigns. For example, Changsha Gas and Heat Affairs Center, together with Changsha China Gas Baijiang, advocated for gas safety publicity on the National Day of Disaster Prevention and Mitigation. The objective was to enhance residents' awareness of safe gas usage, reduce the risks associated with gas usage, and establish a strong defence line for the safe use of gas. During the event, professionals provided free on-site safety inspection services for gas users in need, offering consultation on gas usage issues, explaining the causes of gas accidents, and providing preventive measures and precautions for daily gas inspections.

Similar gas safety publicity activities were also conducted in Nanjing Baijiang and Getang Street, where more than 150 sets of gas safety knowledge material were distributed to residents and commercial households while more than 30 consultations were received on site.

China Gas hopes that through these gas safety publicity activities, residents can fully understand and utilize gas safety knowledge, eliminate gas safety hazards, and create a safe gas usage environment.



Looking forward, China Gas will continue to improve the effectiveness of the Safety Production Month. By strengthening the authenticity of emergency exercises and the coordination and linkage of drills, we expect employees to take safety drills seriously. Through warning education and rich drills, the awareness of emergency response and response efficiency were improved, and all employees worked together to pay close attention to the construction and management of emergency response capabilities, which effectively improved the level of emergency responses.

2.6 DIGITAL SECURITY MANAGEMENT

Building A Digital Security Protection System

The Group is committed to providing customers with safe and high-quality services. To achieve this goal, we have established an operation and management integrated platform (“OMP”) to digitalize itself and achieve dynamic management of our existing businesses, including city gas, rural and township gas, gas refuelling stations, thermal power, and LPG.

The OMP has been fully deployed and launched. It serves as a crucial tool for China Gas’s operation and management. With a focus on safe production, we have established a result-oriented, data-driven, and management-enabled safety management and control system. By leveraging big data, the Internet of Things, cloud computing, artificial intelligence, and other technologies, we determine the construction strategy and overall structure applicable to the gas industry. We identify safety risk points in operation scenarios and control key control points based on the entire business process. Through the construction of intrinsic safety facilities, the utilization of IoT and digital intelligence technologies, and business process reengineering, intelligent management of all scenarios and processes can be achieved. The platform facilitates coordinated operation, efficient management, and scientific decision-making across all levels of the enterprise, setting a benchmark for digital construction in the gas industry. Currently, the OMP has been implemented and is operational in nearly 400 project companies.

Safety Digital Integrated Management Platform 2.0

The Group has established a Safety Digital Integrated Management Platform 2.0 that revolves around business applications such as safety production licensing, standardized management, and hidden dangers investigation. This system forms a safety production database with the enterprise as the unified data view. It enables multi-dimensional visual display and defines the standards for graphical components. Through various platforms such as portal websites, large screens, desktop terminals, portable terminals, and mobile communication devices, reliable operation indicator data is displayed and analysed in a comprehensive, multi-dimensional, and multi-perspective manner.

The launch of “Safety Digital Integrated Management Platform 2.0” is planned for completion in 2023. This system will include modules such as enterprise basic information, accident event management, education and training, hazard source management, and resource sharing. It aims to further enhance the level of safety management and provide real-time supervision and decision-making support for the working and management levels.



2. SAFETY OPERATION

2.7 CONTRACTOR AND SUPPLIER SAFETY MANAGEMENT

China Gas attaches great importance to the health and safety policy requirements and system of contractors to ensure the stability of the supply chain and the health and safety of employees, customers and contractors. Construction Engineering Group, a member enterprise of China Gas, is responsible for supervising the contractors' safety and quality. The "three-level management" model of "Construction Engineering Group — Contractors — Construction Team" is adopted from shortlisting review, process control to delivery inspection and acceptance to implement comprehensive management. The project department assigned by Construction Engineering Group is responsible for the specific implementation of daily management. In addition, China Gas has established safety accident control objectives for contractors, including the achievement of safety production management objectives and assessment indicators. Contractors are required to undergo safety training before commencing work and to adhere to occupational health and safety policies. This ensures the improvement of occupational health and safety management performance and the stable well-being and safety of all stakeholders in the value chain.

Objectives and Assessment Indicators for Engineering Contractor Safety Management	Objectives for Pre-Employment Safety Training for Engineering Contractors
1. No serious injury and fatality	1. 100% three-level safety education rate for new employees and safety education rate for transferred employees
2. No production safety accidents resulting in economic losses of RMB50,000 or more	2. 100% certification of project leaders, full-time safety management personnel, and special operation personnel
3. No safety accidents caused by quality problems, and no significant quality incidents due to fraud or illegal operations	3. 100% signing rate of safety production responsibility statements
4. No administrative penalties imposed for production safety violations	4. 100% on-duty rate of safety management personnel as planned, meeting the requirements of construction safety management
5. 100% utilization rate of safety protection supplies (such as safety helmets, safety belts, etc.)	
6. 100% of electrical equipment used in good condition and equipped with safety protection devices	
7. 100% disclosure rate of safety technologies	
8. 100% handling rate of injury insurance	



Preparing HSE System Covering Contractor Management Requirements

To regulate the occupational health and safety of contractors, China Gas has formulated the *China Gas HSE Management Manual*, covering four aspects: contractor qualification review, contractor safety training, contractor safety supervision, contractor safety assessment and evaluation. China Gas requires project companies to strictly implement the requirements to ensure that the contractors stay in line with the occupational health and safety indicators during the work process and reduce the occurrence of occupational hazards and occupational diseases.



<p>Contractor qualification review</p>	<ul style="list-style-type: none"> • Project companies must conduct thorough checks and review the safety and professional qualifications of contractors, including carriers and technical service providers, before admitting them; • Subcontractors working for contractors must be managed as if they were contractors themselves.
<p>Contractor safety training</p>	<ul style="list-style-type: none"> • Project companies are responsible for providing safety training to all personnel employed by admitted contractors. Only those who pass the examination could be granted entry permits.
<p>Contractor safety supervision</p>	<ul style="list-style-type: none"> • Subcontracting main works by general contractors, subcontracting of subcontracted projects, and illegal subcontracting are prohibited; • Project companies must sign safety agreements with contractors or stipulate safety responsibilities and terms in the contract. They should also verify the validity of the qualifications of the contractor's special operators and equipment operators; • Project companies are responsible for inspecting and supervising on-site operations of contractors and recording the results of feedback inspections and supervision; • Contractors are required to purchase personal accident insurance and other relevant insurances for all employees, which will be supervised and implemented by the project company.
<p>Contractor safety assessment and evaluation</p>	<ul style="list-style-type: none"> • Project companies conduct monthly safety performance evaluations of contractors and create a "blacklist" of contractors. Contractors listed in the "blacklist" are prohibited from further engagement.

2. SAFETY OPERATION

Contractor Safety Training

In FY2022/23, the engineering contractor conducted safety training and pre-service training as mandated by China Gas. Safety training sessions were conducted regularly as part of daily management activities, in light of factors such as seasonality, holidays, and daily management regulations. A total of 3,536 daily safety training sessions were conducted with 36,516 participants. Regarding pre-job training, all construction teams are provided with three-level safety education and training (in accordance with the three-level safety education management implementation measures) before entering the site. It ensures that they successfully pass the examination before commencing work, including new recruits. A total of 3,264 sessions of the three-level safety education and training were held, with 9,441 participants. Pre-shift safety education and training are provided to the construction team every day before entering the site. A total of 10,169 pre-shift safety education and training sessions were held, with 74,104 trainees.

Safety Training for Contractors

Category	Unit	FY2022/23	FY2021/22
Contractor safety training participants	person	535,437	841,813
Number of hours of safety training for contractors	hour	1,286,545	1,831,177
Number of contractors receiving safety training	No.	968	1,643
Coverage rate of safety training	%	100%	100%

Contractors and Suppliers Implement Safety Management Measures

To ensure compliance with production safety laws and regulations and provide effective guidance on production safety, the Group's Production Safety Committee implemented the "Key Points of Work Safety for China Gas in FY2022/23". All units were required to align their work safety plans with the key indicators, clearly defining responsible departments, individuals, completion standards, and deadlines for achieving measurable and evaluable performance. These key indicators also include regulatory requirements for contractors. Strict control is mandated over the qualifications, HSE performance, team quality, and on-site management capabilities of all types of contractors. The management of operation permits is strictly enforced, and illegal subcontracting is strictly prohibited. Monthly safety performance ratings and a "blacklist" system for contractors are implemented to enhance safety supervision effectively.

2. SAFETY OPERATION



The Group's occupational health and safety policies extend to work of the entire group including the management of external suppliers and contractors. *The Code of Conduct for Suppliers of China Gas and Code of Conduct for Contractors of China Gas*, issued by the relevant departments, clarify their responsibilities. Suppliers and contractors are supervised and evaluated by the supply chain company, the Construction Engineering group, and the five major supervision centers.

China Gas's commits to safe production throughout the value chain, including suppliers and contractors, which contributes to improving the safety production and providing safer and more reliable services to employees and other stakeholders.

2.8 STABLE GAS SUPPLY

The Group strictly follows the *Regulation on the Administration of Urban Gas of the People's Republic of China* to ensure urban gas development planning and emergency response, gas operation and services, gas use, gas facilities protection, prevention and handling of gas safety accidents and related management activities. During the Reporting Period, there was no confirmed case of non-compliance in relation to product responsibility that would have a significant impact on the Group.

Number of connected users (residential, commercial)	45,724,032 households
Number of connected gas users (industrial)	22,108 households
Number of gas stations	533 units
Total volume of natural gas sold to residential users	8,383 million m ³
Total volume of natural gas sold to industrial and commercial users	14,099 million m ³
Total volume of natural gas sold to vehicle refilling stations	523 million m ³
Length of gas pipelines	551,688 km
Total length of refurbished pipeline network completed	1,812 km

2. SAFETY OPERATION

Rectification and Management of Transmission Loss

China Gas aims to stabilize gas supply to reduce safety hazards, economic losses and environmental impacts caused by gas leakage. To this end, China Gas has implemented a two-level transmission and loss management mechanism, which is led by the project operation department of the headquarters for rectification, and implemented the transmission and loss plan and the accountability assessment of its indicators at all levels. In order to improve transmission loss control, the Group has formulated the “Transmission Loss Rectification Management Regulations” and implemented four rectification measures: rectification of transmission differences due to gas pipeline network, measurement inaccuracies, data handling errors, and gas theft.



<p>Rectification of transmission loss in gas pipeline network</p> <ul style="list-style-type: none"> • Establish robust scheduling and inspection systems to ensure tightness and safety of the gas transmission and distribution system • Establish a robust leakage detection and prevention mechanism to control the leakage rate at seal points of the gas transmission and distribution system • Establish a robust emergency repair and maintenance mechanism to control gas leakage and unexpected incidents in gas transmission and distribution system • Optimize pipe replacement scheme to strictly control the amount of gas escaped during construction 	<p>Rectification of transmission loss arising from data handling errors</p> <ul style="list-style-type: none"> • Standardize the settlement of the sales volume of civil prepaid households and evaluate the remaining volume • Increase efforts in internal inspections to improve metre recording accuracy • Perform monthly meter reading for wall-mounted heater users during warm seasons • Standardize billing practises for domestic prepaid users • Conduct operational safety checks of gas facilities by customer management officers • Identify hidden safety hazards and promptly arrange maintenance staff to carry out repair and rectification work
<p>Rectification of transmission loss due to measurement inaccuracies</p> <ul style="list-style-type: none"> • Establish a robust metering management system • Strengthen maintenance and weekly inspection of flowmeters • Strengthen management on flowmeter selection • Continue to carry out specific flowmeter rectification activities • Provide dedicated meters to village users • Promote industrial and commercial ultrasonic flowmeter 	<p>Rectification of transmission loss due to gas theft</p> <ul style="list-style-type: none"> • Take practical measures to prevent gas theft • Strengthening inspection and cracking down on theft

At the same time, China Gas issued the “Technical Regulations for Gas Flow Metre Selection” to strengthen the management of gas metre selection of various users and improve the effectiveness of rectification of transmission difference. During the Reporting Period, China Gas continued to combine the anti-theft of gas, strengthened the management of metre reading, and strived to further reduce the transmission difference rate to ensure the safe use of gas and economic benefits for customers.

Leakage Detection and Prevention Mechanism

The Group pays attention to the safety of the gas pipeline networks. To achieve this, China Gas provides guidelines such as the “China Gas Inspection Guidelines for Gas Pipeline and Ancillary Facilities,” “China Gas Pipeline Leak Inspection and Investigation Guidelines,” “China Gas Third Party Construction Guidelines,” “China Gas Pipeline Network Inspection Management Guidelines,” and “China Gas Guidelines for Prevention of Damaged Accidents (Incidents) in Gas Pipeline Facilities.” These guidelines ensure that employees understand the content and standards of gas pipeline network inspection, leakage detection, and monitoring. China Gas’s gas line patrol system allows project companies to have comprehensive information about gas transmission and distribution. In case of failures, the system enables quick and accurate fault location, assessment of the impact on gas users, and timely initiation of emergency repairs. It assists the dispatch center in determining the best plan for opening and closing valves, and on-site maintenance personnel can follow work orders for valve closure. The system also facilitates rapid response and disposal of urban gas pipeline network accidents, shortening repair time and minimizing losses.

Case 1: Strengthening Various Work Safety During Festive Season



During the National Day holiday, the Company deployed safe production measures in Northeast China and implemented the requirements of the “100-day Action.” Various departments conducted safety production inspections throughout the holiday period.

The inspection team visited the Qingtaizi Gate Station, Wanghua Station, Linjiang Road Station, Hebei Regional Grid Management Center, and Zhongwei International Community Pressure-regulating Station. They conducted key inspections on environmental safety, equipment operation safety, safety protection facilities, and personnel safety awareness. Instructions were given regarding safety-related issues at each station, and immediate rectification was required. To address gas consumption issues in a timely manner, maintenance and repair personnel of Mudanjiang China Gas were on standby 24 hours a day, and the business hall operated as usual. Hotline personnel were also on duty to ensure the normal use of gas by citizens.

Case 2: Carrying out the Safety Theme Activity of “I: a Line Inspector”



The Dalian Operation Group launched the safety theme activity of “I: a Line Inspector” throughout the financial year. The Group’s management and branch personnel regularly participated in line patrol with the line inspectors of each company. Through active involvement, communication strengthening, and problem-solving, the activity aimed to improve safety management, foster a safety culture, and consolidate safety practices.

This safety theme activity focused on strengthening third-party construction supervision and management. In strict accordance with its system, China Gas strengthened inspection and third-party construction supervision management. They cooperated with third-party construction companies to accurately disclose pipeline locations and record construction supervision data to ensure the safe operation of gas pipelines. The line patrol system played a crucial role. Data uploaded by the line patrol terminals underwent strict review and analysis. Whether for a third-party construction or a hidden danger rectification project, it was required to be recorded in the system to ensure that all identified hazards were handled promptly and effectively.

2. SAFETY OPERATION

Repair and Maintenance Mechanism

The Group has established several standards and guidelines to regulate and manage pipeline network maintenance, emergency repairs, natural gas ball tanks, and safety valves. These include the *"Guidelines for Emergency Repair in the Production and Operation of China Gas Group's Project Companies,"* *"Guidelines for the Construction of Emergency Repair System in the Production and Operation of China Gas Group,"* and *"Management Standards for the Operation and Maintenance of Gas Facilities."* Additionally, China Gas's three-level production, operation, emergency repair, and maintenance management system covers the Group, regional operation management centers/operation management groups, and project companies. The system has clearly defined emergency repair functions, structures, and technical equipment.

To ensure preparedness, the Group has implemented the *"China Gas Group Emergency Exercise Management System,"* *"China Gas Group Emergency Repair System Construction Work Guidelines,"* and *"China Gas Group Project Company Emergency Plan Preparation Guidelines."* They have also established measures to manage and assess incidents of third-party construction damage to gas facilities in a standardized and institutionalized manner.

Case 1: Rapid Repair of Damaged Gas Pipelines



In April 2022, Yangzhong China Gas received a gas leakage alarm for a damaged gas pipeline. Patrol personnel promptly arrived at the site, closed the valve to stop gas supply to surrounding commercial households, and set up warning lines. The main persons-in-charge of Yangzhong China Gas, safety supervision department, operation department, and emergency maintenance personnel also arrived to confirm the damage and formulate an emergency repair plan. After eight hours of work, the damaged pipeline was repaired, passed inspection, and gas supply was restored promptly.

China Gas will continue to strengthen daily monitoring, improve protection devices and safety warning signs for gas facilities, and ensure their safe and reliable operation.



Pipeline Network Reconstruction Mechanism

The Group continues to address hidden dangers in the pipeline network. To enhance pipeline availability and reduce potential safety hazards, China Gas undertakes comprehensive cleaning and reconstruction of old cast iron pipe networks. They install remote leakage detection devices in older pipelines, prone pipe sections, and valve wells for 24-hour monitoring. These measures ensure the intrinsic safety of pipelines, reduce gas leakage, and facilitate prompt handling of any leaks. The Group conducts an assessment of the current situation of cast iron and old steel pipe networks, classifies them based on priority, and implements transformation plans in the Northeast Region, Northwest Region, and North China Region.

The Group will continue to implement the replacement plan of old pipelines and accelerate the reconstruction of old pipelines. During the Reporting Period, it was planned to complete the refurbished pipeline network with a length of 1,762 km. With the cooperation of departmental employees, the actual length of the old pipeline network was 1,812 km in FY2022/23, with a completion rate of 102.82%.

Case : Baoshan China Gas's Renovation of Old Pipelines Against Potential Safety Hazards



In November 2022, Baoshan China Gas successfully carried out the renovation project of an old pipeline network, which is well-prepared and much exchanged on. The comprehensive renovation project involved the refurbishment of 127 km of medium and low-pressure gas pipelines, benefiting 30,000 gas users in 559 old communities. China Gas conducted thorough preparations, including coordination meetings, engineering promotions, and multi-department meetings, to ensure the successful those of achievement of project targets within two months.

3. Social Contribution



113	3.1	FY2022/23 Highlights
114	3.2	Rural Revitalization
117	3.3	Relocation for Local Residents
120	3.4	Social Responsibility



3. SOCIAL CONTRIBUTION

The Group always takes “Converging in Harmony and Benefiting the Communities” as its mission, earnestly fulfils its responsibilities as a corporate citizen, gives back to the society with its own advantages, actively innovates gas supply technology, gas supply model and business model and actively participates in Rural Revitalization, committed to improving the community and contributing to the healthy development of the society. In the process of project investment and development, the Group takes into account the interests of community development and local people in project development, committed to achieving harmonious coexistence communities carried with local communities. We devote ourselves to building a better society and launched a number of activities:

- Innovate gas supply technology, gas supply model and business model, support the construction of rural public infrastructure, and actively invest in rural revitalization with a number of measures such as rural MicroGrid network, rural e-commerce, and rural coal-to-gas conversion
- Conduct in-depth public welfare and charity activities, continue to donate to brand charity projects, actively implement volunteer services and public welfare communication, share the corporate development outcomes with the society with sincerity, and drive more public to participate in public welfare
- Incorporate community development and the interests of local people into the project development process, and strive to achieve harmonious coexistence with local communities

3.1 FY2022/23 HIGHLIGHTS



Innovating gas supply technology, gas supply model and business model to comprehensively promote rural revitalization

- Supply heating services to more than 4 million rural residents every year.
- Huangtanglu Village, the first government-subsidized natural gas “Village Connect” pilot project in Jiangbei District of Nanjing is officially connected to natural gas on 9 January, 2023

3. SOCIAL CONTRIBUTION

3.2 RURAL REVITALIZATION

The comprehensive promotion of Rural Revitalization is an important task to build a strong agricultural country in the new era. In January 2023, the Central Committee of the Communist Party of China and the State Council published the *"Opinions on Carrying out the Key Work of Comprehensively Promoting Rural Revitalization in 2023"*, which was the first *"No. 1 Central Document"* to guide the work of "agriculture, rural areas and farmers" issued after the 20th National Congress of the Party, and conveyed a strong signal of focusing on and strengthening agriculture. China Gas conscientiously implements the requirements of the *No. 1 Central Document* of the central government, and actively takes actions in the construction of agricultural infrastructure, the expansion of sources and channels of income for farmers, the construction of livable and beautiful villages. China Gas made full use of its own technology to innovate and explore rural gas supply technology and business model innovation. Through the innovation of gas supply technology, gas supply mode and development mode, the Group promoted the development of rural gas business, supported the construction of rural public infrastructure and comprehensively promoted Rural Revitalization through rural MicroGrid network, rural e-commerce and rural coal-to-gas conversion.

Design and Development of Rural MicroGrid Network

Following the first inclusion of "Rural MicroGrid" into the *No. 1 Central Document* in 2021, China Gas was once again mentioned in the *No. 1 Central Document* issued in 2023 by the Central Committee of the Communist Party of China and the State Council. The document mentioned that "promoting the urban and rural construction and management of general service facilities such as power supply, gas supply, telecommunications and postal services in county areas, and promoting the coverage extension of municipal pipeline network and rural MicroGrid network to households." The gas supply system for rural gas storage tanks and MicroGrid network has been continuously piloted, designed and developed by China Gas in the past few years, and has been highly valued by the Central Committee of the Communist Party of China and the State Council.

Based on the gas supply technology of small-scale propane storage tanks commonly used in rural areas of developed countries, the system integrates new technologies such as the Internet of Things, intelligence and cloud platforms, and has established a technical standard, product system and operation scheduling system platform that better adapts to the characteristics of the Chinese market. The original gas supply model of "bottled supply, individual and self-storage" has been transformed into a model of "centralized gas supply, distributed MicroGrid network to households, and remote online monitoring by enterprises". It is praised by experts as "revolutionary technology that changes the energy consumption structure of China's rural areas for decades", which is in line with the national Rural Revitalization and energy system strategic direction, and is the most suitable revolutionary gas supply method for large-scale promotion in China's rural areas.

We actively promote gas consumption in rural areas, use the "bottle-to-pipe" project, promote the use of clean energy in rural areas, and replace diesel combustion to reduce carbon emissions. We have invested in the construction of demonstration projects in Qinghai, Yunnan, Shandong, Hunan and other places. Currently, we have signed contracts with 30 villages in Qinghai, covering 6,197 households. We have completed the construction in 8 villages and installed gas ignition projects, with 426 households installed. We will conduct large-scale replication and promotion of the smart MicroGrid network construction project in the vast rural areas of China, striving to create a low-carbon economy and a livable environment.

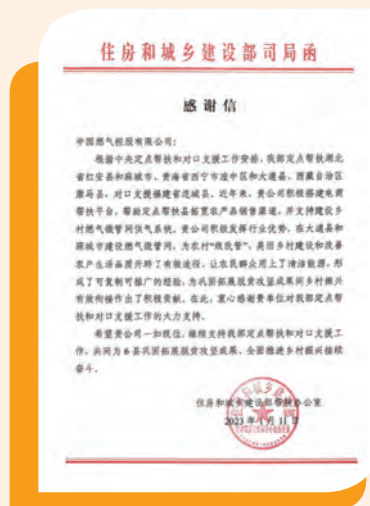
Exploration of Rural E-commerce Services

While promoting the new energy strategy in rural areas, the Group actively cooperated with the government to explore sustainable development in rural areas. In response to “low incomes and difficulties in selling agricultural products” in rural areas, China Gas integrated the Group’s urban community service network, customer channels and new retail platform resources, relied on the gas service stations in the villages to carry out rural e-commerce services, and created the “Smart Living” e-commerce platform. The platform has created a “China Gas Special Supply for Agricultural Products” model for household users, helping local farmers to put agricultural products on the e-commerce platform for sales, improving the sales of agricultural products through live broadcast and best-seller strategies products on the platform, solving the problem of product sales channels for farmers, and promoting the continuous increase of farmers’ incomes.

Case: Leveraging Technological Advantages and Model Innovation to Promote Rural Revitalization in Targeted Counties

In January 2023, China Gas received a letter of thanks from the Poverty Alleviation Office of the Ministry of Housing and Urban-Rural Development. China Gas has fully affirmed and expressed its sincere gratitude to China Gas for its assistance in poverty alleviation and rural revitalization in its designated counties.

In response to the national call for “Poverty Alleviation” and “Rural Revitalization”, China Gas was invited to participate in the construction of the demonstration project of “joint creation of poverty alleviation and beautiful and livable rural construction” by the Ministry of Housing and Urban-Rural Development in 2018. The Group assisted the Ministry of Housing and Urban-Rural Development to develop and operate the “Smart Agricultural Living” mini program, which established a direct sales channel for agricultural products for local farmers connecting 40 million urban users of China Gas. From 2019 to 2021, through the mini program and the e-commerce platform of Smart Living, we have helped 21 poor rural farmers in Qinghai, Hubei and other provinces and rural users nationwide to launch 865 agricultural products within three years, with a total sales of 1.99 million pieces and a total amount of over RMB105 million.



3. SOCIAL CONTRIBUTION

Promotion of Rural Coal-to-gas Conversion

The Group actively responded to the national call for air pollution control, continued to promote the “replacement of coal with gas” project, and regarded the promotion of rural coal-to-gas conversion as an important strategic direction of the Group’s development. In terms of promoting rural coal-to-gas conversion, we have implemented it according to local conditions. Rural coal-to-gas conversion should not only educate farmers on how to use modern living facilities such as natural gas stoves, wall-hanging furnaces and ovens, but also let every farmer clearly understand how to ensure gas safety and how to deal with accidents in a timely manner, and also help them master the knowledge of scientific use of clean energy and use energy in a rational manner.

We provide heating services to more than 4 million rural residents every year. On 9 January, 2023, the Huangtanglu Village Project, the first government-subsidized natural gas “Village-to-Village” pilot project in Jiangbei District of Nanjing, was officially connected to natural gas. By the end of March 2023, the rural gas replacement transformation has been installed in 3.56 million households and 3.1 million households have been connected to and are using natural gas. The project effectively improves local air quality and accelerates the construction of rural infrastructure facilities.

Case: Enhance Gas Safety Promotion and Improve Safety Awareness for Villagers



In order to prevent and reduce third-party construction damages and safety accidents of gas pipelines, and enhance the safety protection awareness of villagers along the long-distance pipelines, from 27 March to 5 April 2022, under the leadership of the heads of each area, the line inspectors of Huanggang China Gas, through various forms such as setting up safety production publicity boards, banners and on-site explanations, carried out safety publicity activities for gas pipelines in the villages along the pipelines such as Xishui, Huangmei, Wuxue and Qichun to ensure the safe and stable operation of the long-distance pipelines during Qingming Festival.

On the site, the staff distributed safety publicity materials, explained the direction of the Company’s pipelines and how to protect natural gas pipelines, strengthened the general knowledge publicity of avoiding third-party construction damage incidents and the warning education of typical accident cases, in order safety alarms to prevent accidents. The line inspectors patiently answered questions raised by the villagers. During the seven-day safety campaign, we distributed more than 2000 safety manuals in total, which not only expanded the safety publicity of gas and public awareness, but also enabled villagers to understand the importance of gas pipeline safety more intuitively.



3.3 RELOCATION FOR LOCAL RESIDENTS

The Group has always incorporated community development into the process of project investment and development and strictly follows the guiding principles in the *Environmental and Social Management System*. The Group also complies with the relocation guarantee and local people's protection requirements in the *Safeguard Policy Statement* of the Asian Development Bank, avoids or minimizes the disturbance to the lives and livelihood of community members during project construction and operation, and is committed to achieving harmonious coexistence with the local communities.

Local Resident Relocation Plans

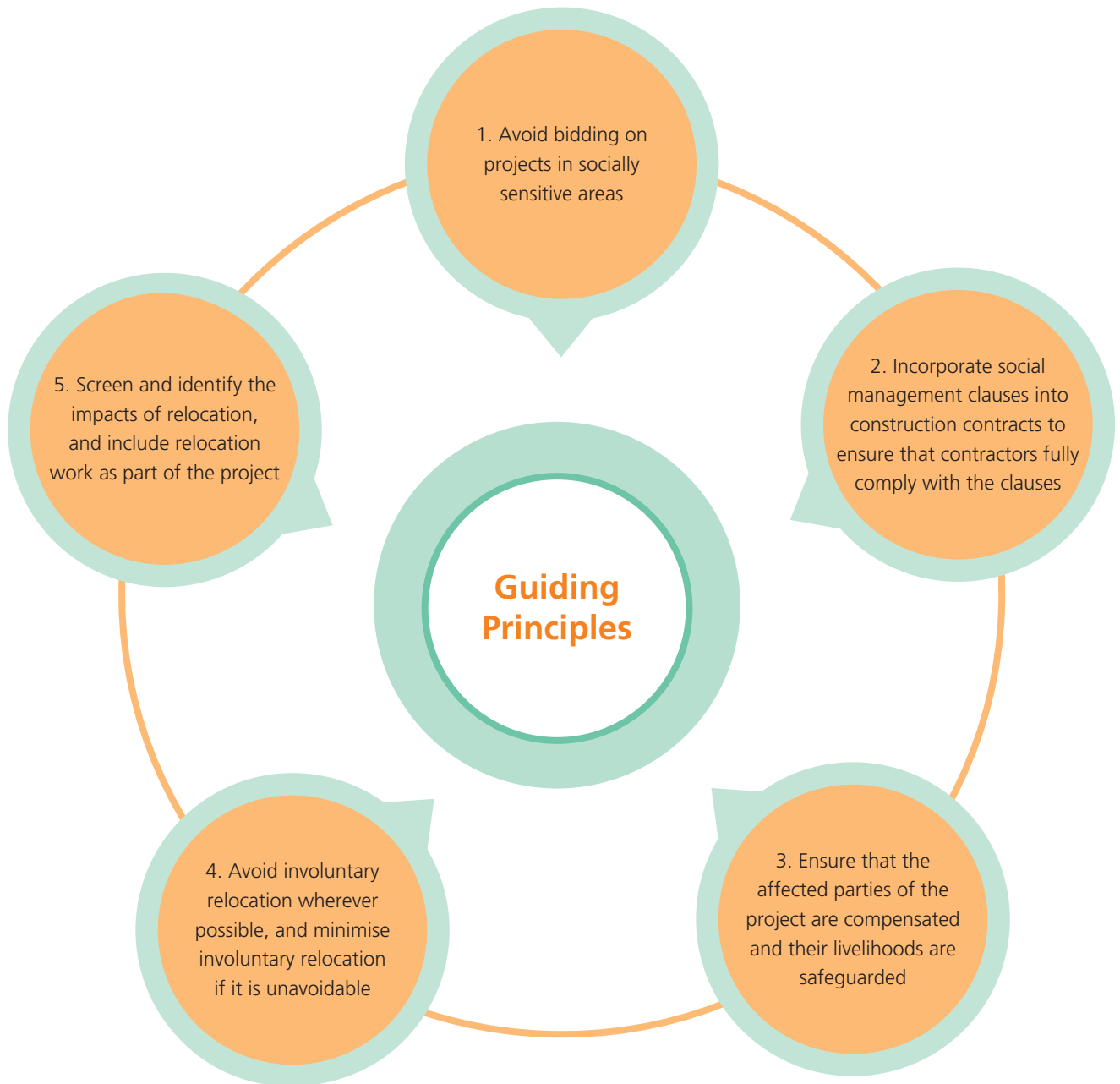
The Group follows the guiding principles of the Safeguard Policy and the relocation security of local residents covers the entire process of the entire project lifecycle, including impact assessment, planning and mitigation measures to address potential adverse impacts. China Gas will conduct preliminary social assessments on the development projects to identify and assess the needs of various groups (such as affected households, local people, vulnerable groups, etc.). In designing and implementing projects, we fully respect the definition of the identity, dignity, human rights, lifestyle and cultural characteristics of local people, so that they can receive social and economic benefits that are consistent with their cultural traditions.

If it is recognized at an early stage that the project will have an inevitable impact on communities, we will strictly follow the requirements of the Asian Development Bank in compensation, subsidy, benefit sharing, social impact assessment, resettlement plan, information disclosure, negotiation, grievance mechanism, monitoring and reporting, and strive to maintain and protect the rights and interests of the affected groups so that they can obtain the same level of livelihood as before the project is implemented. When it is inevitable to undertake resettlement plan, we will study and explore all possible opinions of enhancement proposals and alternatives to minimise the number of people affected by the actual resettlement and loss of land or loss of income sources and the extent of the impact. During the Reporting Period, the Group did not have any projects requiring resettlement, nor was there any infringement of the rights of local people.



3. SOCIAL CONTRIBUTION

Guiding Principles of the *Safeguard Policy Statement*



Impacts of Projects on Residents Prioritized

The Group pays attention to and strives to improve the impact on residents during the construction period. In terms of gas projects, we require construction units to strictly implement the *Interim Provisions on Civilized Construction and Environmental Management of Construction Sites*, conduct regular maintenance and strict-standard operation of mechanical equipment, and select low-noise equipment as much as possible.

In addition, in order to further reduce the impact on residents, we have added shock-proof pads to fixed machinery such as cutting machines and electric welding machines, and built the construction site with enclosure, and stopped the construction from 12:00 noon to 2:00 p.m. to prevent disturbers. If the pipe ditch is backfilled, we will lay the incomplete cement pavement or asphalt with red bricks to prevent personnel from falling. Before roadside excavation, we strictly follow the corresponding system, handle the relevant excavation procedures, and inform the surrounding residents. In order to reduce the impact on residents, we choose to enter and exit construction materials during office hours.

Establishment of an Effective Consultation and Participation Mechanism

In accordance with the requirements of the *Safeguard Policy Statement* of the Asian Development Bank, the Group has established an effective negotiation and communication mechanism for affected groups. When a project may cause relocation or other negative impacts on the local people, we will conduct effective communication and negotiation with the affected groups or communities at the earliest stage of the project, and pay compensation to the affected groups in strict accordance with the legal requirements. At present, all projects of China Gas have established a sound complaint mechanism to jointly seek solutions through in-depth collection and response to the requirements of affected groups.

“Effective Negotiation” of the *Safeguard Policy Statement* of ADB

Continual consultation

Effective consultation begins in the early project cycle and is carried out on a continual basis throughout the project cycle, and often conducted in local dialects. The affected persons are adequately informed about the project’s potential adverse impacts and mitigation are proposed.

Timely disclosure of relevant and adequate information

Affected persons should have access to relevant project information such as the nature of the project, the scope of and reason for land acquisition, the resettlement objectives and entitlement matrix, available choices regarding future life, rights of the displaced people to participate in resettlement planning and implementation, and the grievance mechanisms.

No intimidation or coercion

Negotiations need to be conducted in a transparent and open environment; affected people can freely express their opinions without being manipulated, interfered or threatened by external conditions.

Focus on the needs of vulnerable groups

No gender discrimination should exist to ensure the participation and consultation of women and vulnerable groups, and take their concerns into consideration, such as project design, impact mitigation measures, sharing of development achievements and opportunities, and execution issues.

3. SOCIAL CONTRIBUTION

3.4 SOCIAL RESPONSIBILITY

With the mission of “Converging in Harmony and Benefiting the Society”, China Gas have always been enthusiastic about public welfare, caring for and serving the society. The Group established China Gas Charity Foundation (the “Foundation”) in 2014. The Foundation combines its own products and services with public welfare, aiming to serve the development strategy of China Gas by adhering to the general principle of “bringing love to the outside and caring for the inside” and the concept of “The public welfare for all is the real public welfare”. The Foundation actively explores the public welfare operation mechanism with the characteristics of China Gas, closely integrates with the characteristics of China Gas, and serves the development strategy of China Gas, and plays an active role in public welfare fields such as caring for women and children, poverty alleviation, flood control and disaster relief, and anti-epidemic condolences.

During the Reporting Period, the Foundation continued to carry out public welfare projects in the fields of rural education, rural revitalization, flood control and disaster relief, and medical assistance in accordance with the overall principle of “bringing love to the outside and caring for the inside”. At the same time, the Foundation established a volunteer service team to solidly promote the high-quality development of China Gas’s public welfare and charity, and carried out public welfare undertakings in various places to help the vulnerable groups in the society with practical actions and care for the society.

During the Reporting Period, the Group’s key achievements in different charitable areas (including charitable donations, community investment and business initiatives) are as follows:



Total donations (including in-kind donations) for public welfare projects in FY2022/23
HK\$5,437,000



Total hours of employee volunteering in FY2022/23
2,523 hours



Total number of employees participating in volunteer activities in FY2022/23
16,890 participants

Stable Supply of Natural Gas

Against the backdrop of a complex and severe domestic and international supply situation, natural gas supply prices continued to rise, raising the cost of gas sources for urban gas enterprises. By fully predicting the demand for natural gas in the operating regions, China Gas reasonably controlled the procurement cost of gas sources, steadily promoted the natural gas pricing, and actively optimized the gas source structure to ensure the sufficient supply and price stability of residential and non-residential gas. Driven by the “supply and price security” policy in winter, China Gas helped its gas sales to achieve a new round of breakthrough in the heating season.⁷

⁷ The natural gas price refers to the price determined by the enterprise based on the purchase price of natural gas, plus the current reasonable cost and minimum profit.

3. SOCIAL CONTRIBUTION

Community Construction and Services

Over the years, China Gas has been committed to public welfare activities and has always believed that “The public welfare for all is the real public welfare” to benefit the society. The Group has established a volunteer service team to encourage employees to actively participate in volunteer services and serve the community construction. During the Reporting Period, the volunteer service team participated in various types of volunteer services, including telecom fraud prevention volunteer services, gas safety publicity, public welfare day activities, etc.

Case: Popularize the Gas Use Regulations for Residents in the Area to Effectively Prevent Disaster Risks

China Gas Energy’s project companies visited communities and served gas users with care. Focusing on the theme of “Mitigating Disaster Risks and Guarding a Beautiful Homeland”, Southwest Anshun Gas Station of Baijiao Jiangxi fully recognized the significance of risk prevention and mitigation, and carried out gas safety publicity in Ruofei Square in Anshun City and Nanma Square in Anshun City.

During the activity, fire emergency response exercises and first aid exercises for injuries and illnesses were arranged on site. At the same time, the Company distributed gas safety manuals to citizens, promoted safety knowledge, introduced various high-quality service businesses of the Company, patiently answered all kinds of difficult problems in gas use for users who came to consult, and extensively collected opinions and suggestions from the general public. On that day, more than 500 gas safety data were distributed, more than 100 people received public consultation, and more than 10 users received feedback. The event was well received by the public afterwards.



3. SOCIAL CONTRIBUTION

Together for Charity

In order to organize and carry out charity and public welfare activities in an orderly manner, the Group has issued the “Charity and Public Welfare Activities Management Policy” to regulate and supervise various public welfare activities carried out by the Group, so as to ensure that charity activities can be implemented. We practise the concept of “practising love and contributing to public welfare” with practical actions.

Case 1: Children’s Day Activity on Love and Care for Children

On 31 May 2022, China Gas joined hands with Huanggang Border Inspection Station of Shenzhen Border Inspection Station to form a condolence team to go to Peixiu Primary School and Pingxianjia Primary School in Liangchong Village, Tongle Township, Sanjiang County, Tongle Miao Township, Sanjiang County, Sanjiang County, Liuzhou City, Guangxi Zhuang Autonomous Region to carry out the donation and condolence activity of “Spreading Love on Children’s Day”, visiting the children of the designated village schools and affiliated kindergartens, and giving them holiday gifts in advance with love and care, so as to continuously power the happy childhood of the children.

CHEN Yan Yan, Party Secretary of China Gas, immediately donated to the campus according to the actual needs after learning the lack of supplies for the kindergarten in Peixiu Primary School in Liangchong Village, and appointed WANG Meijun, Deputy Secretary of Youth League Committee of the Group, to donate 30 children’s beds and outdoor amusement facilities on Children’s Day. At the same time, the condolence group sent nearly 100 items to the students of primary and secondary schools in Pingshanjia, such as school bags, sports fitness kits (jump rope, grip, elastic bands), outdoor waist bags, towels, sports sun scarf, and toys.



3. SOCIAL CONTRIBUTION

Case 2: Participation in The Community Chest “Hong Kong & Kowloon Walk for Millions” and Supported for Public Welfare with Practical Actions

The Community Chest’s first major fundraising event in 2023, Hong Kong and Kowloon Walk for Millions, resumed the physical Walk for Millions on 15 January 2023. China Gas Charity Foundation donated HK\$50,000 to support the fundraising of family and child welfare services. The funds raised from the event were donated to 24 member institutions providing family and child welfare services without any deduction of expenses.

香港公益金 THE COMMUNITY CHEST 主辦
中國銀行(香港) BANK OF CHINA 全力支持

港島、九龍區百萬行

HONG KONG & KOWLOON WALK FOR MILLIONS 2022 / 2023

為公益籌款助工、家庭及兒童福利服務，獻款予「Senior Family and Child Welfare Services」supporting The Community Chest

起點 Start Point
香港大球場
Hong Kong Stadium

最新轉捩點 Start time
上午8時至中午12時正
8:00 am - 12:00 pm

終點 Finish Point
香港仔郊野公園遊客中心
Aberdeen Country Park
Visitors Centre

2023.1.15 (星期日) (Sunday)

參加者請預先報名!
Pre-registered attendance is required!
志願者請以表格列明參與方式選擇「橫濱跑」!
Due to limited capacity, attendance is via a first-come-first-served basis.
*All participants have to adhere to the prevailing anti-pandemic measures.

主席 Chairman: 李愛平博士 Dr Christina Lee, MEd
 籌備主席 Co-Chairman: 周錫威博士 Dr Chow Kam Wai, MEd
 周廷棠 A.S.M.S. Mr Peter Chow, JP
 廖靜儀女士 Ms Candy Liu

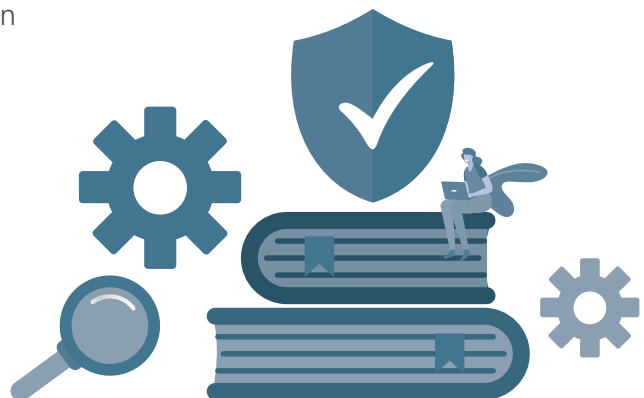
香港賽馬會 Dr-Hank Jockey Club
 香港公益金 THE COMMUNITY CHEST

活動詳情 Event details: [comcheat.org.hk](https://www.comcheat.org.hk)

4. Service Guarantee



125	4.1	FY2022/23 Highlights
125	4.2	Product Quality Assurance
128	4.3	Intellectual Property Protection
128	4.4	Digital Transformation
130	4.5	Customer Care






4. SERVICE GUARANTEE



As the demands for product quality and functionality from new generation of consumers continue to increase, service quality standards also continue to rise. In the long run, creating high-quality products and services will be one of China Gas' core tasks, and we will continue to explore the following aspects for improvement:

- Establish a sound and complete product quality inspection system to promote product quality management and the monitoring and tracking of tainted products for yet better products and services
- Adopt customer-oriented approach to explore new service operations for improving customer experience and service quality
- Strengthen technological innovation and protect intellectual property rights in line with the trends of technology transformation

4.1 FY2022/23 HIGHLIGHTS

 Increased self-manufactured products	<ul style="list-style-type: none">• On top of original OEM manufacturing, the Group increased the self-manufacturing business of products, i.e. from R&D, production to sales of products are all self-controlled. While strictly controlling OEM manufacturing, strict control measures have been implemented for self-manufactured products, from raw materials possessing to production inspection to finished-product warehousing.
 Enhanced quality management system	<ul style="list-style-type: none">• The Group further improved and revised the internal quality management system documents, including making clearer regulations from raw material acceptance inspection, process inspection, key control points, finished-product sampling and inspection, etc.• The Group conducted quality inspections during production, delivering inspection records, issue reports, issue analysis and correction, measures and also closed-loop management of optimization tracking.• The Group successfully passed the factory audit of fire safety certification, CCC product certification and ISO three-system certification.
 Further digital transformation	<ul style="list-style-type: none">• Completed the construction of 329 companies' supervisory control and data acquisition (SCADA) cloud platform and connected to the Group's power monitoring system cloud platform.

4.2 PRODUCT QUALITY ASSURANCE

China Gas has always placed product quality at the core, and is well aware that improving product quality and safety is the fundamental path for the survival and development of an enterprise. The Group strictly follows standard operating procedures for quality management and uses standard operating steps and requirements to guide and regulate quality management. A strict and detailed quality inspection process has been established, and different testing processes have been adopted according to the type, location, method and process of product production to ensure the stability and reliability of product quality.

4. SERVICE GUARANTEE

Product Quality Management

Since 2015, China Gas has started to develop value-added business and simultaneously established the “Smart Living” laboratory. We have implemented management in accordance with ISO 17025 laboratory management system, and through strict quality control, no accidents regarding to product quality and safety has occurred in the past 8 years, ensuring the safety of people’s lives and properties. We have developed a comprehensive product quality control process that runs through all aspects of production, includes:

1. **Product R&D:** Establish product R&D team with over 100 sets of avant-garde testing equipment for gas appliances from home and abroad;
2. **Selection of suppliers:** strict quality control and evaluation systems for suppliers and use accessories from top tier suppliers;
3. **Raw material testing:** Comprehensive testing on gas boiler parts with 39 sets of testing equipment;
4. **Production process testing:** first Article Inspection (FAI) implemented; with inspections every two hours for sufficient level of accuracy and granularity on, for example, each of the strength of each screw, covering workers, equipment, raw materials, methodologies, procedures and testing;
5. **Sample testing for finished goods:** 98 testing items tested for strictly control of the quality of finished products, on combustion conditions, thermal efficiency, electrical properties, air tightness and packaging.

Product Complaint Management

Upon receipt of a customer complaint regarding products and services, the Group’s customer service department will respond immediately and handle the complaint in accordance with standardized service procedures:

1. **Complaint acceptance:** According to the standard processing process, “complaint acceptance (establishing complaint cases) — preliminary analysis (distinguishing seriousness, majority and minority) — filling out “*Customer Complaint Processing Record Form*” and other steps. Record customer complaint data and relevant materials in detail, and submit them to the relevant manager for timely and effective processing.
2. **Complaint analysis:** After receiving the Customer Complaint Processing Record Form, the responsible officer of the relevant unit will hold a meeting to review and analyze the causes. At the same time, to prepare the *Report on Improvement Measures for Abnormal Effectiveness of Customer Complaints* for tracing.
3. **Complaint handling:** We will make feedback, improve and handle the situation, actively communicate with customers to coordinate solutions, with the responsible department to establish improvement measures and closure plans, as well as the final tracking of improvements to ensure that the problem is completely resolved.

In addition, in the process of handling complaints, we keep in touch with consumers, share the processing progress in a timely manner, and provide customer care to avoid product returns and escalation of complaints. If it is not a product quality problem, we carefully explain with the customer and show the identification result and basis, analyze the possible causes in collaboration with the customer, and discuss with the customer the follow-up solutions to the problem.

4. SERVICE GUARANTEE

Complaint type	Number of complaints		Complaint resolution rate	
	FY2022/23	FY2021/22	FY2022/23	FY2021/22
Total	787	970	99%	96%

Category	FY2022/23	FY2021/22
Product and service related complaints	51	56
Product returns or recalls for safety and health reasons	45	36
Percentage of total products sold or shipped subject to returns/recalls for safety and health reasons	0.02%	0.00%

Quality Recall Process

In order to better protect the rights and interests of customers and the corporate image, the Customer Service Value-added Department took the lead in establishing an emergency response team for product recalls, and clarify the responsibilities of the members of the product recall emergency response team. In the event of a product recall, the product recall emergency team will work quickly to ensure that the recall work is carried out in an efficient and orderly manner.

1. **Information feedback and analysis:** For product quality and safety problems feedback by customers, for unqualified products found in national sampling tests, and product safety accidents or serious quality problems found within the Company, the finder will promptly report to the Operational Customer Service Department in the form of "Information Contact Form" together with other complaint information. Based on the analysis results of the information feedback, the Operational Customer Service Department will decide whether to start the product recall procedure.
2. **Implementation of product recalls:** The Operational Customer Service Department prepares a "Product Recall Notice" and delivers it to the Sales Department and other relevant departments in a timely manner, asking the distributors or project companies to stop selling the products to be recalled. These products will be taken off the shelves, sealed and returned to the Company warehouse for isolation, sealing and marking.
3. **Handling of recalled products:** The Operational Customer Service Department will firstly evaluate the recalled products and related stock products, and then propose handling opinions and submit them to the supervisor for approval in the form of a "Non-conforming Product Evaluation Sheet". The relevant departments will handle the recalled products and related stock products according to the processing decision on the "Non-conforming Product Review Sheet".
4. **Correction and improvement:** After the product recall is completed, a conclusion of the product recall shall be made. In the summary, the reasons for the recalls should be identified, the sales areas and product types involved in the product recalls, the results of the handling of the recalled products, the impacts of the recalls on the Company's reputation, and the economic losses caused by the recalls to the Company should be clarified. At the same time, the Company shall put forward suggestions for handling and prevention measures.

Through the above-mentioned well-established product recall mechanism, we can respond to product quality and safety issues in a prompt and effective way to protect customer rights and corporate reputation. During the recall process, we will continue to summarize our experience, improve the mechanism, enhance the emergency response capability and customer satisfaction, to ensure a steady improvement in product quality and safety.

4. SERVICE GUARANTEE

After-Sales Services

China Gas is committed to improving customer services. We follow the “*Law of the People’s Republic of China on Product Quality*” and the “*Consumer Rights Protection Law*” and set a three-year free maintenance standard that is higher than the national law. We also comply with the standardized procedures in the return and exchange process to ensure that the process of receiving, reviewing, processing, tracking and confirming products is smooth and accurate, while quickly responding to and processing customers’ return and exchange applications, the Company is continuously optimizing product quality and after-sales service system to meet customers’ needs and expectations.

4.3 INTELLECTUAL PROPERTY PROTECTION

China Gas strictly observes the *Chinese Patent Law*, *China Trademark Law*, and other laws and regulations, and has prepared the *Basic Code of Conduct for Employees*. Employees are strictly prohibited from infringing or leaking copyrights, and suppliers and business partners are required to respect and protect intellectual property rights. At the same time, we have established an intellectual property management mechanism, with the Legal Internal Audit Department and the Administration Department coordinating to manage the intellectual property needs of all departments, monitor and maintain intellectual property protection matters, sort out and identify intellectual property protection loopholes by conducting annual reviews, and continuously update external intellectual property management system certification. In addition, we continue to strengthen investment in R&D, conduct training on IPR topics, and set up a knowledge innovation reward system to create a favorable innovation atmosphere and continuously increase the number of independent IPRs.

FY2022/23 Number of patents, trademarks and copyright applications	35
FY2022/23 Innovative R&D funding	RMB231,600,437

4.4 DIGITAL TRANSFORMATION

China Gas is well-positioned to contribute to the digital transformation of cities by collecting, analyzing and modeling data in the energy and infrastructure sectors with the support of IoT and big data. We are promoting the application of Narrowband IoT (NB-IoT) in the city gas industry. Technology optimization enables large-scale access to IoT for gas equipment, remote meter reading, real-time monitoring and safety warning, which will not only improve operational efficiency and refine management of gas companies, but also enhance the urban business environment and customer satisfaction.

Case 1: China Gas Wuhu Intelligent Gas Station

In 2022, China Gas, Huawei, Hikvision, Jinghu Technology and other technology enterprises jointly built a smart gas pilot project in Wuhu. China Gas Wuhu Intelligent Gas Station adopts the “1 + 4 + 1 + N” structure: one center, four application scenarios, one network and various intelligent sensing equipment, realizing the digitization of safety management, the refinement of gas source dispatch and the linkage between government and enterprises. China Gas empowers the closed-loop safety management and upgrade and transformation of stations through “artificial intelligence + big data”, and uses the service model of “software + hardware + AI” to provide enterprises with one-stop solutions for access management, operation management, intelligent inspection, unattended and other scenarios. The solution adopts a service model of software, hardware and artificial intelligence, and at the same time solves regulatory problems such as entry and exit management, operation management and intelligent inspection solutions.



Case 2: China Gas Digital Construction — Emergency Digital Collaborative Command Platform

With the “emergency response” in production safety, the construction of a sound digital collaborative command platform for emergency has become one of the important directions for China Gas’s digital construction. The overall framework of China Gas’s emergency digital collaborative command platform adopts the “1 + 2 + 3 + N” form, which includes one central cloud platform, two special scenarios, three technology platforms and a number of IoT sensing devices.

Through advanced digital technologies, the platform achieves the goal of combining time-based status monitoring and early warning, time-based status scheduling and command, big data to assist decision-making, and combining expertise. The platform has achieved “Three prevention, Three transformation, and Three linkage”: “Three Prevention” includes personnel-driven defence, physical defence and technical defence; “Three transforms” include standardization of information reporting, digitization and intelligent decision-making of emergency plans; “Three linkage” includes on-site linkage, linkage with the Group and linkage with the government. In the later stage, China Gas will form replicable and promotion experience based on the pilot results, and promote their in other businesses.



4. SERVICE GUARANTEE

4.5 CUSTOMER CARE

Adhering to the core strategic goal of “customer satisfaction, social recognition and employee pride”, China Gas is committed to providing customers with active, thoughtful and fast services guided by the cultural concept of “full services”. We adhere to the service system construction principle of “customer orientation, local conditions, highlighting key points, and continuous improvement”, and revise and improve service indicators every year to improve service performance and quality and meet the needs of customers of different categories, regions and time periods.

Improving Customer Services

We have formulated the “China Gas Group Staff Service Code” to set out the standard requirements for service positions and clarify the service process for customer service staff to ensure timely responses to customer needs. We also employ external professional instructors to conduct training to improve the business capabilities of our employees and continuously improve the quality of customer service in order to enhance the Group’s brand image. We have set up a 24/7 national customer service hotline 95007 to provide customers with services such as account opening, gas ordering, maintenance, security inspection, consultation and complaints.

Case: Launch of the New “China Gas Customer Service Brand” to Provide Users with Warm Service Experience



On 16 November 2022, China Gas released a new brand of “China Gas Customer Service” at “China Gas Customer Service Brand Release and 2022 Warm Winter Action Launch Conference”. Through the reshaping of the customer service brand, we aim to demonstrate China Gas’s determination to strengthen gas safety, improve user experience and create industry service benchmark. The new brand slogan of China Gas Customer Service is defined as “Safe Service, Guardian of Thousands of Families”. The connotation is to provide a safe service environment with a user-centric approach. Our new values are to “pursue intrinsic safety, lead industry service, and exceed customer expectations”. Our core values put “safety” first.

In order to demonstrate the personality of the brand, China Gas Customer Service also launched two IP images — “Secure” and “Assured” to express our brand characteristics of “stability and reliability, affinity and vitality” and interact with users. These IP images represent that all customer service personnel always maintain a young and good interaction with users, and bring a warm experience to users on the basis of service affinity.

In the future, China Gas Customer Service will adhere to the mission of “Converging in Harmony and Benefiting the Society”, continue to improve service, earnestly fulfill the commitment of “Safe Service, Guardian for Thousands of Families”, and improve the quality of life of users. We will continue to promote the construction of customer service brand, establish a complete service system, improve service quality and efficiency, and create a better life for customers with more high-quality, efficient and safe services.



4. SERVICE GUARANTEE

Customer Satisfaction Survey

To understand customers' opinions on products and services of China Gas, 165 project companies of the Group conducted customer satisfaction surveys during the Reporting Period and received a total of 6,135 feedback surveys, with a score of 92.10.

	FY2022/23	FY2021/22
Number of project companies conducting customer satisfaction survey	165	78
Number of satisfaction surveys	6,135	1,450
Result (scores)	92.10	92.36
Issues identified in the investigation	<ol style="list-style-type: none"> 1. Customers generally expressed their wish to increase online top-up and business processing channels; 2. Customers hoped to improve the timeliness of services such as business outlets and door-to-door services; 3. Customers expected customer service personnel to improve service attitudes and services. 	<ol style="list-style-type: none"> 1. To improve business processing efficiency and response speed; 2. It is considered that the fees are unreasonable/ expensive; 3. Suggest to strengthen the management and training of service attitude of staff; 4. Expedite the installation and ignition progress; 5. Online processing and top-up of businesses such as top-up/transfer; 6. To increase the number of customer service staff in the business outlets/ business outlets.
Improvement measures for problems identified	Released and reported the survey results of each quarter, supervised the backward regions/ project companies to focus on solving customer dissatisfaction and solving service problems	Formulated the China Gas Customer Service Rebuilding Implementation Plan to improve from various aspects.

Improving Customer Satisfaction

We formulated the "China Gas Group Customer Service Reengineering Implementation Plan". We propose improvement measures for the problems found in the research, and continuously followed up on the improvement of the problems to effectively respond to customer needs.

China Gas strives to promote the application of smart IoT meters and launch online gas self-service top-up services to enhance customer terminal top-up experience. As of 31 March 2022, the number of customers of the Group (excluding non-controlling companies) who have installed IoT meters reached 5,019,203, accounting for 19%. At the same time, the number of IC metres installed with automatic charging function also reached 15,750,000, with a coverage ratio of 60%, further improving customer experience. In the future, we will continue to promote smart city construction and smart management, continuously improve customer experience, and contribute to the realization of green and low-carbon, smart life and sustainable development.

4. SERVICE GUARANTEE

Case 1: Pennant from Owners for Jinzhou China Gas



In May 2022, the chairman of the owners' committee of the Fada Jiayuan Property donated a pennant to China Gas Jinzhou Energy on behalf of the property owners, written "warm and good service, for all property owners", thanking all employees of the market development department for their contributions. The community was originally a residential area that was abandoned by the developer and the property owners reflected there were significant number of issues and have been no piped gas installing.

After conducting investigation, the Company first exchanged with the owners. Although some owners disagree with the installation, Jinzhou China Gas Energy did not give up. For three consecutive months, all employees worked hard to publicize to the community during off-work hours, changing the views of most owners and supporting the installation. The Company attaches great importance to this project, and the general manager and deputy general manager solve problems directly personally for several times. At present, 70% of the owners have installed piped gas, and 1,160 households have registered. The enthusiasm, patience and thoughtful service attitude of all employees of Jinzhou China Gas Energy have helped the Company ultimately improve the living environment of the developed Jiayuan community and solved the needs of citizens for piped gas in many years.

This pennant, with a sense of sincerity, is a recognition and trust for our services, and also a responsibility, motivation and encouragement. China Gas will continue to adhere to the service tenet of enthusiasm, convenience, quality, efficiency and standardization, and focus on effectiveness and practical work. While establishing and maintaining a good external image of the Company, we will also bring new enhancement to personal value, better perform our duties for the enterprise, and more fully represent the enterprise to serve the society.



Case 2: Warm Services Well Received & Claim Settlement Timely



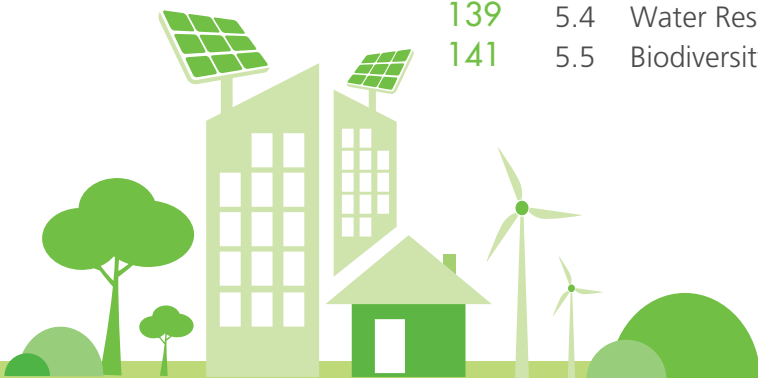
In August 2022, Ms. Liu, a resident of Beiyang Village, Beiyang Township, experienced a sudden fire when using gas stoves, resulting in a glass explosion of gas stoves. The user immediately called the 24/7 customer service hotline of China Gas. The customer service personnel immediately contacted the insurance company to visit the site for investigation and claim settlement after receiving the report. According to the investigation, the customer's situation meets the claim settlement standards, with a compensation of RMB640, recovering economic losses. Ms. Liu expressed her gratitude to the gas insurance of China Gas for timely compensation and highly appraised the gas insurance services.

Gas safety concerns the safety of people and their properties. In order to improve users' safety awareness and accident risk capabilities, China Gas has been committed to the publicity and promotion of humanized family comprehensive insurance. The Company will continue to adhere to the service tenet of "service first for commitment and contributions to society", adhere to the customer-oriented principle, provide high-quality services for the public, demonstrate the warmth and speed of gas people with practical actions, and win customer trust and market recognition. In the future, the Company will continue to improve its service level, strengthen risk prevention and safety supervision, and safeguard the safety and health of people.

5. Environmental Protection



135	5.1	FY2022/23 Highlights
135	5.2	Environmental Management System
137	5.3	Resource Utilization and Waste Management
139	5.4	Water Resource Management
141	5.5	Biodiversity Conservation





China Gas faces internal and external requirements and pressure on enterprises in environmental management, pollutant emissions, greenhouse gas emissions, water resource management, biodiversity, etc. The Group has actively observed the changes in environmental protection trends and made corresponding response actions. These actions will help lay a solid foundation for China Gas' future sustainable development and align with the sustainable development goals set by the United Nations.

- Establish the monitoring system of pollutant emissions and environmental impacts, reduce pollutant emissions, improve energy efficiency, promote the use of clean energy, and improve employees' environmental awareness, so as to reduce the impact on the environment.
- Promote water-saving measures and reduce wastewater discharge to protect water resources and prevent water pollution.
- In terms of biodiversity management, strengthen ecological environment monitoring and adopt ecological system protection and promote ecological restoration to protect biodiversity and ecological environment.

5.1 FY2022/23 HIGHLIGHTS



- Ecological Environment Protection Measures
- Environmental impact assessments were conducted for a total of 12 projects, of which operating sites occupied a total of 35.16 hectares, and all projects were followed up on ecological environmental protection

China Gas continues to adhere to the established environmental goals and continues to move towards these goals.

Environmental Goals	Summary of objectives
<p>Energy use efficiency goal</p>	Continued decline in energy use intensity
<p>Water efficiency goal</p>	With 2020 as the standard year and 2025 as the target year, the water consumption is set to be reduced by 16%
<p>Waste reduction goal</p>	Continuously improve the collection and integration process of waste data

5.2 ENVIRONMENTAL MANAGEMENT SYSTEM

China Gas actively complies with the *Environmental Protection Law of the People's Republic of China and the State*, the *Environmental Impact Assessment Law of the People's Republic of China and the State*, the *Law of the People's Republic of China on the Prevention and Control of Water Pollution* and other regulatory requirements in its business operations. With reference to the ISO 14001 standard, China Gas has formulated the Guidelines for the HSE Management System of China Gas and the Environmental and Social Management System in accordance with the *Safeguard Policy Statement* of Asia-Pacific Development Bank and relevant applicable laws and regulations. Through the establishment and improvement of various energy conservation and environmental protection systems, the Group continues to strengthen energy and resource management, so as to combat climate change. During the Reporting Period, China Gas was not subject to any administrative penalties due to violation of the above environmental laws and regulations that had a significant impact on the Group.

ENVIRONMENTAL PROTECTION

The main environmental improvement and sustainable development work of China Gas includes:

(1) Pollution Prevention and Control

China Gas actively promotes pollution prevention, controls pollutant emissions, strengthens environmental monitoring and risk assessment, and ensures that the impact of business operations on the environment is minimized. In the process of project design, construction and operation, pollution prevention technologies and methods are implemented with reference to internationally recognized standards, including:

- reduces or controls the concentration and quantity of pollutants, and uses coating to protect resources and improve energy efficiency during project implementation in accordance with the principle of clean production
- reduces or controls the amount of hazardous and non-hazardous waste produced, and the amount of hazardous substances discharged
- avoids the production, purchase and use of hazardous substances and materials that are prohibited or required avoidance steps to be phased out
- reduces human indoor air emissions related to the project by nature and extent of impact

(2) Green Construction

China Gas implements the principle of green construction, and continuously improves the level of environmental protection through the use of innovative energy-saving management technologies and the adoption of environmentally friendly new materials and processes to reduce the impacts of construction operations on the environment. Before carrying out all projects, China Gas strictly follows the statutory process of environmental impact assessment and implements the Environmental Impact Assessment Report Outline and Conventional Specifications of Gas Projects Under Construction formulated by the Group to identify possible potential environmental impacts and risks. We publicly disclose the results of Environmental/Social Impact Assessments (EIAs/SIAs) and communicate and interview assessors to implement, follow up and report on relevant recommendations. The environmental/social impact assessment results conducted during the Reporting Period can be consulted through public government channels.

(3) Green Office Operations

China Gas advocates green office and formulates *7S Office Environmental Management System*. We developed and are continuously enhancing the online office system. We also cultivate employees' green office habits such as double-sided printing, saving office electricity, promoting video conferencing, and reducing travel. At the same time, cooperate with Fuji Xerox to implement the *Office Printing Improvement Programme*, adopt environmentally friendly consumables and equipment, promote resource recycling, reduce energy consumption and greenhouse gas emissions.

(4) Biodiversity Conservation

China Gas is committed to protecting biodiversity by minimising or mitigating through potential negative impacts including biodiversity offsets and risks on natural habitats, important habitats, protected areas and biodiversity, or compensatory measures, to achieve net increase or net decrease in biodiversity. At the same time, the Group actively participates in and supports public welfare undertakings related to biodiversity protection.



(5) Protection of Physical and Non-physical Cultural Resources

China Gas actively promotes cultural protection and inheritance. While avoiding significant damage to tangible and intangible cultural resources during the project site selection and design processes, we collaborate with relevant departments and institutions to jointly promote cultural protection.

(6) Further Environmental Protection Promotion

China Gas is promoting its environmental protection publicity, and delivering environmental protection concepts and practical results to the public through various channels such as the official website, WeChat official account and news media to improve public awareness and participation in environmental protection. China Gas is actively building a communication platform with the government, media, the public and other stakeholders, participating in environmental protection public welfare activities, to promote the development of environmental protection.

5.3 RESOURCES UTILIZATION AND WASTE MANAGEMENT

China Gas strictly abides by the Law of the People's Republic of China on the Prevention and Control of Environmental Pollution by Solid Wastes and other relevant laws and regulations, with a sound waste management system, comprehensively controlling and managing the waste in all aspects of operation, to ensure that the waste discharge of the Company complies with national standards and requirements. In addition, the Group also conducts waste classification, reduction and recycling to enhance waste resource utilization rate.

Material	Unit	Consumption in FY2022/23	Consumption in FY2021/22
LPG cylinder	No.	266,877	400,397
Lubricant	ton	33.73	44.23
Antifreeze oil	barrel	0	0
Paper product/cardboard	ton	641.72	933.48
Plastic	ton	6.05	23.66
Wood board	ton	0	10.35
Odourant	ton	344.32	340.98

We apply new technologies in the construction process to reduce the impact of construction operations on the environment and reduce resource consumption.

- **Innovative Energy-saving Management Technologies**

We require all users to install leakage alarm systems, and require high-level users to use automatic solenoid valve leakage alarms and remote cutoffs at the outlet pipes to monitor potential emissions and energy usage in real time to prevent leakage from affecting the environment.

- **New Environmentally-friendly Materials and Technologies**

The steel pipes of the Group are all pre-coated with anti-corrosion layer. Pre-coated steel pipes, available for industrialization production, can reduce the painting work at the construction site, reduce the emission of volatile organic compounds (VOCs) pollutants at the construction site, and ensure the environmental protection of the construction site operation.

ENVIRONMENTAL PROTECTION

Case 1: Green Environmental Protection Technology and Environmental Protection Pipes



China Gas provides users with green technology services to reduce the impact of its operations on the environment. During the Reporting Period, the number of users who use carded carbon steel pipes or galvanised steel pipes as pipe materials accounted for 100% of the number of installed units in 2022. These pipes are environmentally friendly and can reduce pollution and damage to the environment, with better safety performance and service life of the pipeline system. By adopting these environmental-friendly pipes, China Gas provides users with more green, safe and reliable energy services, making positive contributions to environmental protection and sustainable development.

Case 2: New Environmental Protection Pipe Technology



From April 2022, China Gas has been using plastic-sprayed steel pipes instead of seamless steel pipes in engineering construction, and provide installation services for residents and industrial users. The use of plastic-sprayed steel pipes can reduce on-site steel pipe anti-corrosion works, save construction costs, and reduce the impact of the construction site on the environment and air.

Case 3: Recycling of Mud and Earthwork



During earthwork excavation, China Gas generally uses the method of backfilling the original soil, which effectively reduces the generation and discharge of waste and reduces the impact on the environment through recycling. At the same time, we also recycle the mud through construction to further reduce the amount of waste generated and the impact on the environment. We will continue to actively promote the concept of green construction, strengthen the management and treatment of waste in the construction process, and reduce the impact on the environment.



Waste Generation and Disposal

Waste	Sources of waste	Disposal method	Unit	Consumption in FY2022/23	Consumption in FY2021/22
Non-hazardous waste	Domestic waste from offices, non-hazardous parts produced during the manufacturing and maintenance of gas appliances, as well as a small amount of waste generated from cleaning of the gas transmission pipelines, etc.	Regular transportation and disposal by the environmental hygiene department after collection	ton	22,427.15	22,820.10
Hazardous waste	Waste machinery oil, hazardous and expired chemicals and hazardous metals from the waste circuit boards of gas appliances, etc.	Entrusting recycling units with relevant qualifications for compliant disposal	ton	77.34	78.69

5.4 WATER RESOURCE MANAGEMENT

China Gas is well aware of the importance of water resources to the sustainable development of its business and society, and is committed to protecting water resources, saving water and improving the utilization efficiency of water resources. We continue to strengthen the management and monitoring of water pollution prevention and control, improve sewage treatment facilities, improve the efficiency of sewage treatment, and actively promote sewage treatment measures such as "reduction, classification, treatment, and utilization" to protect the water environment and contribute to promoting sustainable development.

Water Consumption

We have implemented a management model of whole-process management and full participation, established and improved the water use system and process, and strengthened the monitoring of water use. At the same time, a number of water-saving management measures have been implemented in various projects and offices, such as:

- Use recycled water for water equipment such as natural gas compressors, ice machines and sprinkler systems to improve water efficiency;
- Install rainwater collection facilities to recycle water;
- Install sensor faucets in the office to save water;
- Recycled water for daily use and in sanitary rooms to save water resources; and
- Carry out Employee training and environmental protection publicity, improve employees' environmental awareness and responsibility, and jointly promote the use of water resources.

In FY2022/23, the Group's water consumption was controlled as follows:

- Executive Office Standard: 70 litres per day;
- Office water consumption standards for dispatch centers, station office buildings and customer service centers: 110 litres per person per day;
- Gas boiler water replenishment standard: less than 3 tons per month; and
- Water replenishment standard for fire pools: less than 5 tons per month.

ENVIRONMENTAL PROTECTION

During the Reporting Period, the Group's total amount of water consumption was 2,754,576.41 tons; the water consumption intensity was 1.72 kg/GJ of energy sold.

Water Consumption by Source

	Unit	FY 2022/23	FY 2021/22
City and township water supply or other waterworks	ton	2,577,736.25	2,206,849.20
Groundwater	ton	52,639.46	110,882.96
Surface water	ton	104,833.00	132,314.39
Ocean	ton	19,367.70	1,041.00
Total	ton	2,754,576.41	2,451,087.55

Water Pollution Prevention and Control Measures

China Gas strictly abides by the *Law of the People's Republic of China on the Prevention and Control of Water Pollution* and other relevant laws and regulations, establishes and improves the water pollution prevention and control system, implements the principle of "focusing on source control, strengthening monitoring methods, centralized sewage treatment, and improving the construction of emergency response system", and actively controls and avoids potential water environmental pollution to ensure that the water pollution of the enterprise meets the national standards and requirements. The Group's sewage mainly comes from production wastewater, equipment washing wastewater and employees' domestic sewage. During the Reporting Period, the Group's total wastewater discharge amount was 1,604,239.31 tons.

China Gas has taken a number of measures to prevent and control water pollution:

- Strengthen the collection and treatment of wastewater, and regularly inspect sewage treatment devices and sewage tanks to prevent leakage of production and domestic wastewater to avoid pollution to the surrounding water environment;
- At station sites, we equip sewage treatment devices, sewage tanks and garbage bins with anti-seepage measures with rain and sewage diversion;
- Establish special emergency plans for water sources, formulate water pollution prevention systems and processes, clarify the responsibilities of each department, and conduct water quality monitoring, identify and cut off pollution sources, and explore the extent and scope of pollution;
- Adopt sewage treatment technologies such as biological treatment and membrane technology to treat and recycle sewage, so as to realize the recycling of water resources and reduce the pressure and waste of water resources;
- Provide employees with training on water conservation to enhance their environmental awareness and sense of responsibility, thereby further reducing the risk of water pollution.



Wastewater Discharge by Destination

	Unit	FY 2022/23	FY 2021/22
Municipal wastewater treatment plants or other wastewater treatment facilities	ton	1,534,041.66	1,303,394.54
Groundwater	ton	12,129.17	25,964.78
Surface water	ton	58,068.48	70,279.59
Ocean	ton	0	90.00
Total	ton	1,604,239.31	1,399,728.91

5.5 BIODIVERSITY CONSERVATION

China Gas understands that protecting the integrity and stability of the ecosystem, maintaining the ecological environment, and protecting biodiversity are important components of corporate social responsibility. The Group has established sound biodiversity protection systems such as the *Biodiversity Conservation Policy* and *Environmental and Social Management System* to fully guarantee the management and protection of biodiversity. At the same time, in accordance with the standards and framework of the *Measures for Public Participation in Environmental Impact Assessment*, China Gas guarantees environmental and biodiversity impact assessments during project implementation, and complies with the environmental management plan, safety pre-assessment and social stability risk assessment requirements to prevent the potential loss of biodiversity and degradation of the natural environment. During the Reporting Period, the Group actively participated in and organized tree planting and environmental protection activities, and planted a total of 1,026 saplings, making positive contributions to environmental protection and ecological restoration.

- China Gas conducts environmental impact assessments before the construction of all projects to clarify possible environmental problems during construction and the measures to be taken, and formulates a comprehensive protection plan.
- During the construction process, the Group strictly abides by the principles of environmental protection and adopts advanced construction technology and process control to reduce damage to the ecological environment.
- At the construction site, the Company strengthens cleaning and garbage disposal to ensure regulated discharge of waste and reduce negative impact on the environment.
- After the completion of projects, the Group actively implements rapid recovery measures such as environment and greening and emphasizes the earnest fulfillment of environmental protection responsibilities to ensure that the construction will not cause damage to the ecological environment.

In terms of prevention and coordinated treatment of environmental problems, China Gas is continuously strengthening and committed to promoting the harmonious development of gas engineering construction and ecology. During the Reporting Period, China Gas conducted environmental impact assessments for a total of 12 projects, covering operating sites of 35.16 hectares, with follow-ups on ecological environmental protection for all projects.

ENVIRONMENTAL PROTECTION

Analysis of Impacts on Biodiversity

Pipeline engineering projects generate less pollutants and have less impact on the overall environment. However, as construction will cause changes in the surface environment, especially in ecologically sensitive areas, it may have more impacts on biodiversity. In order to reduce the impact of engineering construction on the ecological environment and formulate specific management policies for each project, China Gas conducts environmental impact and biodiversity risk assessments for all high-risk projects, which are based on the following considerations.

Consideration Factors	Description
Impact on biodiversity	The construction and operation of natural gas pipelines may have an impact on biodiversity. For example, problems such as land damage, water pollution and wildlife damage may occur during the mining process, which may affect the stability of local ecosystems and species diversity
Impact on terrestrial wild animals	The construction and operation of natural gas pipelines may affect the survival and breeding of local wild animals. For example, construction and operation activities may damage the habitats of wild animals and affect their food chains and migration routes. In addition, natural gas pipelines may cause adverse effects on wild animals such as collision and accidental injury.
Permanent site impact	Natural gas pipeline construction needs to occupy land resources, which may have a permanent impact on the local ecosystem and species diversity. In particular, the occupation of wildlife habitats may result in a reduction in the number and diversity of local species.
Impact on natural plants	The construction and operation of natural gas pipelines may affect the survival and breeding of natural plants. For example, the roots and soil of plants may be damaged during the mining process, which may affect the growth and reproduction of plants. In addition, construction and transportation activities may damage plant communities and affect the stability of the ecosystem and species diversity.
Impact on the agricultural ecology	Natural gas exploitation and transportation may have an impact on the local agricultural ecosystem. For example, pipeline construction may damage farmland water conservancy and irrigation systems, affecting agricultural production and the stability of the ecosystem. In addition, the mining process may pollute the soil and water and affect the health of local agricultural production and ecosystem.
Impact on farmland	Natural gas pipeline construction needs to occupy land resources, which may have a negative impact on local farmland. For example, the construction process may damage farmland soil, water sources and crops, affecting local agricultural production and the stability of the ecosystem.
Impact on farmland irrigation system	The construction of natural gas pipelines may damage the irrigation system of agricultural fields and affect the stability of local agricultural production and ecosystem. For example, the construction process may damage irrigation channels and water sources and affect the supply of water resources in farmland. This may lead to poor crop growth, thus affecting agricultural production and the health of local ecosystems.
Impact on soil environment	The construction and operation of natural gas pipelines may have a negative impact on the soil environment. For example, the mining process may pollute the soil and water and affect the health of the local ecosystem and agricultural production. In addition, pipeline construction may damage the soil structure and quality, affect the soil's rigidity, and at the same time, the impact of construction waste on the soil environment, affect the growth of local vegetation and the stability of the ecosystem.



We also focus on sorting out environmental and biodiversity risks during the construction and operation of construction projects that may cause ecological damage. Soil erosion and surface vegetation will be affected by the cleaning of construction belts and pipe ditch excavation during the construction period. Other activities such as road crossing, station construction and vehicle transportation during the construction period and various maintenance and operation activities will have fewer or no significant impacts on the ecological environment.

Environmental Factors	Construction phase							Operation phase				
	Construction belt cleaning	Pipe trench excavation	Pipe crossing	Station construction	Pipeline pressure test	Construction access road	Vehicle transport	Pipeline overhaul	Equipment operation	Pipeline operations	System overpressure venting	Operational exception incident
Soil erosion	●	■	▲	▲		▲						
Surface vegetation	■	■		●		●						●
Air quality	▲	▲	▲	▲	▲	●	▲	●	▲	●	●	■
Acoustic environment		●	▲	●	●	●	●	●	▲	●	●	■
Surface water			●									●
Groundwater			▲		▲							▲
Wildlife	●	▲				▲	▲					■
Soil quality		▲				▲						
Natural landscape	▲	▲	▲	▲		▲						▲

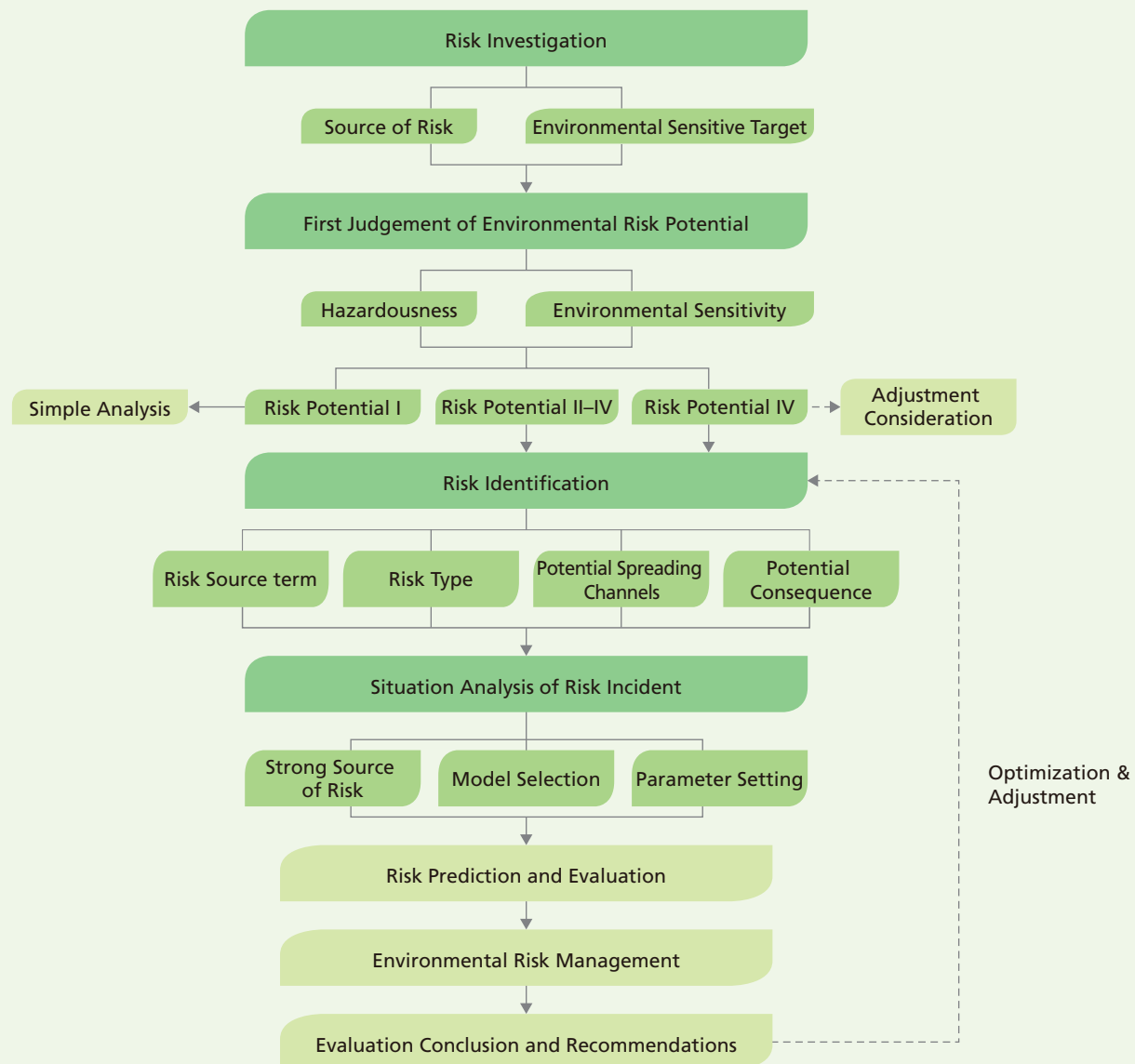
Notes: ■ Major impact ▲ Minor impact ● No obvious impact

ENVIRONMENTAL PROTECTION

Case: Huanggang High Pressure Pipeline Network Renovation Project



In accordance with the *Measures for Public Participation in Environmental Impact Assessment*, China Gas conducted an environmental impact assessment and carried out the Huanggang high-pressure pipeline network renovation project with the scope of its own operating projects and the natural environment of adjacent areas, including along the pipelines in Luotian County and Yingshan County, Huanggang City. The assessment incorporated biodiversity factors, including natural environment location, water resources, climate environment, and wildlife resources. The environmental risk assessment is to analyse and predict the potential hazards and harmful factors of construction projects, the impact of construction projects on the environment during construction and operation, and possible emergencies. The procedures for environmental risk assessment are as follows:





In accordance with the *“Technical Guidelines for Environmental Impact Assessment — Ecological Impact”* and the ecological environment of the project’s operating location and adjacent areas, China Gas conducted data collection and field investigations on plant and animal species status, vegetation status, ecosystem within the scope of assessment, so as to reflect the ecological environment characteristics and major ecological issues in a more complete and accurate manner. The identified biodiversity-related risks and the corresponding mitigation measures are as follows:

Risk	Management plan and mitigation measure
Land changes utilization	After the construction is completed, most of the temporary land area such as the construction work belt and construction corridor will be restored. Part of the forest land in the construction work belt will be transformed into grassland, and the nature of land use will not be changed through the forest of the area. The cultivated land, water and construction land temporarily occupied by the project can be restored.
Ecological integrity changes	Analyse the biological volume changes in the construction impact area, including recovery stability analysis, qualitative resistance analysis and comprehensive evaluation of the quality of the urban ecological system. According to the on-site investigation, the impact of construction on the farmland ecosystem and forest ecology in the evaluation area is relatively serious. From the perspective of the current status of vegetation in the evaluation area, the forest land is mostly sub-forest, with simple vegetation composition and high resilience stability: the cultivated land is greatly disturbed. Research shows that the ecological system properly interfered by the outside world, the biological sample composition is simple and weak, but its resilience is high. After the construction is completed, cultivated land will be re-cultivated in time, and the natural biological volume in the area will gradually return to the level before construction. The project occupies the forest land and the area of cultivated land is small, so it will not have a significant impact on the structure and function of the natural ecosystem.
Impact on ecosystem	The most significant impact of pipeline construction on the forest ecosystem is the damage to forest vegetation caused by pipeline excavation and construction land, and the area occupied by the forest and irrigation from the ecosystem only accounts for a relatively small total area of the evaluation area. According to the on-site investigation, the vegetation in the area covered by the project is mainly the Chinese red pine forest, Chinese fir forest, moso bamboo forest, and the common plants include formosan gum, omei mountain bamboo, rhus chinensis, chastetree, Silver-grass, white cogongrass, etc. These vegetation are the most widely distributed vegetation types in the evaluation area and are common local species. Therefore, the impact of the project area on the vegetation and vegetation in the forest ecosystem in the evaluation area is relatively small.
Impact on wetlands and intertidal zone animals and plants	The construction site is far from the waters and the construction directly affects the area basically without the wetland ecosystem. At the same time, the pipeline project passes through rivers and other wetlands in the form of directional drilling or large excavation. Directional drilling mainly destroys the vegetation of the entrance and exit sites, which may affect the activity of animals. When passing through the river in a large-scale excavation method, the trenching ditch and the setting up of diversion in the crossing section will temporarily occupy the beach land on both sides of the river. The vegetation on both sides of the wetland is mainly made of grass, biogas and aquatic vegetation, as well as artificial planting forest. These plants are widely distributed in the certified price area, and have a high recovery stability, and can be restored as soon as possible after the construction is completed. Therefore, the impact of the project on the wetlands and intertidal zone animals and plants is temporary.
Impact on terrestrial animals	The impact of the project on terrestrial animals during the construction period is mainly due to the long-term land occupation and temporary land occupation of the project which destroys the animal habitat, as well as the noise generated from the construction activities which alarms and drives the animals, and the pollution to the animal habitat such as wastewater and waste gas. In order to reduce the impact, we reduce the impact time on wild animals by using the point distribution of the valve room at the station and the section laying of the pipeline. Therefore, the impact of pipeline construction activities on wild animals is short-term and reversible.

ENVIRONMENTAL PROTECTION

Risk	Management plan and mitigation measure
Pollutant impact	<p>Since the pipelines are deeply buried underground during operation while adopting airtight delivery, the impact of the pipelines on animals during operation is minimal. The impact on animals is mainly the impact of pollutants discharged from various stations and valve rooms. These pollutants include air pollutants, water pollutants, noise pollution and solid waste.</p> <p>With the relatively small amount of pollution and the corresponding mitigation facilities in the valve room of the station, including sewage treatment equipment and noise barrier walls and reasonable maintenance cycle arranged, solid waste and air emissions are highly reduced.</p>
Impact on Bailianhe Wetland Park	<p>The project, across the Bailian River National Wetland Park, recovers the urban construction area, with a distance of approximately 200 metres. In order to reduce the impact of the project on the Bailianhe National Wetland Park, we adopt underground directional drilling and crossing, strictly control the construction boundary, restricting bypass construction, any permanent and temporary construction on the surface and any impact on the ecological function of the Bailianhe National Wetland Park to restore the undeveloped area. At the same time, the project will not set up construction camp, pressure regulating station, pipeline station, network room and other buildings in the Bailianhe National Wetland Park.</p>

Biodiversity Conservation Measures

China Gas attaches great importance to the protection of biodiversity. In strict accordance with the relevant provisions of the *Environmental Impact Assessment Law of the People's Republic of China* and the *Classified Management Catalogue for Environmental Impact Assessment of Construction Projects*, China Gas implements the environmental impact assessment system for new projects, formulates corresponding protective measures, and continuously monitors and evaluates the environmental impact.

The environmental impact assessment of new projects conducted by China Gas takes into account the following major factors:

Assessment dimension	Principal Factors Considered in The Assessment
Project Planning aspects	<ul style="list-style-type: none"> Project compliance Rationality of project location Rationality of floor plan Environmental compliance
Environmental aspects	<ul style="list-style-type: none"> Surface water protection Prevention and control of underground water pollution Atmospheric environment protection Sound environmental protection Solid waste treatment Ecological environmental protection Natural gas pipeline protection
Risk and economic aspects	<ul style="list-style-type: none"> Environmental risk identification Environmental risk management Environmental impact cost-benefit analysis



In order to protect the ecological environment, reserve biodiversity and minimize the impact on the ecological environment and biodiversity during project construction and operation, the Group has adopted a series of strict measures and management plans in the project location, aiming to protect the local ecological environment and species diversity, and make positive contributions to the local ecological environment and the sustainable development of society.

- **Protection of Wild Animals and Plants**

- **Management and monitoring:** In the process of pipeline construction and operation, we strictly manage and monitor the impact of relevant activities on wild animals and plants to ensure that the impact on the local ecosystem and species diversity is minimised.
- **Protection and restoration:** We are committed to protecting and restoring local vegetation, taking measures to protect important wildlife habitats, such as establishing conservation areas, formulating animal and plant protection plans, etc. In the process of pipeline construction and operation, we will also actively adopt ecological restoration technology to restore the damaged ecosystem, such as setting up water interception walls on the pipelines, setting up drainage pipes after the original appearance is restored on field level and spreading grass seeds on the slope for slope protection.
- **Cultivation and research:** We actively carry out wild plant cultivation and research work to promote the recovery and growth of wild plant populations and the continuous improvement of protection work. We will also cooperate with relevant institutions and organizations to jointly promote the protection and research of wild plants.

- **Biodiversity Reservation Awareness Education**

China Gas is committed to protecting the ecological environment and promoting sustainable development through protection awareness education and biodiversity protection measures in project locations. By carrying out all-staff education and environmental education activities, we are enhancing the awareness and responsibility of biodiversity protection of employees and the public.

- **Education for all employees:** China Gas has carried out internal training, publicity and public education activities to improve the awareness of employees and the public on biodiversity protection and promote environmental protection concepts and behaviours.
- **Environmental education:** In the process of project construction and operation, China Gas pays attention to carrying out environmental education activities, guides employees and the public to understand and pay attention to the natural ecological environment, and enhances ecological protection awareness and sense of responsibility.

ENVIRONMENTAL PROTECTION

Greening the Operating Environment

The Group incorporates the principle of greening design in the operating environment and carries out key greening in the office and living areas. The office building is surrounded by evergreen trees, flower beds, and small gardens.

The Group also pays attention to the use of forest resources and avoids negative impacts of our operations on global forest ecosystems. If our business needs to occupy the forest resources, we will take compensation measures, including planting plants according to the planting principles, and restoring the vegetation in the engineering project. We plant plants on all landfills to restore the ecological environment of the landfills.

- **Planting Principle**

In accordance with the principle of “suitable trees and suitable grass for the place”, we are conducting detailed investigation and research according to the topography, soil and climate conditions of each region, with local indigenous plants as the main source, while introducing high-quality plant species to ensure that the species of green planting are suitable for the local environment and be able to grow well to ensure the survival rate of green planting.

- **Vegetation Restoration**

In the process of vegetation restoration and construction, we are selecting species suitable for the local environment based on the environmental characteristics along in the project areas, with certain economic value and viewing value, so as to align the restored ecosystem with the original ecosystem as much as possible.

6. Employee Care



150	6.1	FY2022/23 Highlights
151	6.2	Employee Rights Protection
154	6.3	Talent Acquisition and Retention
157	6.4	Employee Training and Development
164	6.5	Well-Being of Employees



6. EMPLOYEE CARE

The Group recognises the significance of a harmonious, and diverse working environment of equality in fostering a sense of belonging and happiness among employees. By providing ample training resources, diverse development opportunities, and a robust system to safeguard their rights and interests, we aim to cultivate a comfortable and efficient working environment. Our focus on employees allows them to contribute to the Company's business growth while advancing their own careers. Through these efforts, we continue to consolidate our leading position in the market and promote the long-term development of the Group. Our approach to employee care is as follows:

- Develop a series of policies to protect the equal rights of employees, provide reasonable and competitive compensation and benefits, and establish a comprehensive performance assessment system
- Maintain mutually beneficial cooperation and exchanges with universities, provide training for talents recruited from the society to integrate into the Group's culture, and establish a good promotion mechanism to attract and retain talents
- Organize recreational activities and invite employees' families to participate in some activities to promote the work-life balance of employees

6.1 FY2022/23 HIGHLIGHTS



- In FY2022/23, we have successfully entered into cooperation with a number of universities, and plan to cooperate with 10 universities with coverage of 9 regions in two years.

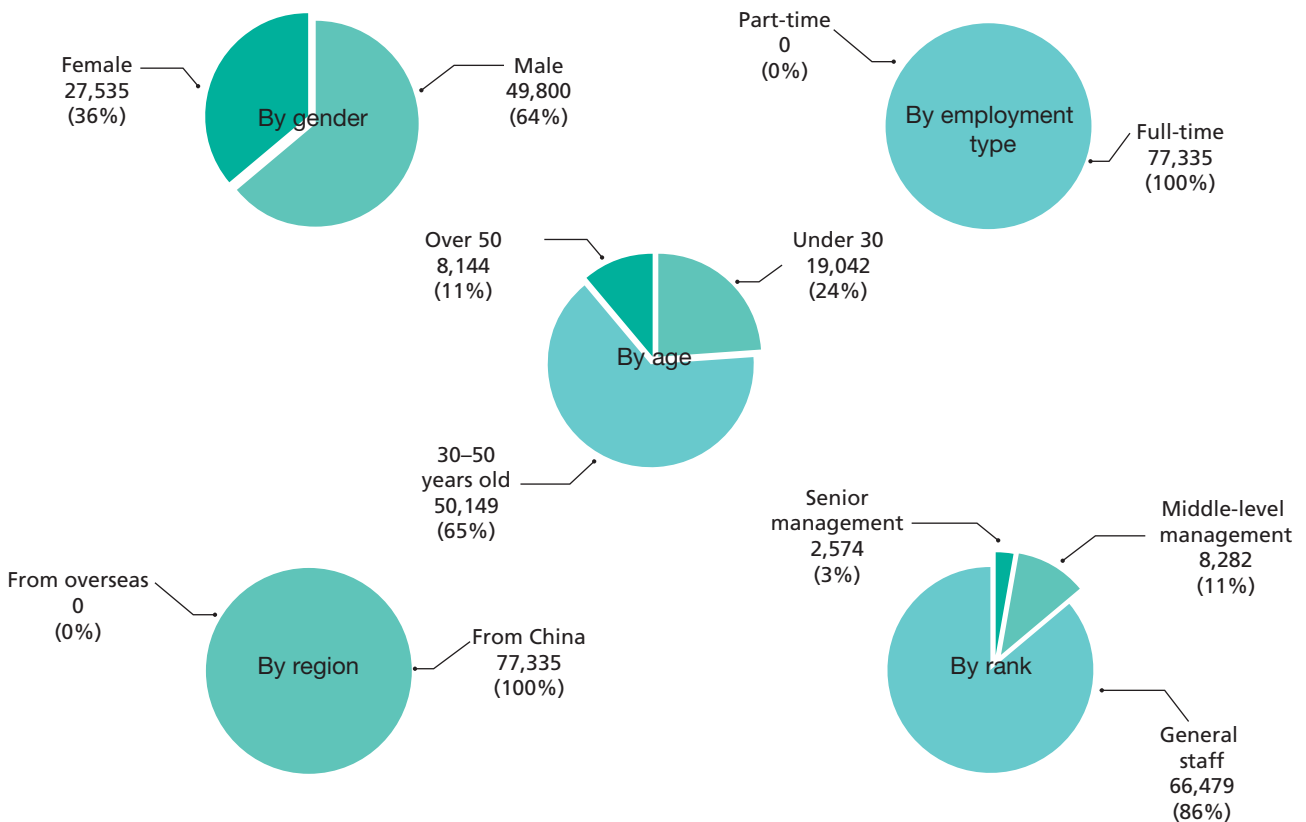
6.2 EMPLOYEE RIGHTS PROTECTION

Equal rights forms the foundation of our employee management approach. The Group complies with all employment-related laws and regulations and strictly adheres to the *Equal Rights Policy*. To attract talent and motivate employees, we have developed clear recruitment strategies and provide competitive remuneration and benefits in accordance with the “China Gas Human Resources Management Manual” and “China Gas Recruitment Management System”, aspiring to be an equal and responsible enterprise.

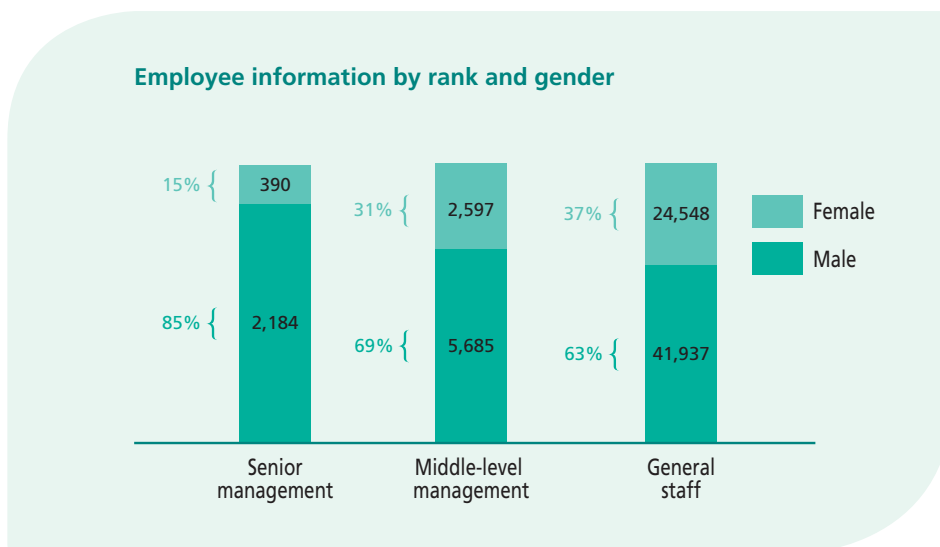
Employment of Equality

Talents is a key driver for the Group’s long-term development. Guided by a “people-oriented” employment principle, we continued to recruit talents during the Reporting Period. As of 31 March 2023, China Gas employed a total of 77,335 individuals, including 7,162 new employees and 5,515 from ethnic minority backgrounds.

Employee statistics by gender, age, region, rank and employment type



6. EMPLOYEE CARE



Employment Compliance

The Group is committed to safeguarding the legitimate rights and interests of employees and upholds the principles of equal and inclusive employment. We strictly adhere to all applicable laws and regulations, including *Labor Law of the People's Republic of China*, *Labor Contract Law of the People's Republic of China*, *Employment Promotion Law of the People's Republic of China*, *Provisions of the State Council on Working Hours of Employees*, *Unemployment Insurance Regulation of the People's Republic of China*, *Regulation on Work-Related Injury Insurances* and etc. Additionally, we comply with the *Social Insurance Law of the People's Republic of China*, which outlines the Group's legal responsibilities regarding illness, work-related injuries, maternity, medical care, retirement, and death insurance.

The Group has established comprehensive rules and regulations to govern labor employment. During the recruitment process, we strictly prohibit discrimination based on gender, race, age, religion, health, marital status, family status, and other factors. We have a zero-tolerance policy for forced labor, child labor, and individuals with falsified identity documents. Non-compliance is dealt with strictly, with prompt improvements. Any person-in-change is subject to audit penalties. Throughout the year, there were no cases of employee discrimination, and no punishment for violating laws and regulations related to labor protection, child labor, or forced labor.

To standardize the including, fulfilling, renewing, changing, suspending or terminating labor contracts, the Group has developed the *China Gas Human Resources Management Manual*, with specifications to protect the legitimate rights and interests of itself and its employees, avoiding and minimizing risks for it. The Manual also features the labor contract termination, decontrol risk prevention and its detailed guidelines, ensuring the in-depth understanding on the Group's management principles and its labor rights and interests of departments and staff. For example, the basic principles of the Group's layoff management include that all employees and trade unions must first be consulted before layoffs; If there is a superior administrative unit, it must wait for the approval of the labor administrative unit before laying off employees. In particular, we stipulate that we cannot reduce the number of employees from disadvantaged groups, such as 1) employees who suffer from occupational diseases or work-related injuries and are confirmed to be incapacitated; 2) Employees who fall ill or are injured during the prescribed medical treatment period; and 3) female employees during pregnancy, childbirth, and breastfeeding.

Remuneration System

The Group will provide competitive remuneration packages based on the performance and experience of employees to ensure that the contributions made by each employee are fully recognized. The remuneration packages we provide include various paid holidays, pension contributions, social insurance and housing provident funds, etc. We take performance and personal ability as the factors of salary management, and adjust the salary standard when appropriate, so as to establish an attractive and motivating salary management system. We formulate corresponding remuneration tables according to the salary levels in different regions and markets to ensure that all employees can enjoy fair and reasonable remuneration and benefits and are committed to promoting employees to devote themselves to work.

Employee Assessment

On an annual basis, we conduct regular job suitability assessments for all employees, including management personnel, managers and general employees within the Group. Through these performance evaluations, we aim to promote outstanding employees and optimize the efficiency of human resources allocation.

In order to improve the assessment, reward, punishment and incentive mechanism and fully mobilize the enthusiasm and creativity of the operators of the regional management centers, the Group and the main responsible persons of the regional operation and management centers and the main responsible persons of the operation and management of each post within the project company sign the operation target responsibility letter and the safety target management responsibility letter respectively, and formulate the reward and punishment mechanism linked to the salary. The target responsibility letter contains the project company and financial, management, safety and other related indicators and their scoring methods, and the Group will conduct annual assessment of the completion of the indicators, and the assessment results will be linked to the year-end performance bonuses of relevant employees. The results of the assessment will be linked to the year-end performance bonuses of the relevant employees. This will allow employees to take responsibility for business operations and safety management through performance commission and bonus incentives and encourage them to supervise the project companies to achieve the Group's objectives. At the same time, if the assessment result is not good, due to, for instance, a major safety accident, it will have a negative impact on the year-end performance bonus of the relevant employees.

Case: Indicator Updates of Performance Assessments for a Harmonious Working Environment



The Group has established different appraisal indicators, including performance indicators, business expansion and management indicators, financial control indicators, and negative lists. To ensure the comprehensiveness of our assessment process, we evaluate performance across various units, including the headquarters, business departments, specialized companies, regional management centers, and project management teams. The weightage of these indicators varies according to rank, ranging from 30% to 50%. Employees who fail to meet the performance appraisal standards may be subject to performance-based salary deductions and reductions.

Throughout the fiscal year, we have optimized and adjusted our performance assessment indicators, lowering threshold requirements, and incorporating sustainable development and economic indicators. These include factors such as government relations management improvement of the business environment, and employee engagement. Additionally, all employees and managers are required to undergo a reflective appraisal, focusing on sustainable development, economic, social, and environmental aspects. The assessment includes indicators such as employee skill enhancement, individual qualification certifications, relationships with colleagues, the focus of assessment shifted towards cultivating a harmonious working environment.

6. EMPLOYEE CARE

Democratic Management

The Group respects employees' freedom to organise or participate in trade unions' selection and enforcement to protect their rights and ensure employees enjoy freedom of association and robust rights protection. As of 31 March 2023, the total number of employees participating in the labor union was 77,335, i.e. all employees.

The Group has established a robust communication mechanism to better understand the needs of our employees through close and trust-building interactions. We have implemented a suggestion column on our office automation (OA) platform, allowing employees to express their suggestions and opinions regarding corporate management and sustainable development. When employees encounter challenges or have questions related to work and personal life, they can share their concerns in the platform's exchange forum zone, where relevant responsible individuals from our professional departments will provide answers. Through internal media channels such as our WeChat accounts, "China Gas Home" and "The China Gas WeChat official Account," as well as our broadcasted programs "New Vision with a Blue Flame" and "Blue Flames You and Me," we release the latest news on operations, management, strategies, and targets to keep employees informed, also with numerous staff activities promoting employees of all regions for their better and most up-to-date understanding of the latest trends and the Group's future orientations as well as objectives.

Furthermore, we have established a platform for complaints and whistleblowing. The Audit and Supervision Department conducts fair, impartial, and transparent investigations for each complaint. Investigation results are then reported to the management as necessary, and feedback is provided to the complainant, demonstrating the Group's commitment to maintaining and respecting the legitimate rights and interests of employees. We also collect employee requests through the "Letter Box to the Presidents" and WeChat groups, strengthening communication between management and employees.



Number of employees of the Group participating in the labor union

FY2022/23

77,335

6.3 TALENT ACQUISITION AND RETENTION

The Group adheres to the principle of the "openness, equity and fairness" and has established several systems, including the "Recruitment Management System" and the "Human Resources Management Manual," to build and maintain an excellent workforce. Our focus is on effectively matching talents with suitable positions. To maintain our competitiveness in the market and attract talents from various fields, we gradually build an experienced working team through diversified recruitment channels.

During the Reporting Period, we adjusted the scope and position of talent recruitment for new business directions, such as digitalization, power and new energy, and hired professionals in chemical engineering, engineering, architecture, and environmental field, as well as talents with market-oriented and marketing experience to promote the development of value-added business. In addition to the above recruitment channels, there is also collaboration with research institutions and governments for recruiting talents and interns and rehire retired professionals through retirement.

Corporate Recruitment

To recruit suitable talents from all aspects of society, we utilize various channels, including campus recruitment, social recruitment, China Gas website recruitment, and WeChat official account recruitment.

Case: Campus Recruitment Training Camp



China Gas places great importance on the cultivation of young talents. During the fiscal year, we selected a total of 89 fresh graduates through campus recruitment and conducted a 9-day campus recruitment training camp using a combination of online and offline methods. The training camp focused on “cultural integration, role transformation, business involvement, and skill improvement”. It included well-designed courses, interesting activities, and lectures by professionals from top management, including chairman of the Board, various departments, and professional companies who shared their work experience and insights.

Through this training camp, participants experienced the transition from campus to the workplace, prepared themselves for their new journey, defined their personal development direction, prepared to contributing to a better future together with China Gas.

Case: Internship Program with Shandong Urban Construction Gas College



In the context of China’s “dual carbon” policy, the upgrading and replacement of gas technology is a growing trend. To attract talent and expand our talent pool, we have established deep cooperation with various colleges and universities. During the fiscal year, we launched an internship programme with the Gas College of Shandong Urban Construction Vocational College. Outstanding graduates from the college are recommended for internships at China Gas. Additionally, we invited professional teachers from Shandong Urban Construction Vocational College to visit the Group for research and study, participate in the interpretation of energy industry policies, and collaborate on research topics such as biomass energy utilization, carbon neutrality roadmap, and CCUS. This collaboration aims to cultivate gas industry professionals by knowledge exchanging and new idea and method exploring.

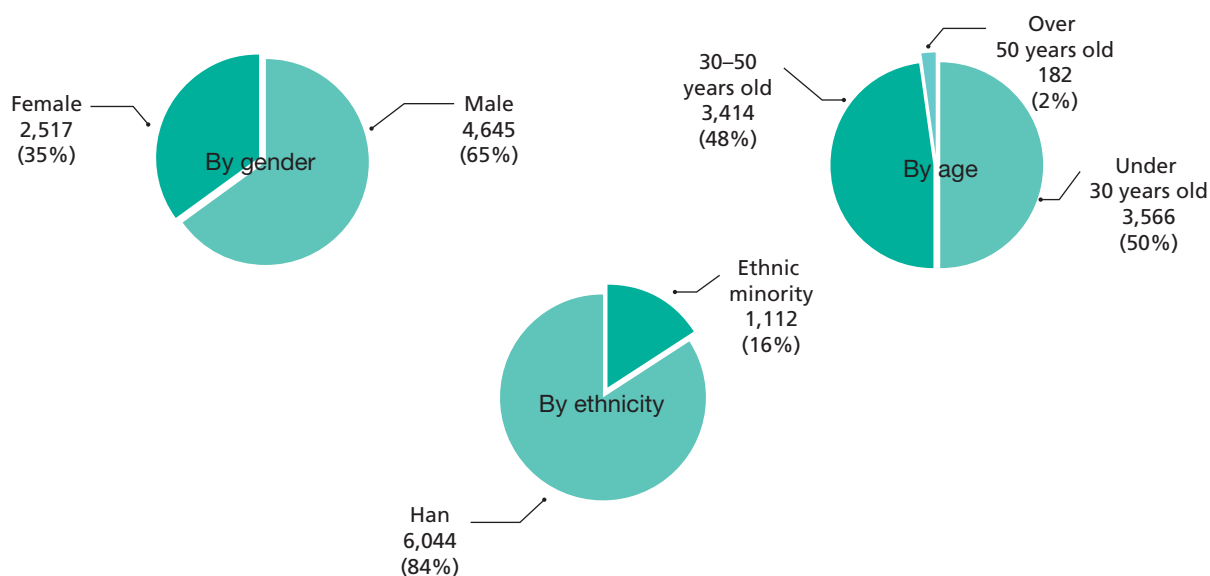
6. EMPLOYEE CARE

Promotion

The Group has a comprehensive promotion mechanism in place, in order to provide sufficient opportunities to internal employees for its long-term development. According to the *Management Method for Manager Allocation*, our internal employees are preferred for promotion to external hires.

In FY2022/23, the total number of new employees was 7,162.

New employee hires by gender, age and ethnicity



6. EMPLOYEE CARE

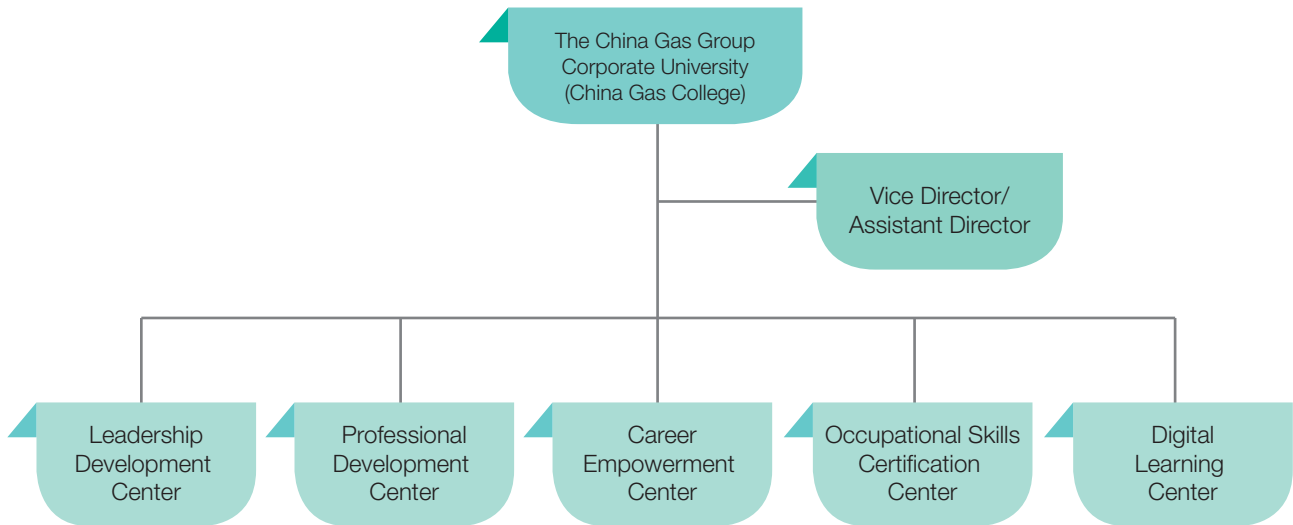
In FY2022/23, the total number of employee turnover was 6,360, and the employee turnover rate was 8.22%.

Employee turnover statistics by gender and age



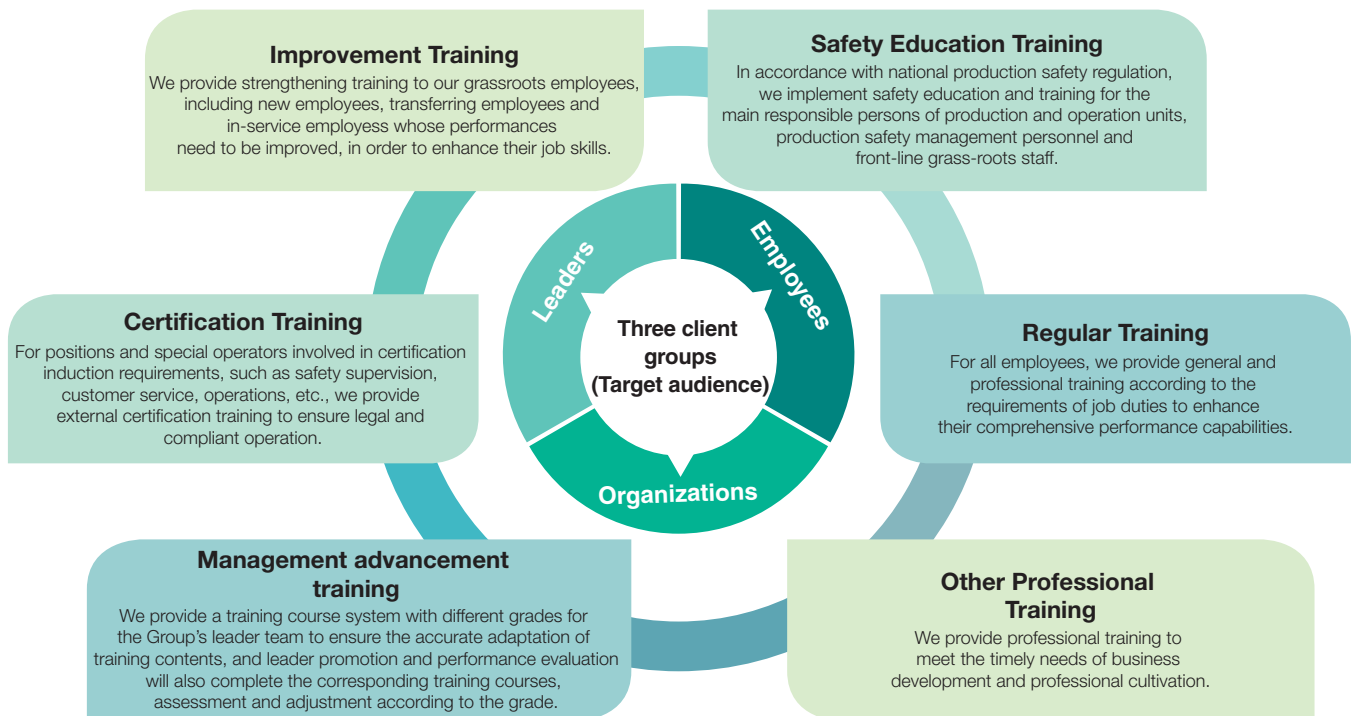
6.4 EMPLOYEE TRAINING AND DEVELOPMENT

Function settings of The China Gas Group Corporate University (China Gas College):



6. EMPLOYEE CARE

China Gas Training Category: Different Training for Different Employees



6. EMPLOYEE CARE



To ensure that employees stay updated with industry trends and developments and enhance their awareness and abilities, China Gas has established China Gas College, a corporate university. This institution provides targeted empowerment training for three types of internal target audience: the organization, leaders, and employees, with self-enhancement resources while consolidating our competitiveness and leading position in the market. Employees participate in training activities tailored to their positions, ranks, business development needs, and interests. The Group has developed the *Training Management Regulations and the Regulations on Training for Frontline Employees*, which outline the three-level management system encompassing the headquarters, regional management centers, and project companies. These regulations detail the training organization, division of responsibilities, training classification and content, planning and budgeting, effectiveness evaluation, and action improvement plans.

China Gas's training for employees is of six types: improvement training, safety education training, certification training, regular training, management advanced training, and other professional training. By the end of the financial year, a total of 9,069 employee training sessions were conducted, nurturing outstanding talents and fostering mutual growth between employees and China Gas.

The Group has appointed China Gas College to provide professional guidance for formulating and implementing annual training plans for each business module at the headquarters and regional operation and management centers. This includes planning the annual training schedule, designing key training projects, following up on training plans, evaluating training effectiveness, and more. Through this approach, employees can learn flexibly and systematically. The Group continuously refines its training system to enhance the overall quality and capabilities of its employees. Cross-disciplinary training is also provided, covering problem-solving skills, creative thinking, and career planning, to cultivate skills beyond the scope of work and promote the long-term development of both the Group and its employees.

6. EMPLOYEE CARE

Management Training

Case 1: Training Camp for Regional General Managers in Central China



At the beginning of autumn in 2022, we organized more than 160 corporate leaders, backup leaders, reserve leaders and temporary general managers/project leaders in Central China to participate in the general manager training camp in Central China in Wuhan. According to the unified planning of the Group's training college, two classes, A and B (for alternate rotation training), were specially set up for this centralized training in Central China to achieve full-coverage training for regional leaders.

The content of the in-service leaders training is linked to group development, performance indicators, integrity and anti-corruption, including *"Target Responsibility Systems in High-quality Development"*, *"Safety Responsibilities of General Managers"*, *"Strategic Proposals for Reforms in Central China"*, *"Four Keys to Leadership"*, *"Integrity Practicing"* and so on. For backup leaders and reserve leaders, the training focused on cultivating leadership thinking and effective management in the workplace. Courses such as *"Objectives and Plan Management"* and *"Management with DISC and Reporting with Pyramid"* were provided.

After the training, trainees and tutors engaged in in-depth discussions and evaluations of the courses and trainers, fostering a mutually beneficial learning environment.

Case 2: Training Camp for General Managers in Southeast China



To deeply pursue the Group's strategic spirit of revolution and development, improve the construction of leader team, empower high-quality development of projects and companies, the general manager training camp in the Southeast region was held from 2 March to 3 March in 2023, according to the unified planning of the Group's training college. There were 99 incumbent leaders, temporary leaders, backup leaders and reserve leaders participating the camp through physical and online ways. This camp includes different courses such as win-win strategy for gross margin, new retail business, leadership training for cadres, honesty and integrity, safety and production.

In addition to the courses, the training camp adopted a point system and established a betting fund to stimulate the trainees' enthusiasm and competitive spirit through school and group competitions. At the conclusion of the general manager training camp in Southern China, 10 outstanding trainees, 3 excellent groups, and 3 exceptional topics were recognized and awarded.

Improvement Training for Frontline Job

We organise and implement intensive training (special knowledge and skills) for five major business lines: customer services, safety supervision, engineering, operation and technology, covering more than 500 project companies in 9 regions, with 30,852 trainees and 40 newly developed courses. We also organized 25 examinations, covering 28,360 people. With the project to coordinate the five major business lines to innovate and develop a number of intensive training courses, and form a solid course library, and through the “training + examination + sampling + monthly report” integrated closed-loop management, to consolidate the training effect and strengthen the front-line grassroots positions staff knowledge and skills.

Certification of Frontline Employees’ Ability of Duty Performing

We organize and implement the certification of frontline employees’ ability to perform their duties for 3 major businesses, namely, customer services, engineering and operation, 10 types of key positions, including 5 types of operation: emergency repairer, inspection worker, pressure regulator, dispatcher, field station transmission and distribution worker; 3 types of engineering: field management post, quality and safety management post, engineering digital post; 2 types of customer services: ignition maintenance post and security inspection post. We have completed the compilation of skill standards (209 items) corresponding to 15 business fields and 29 skill modules; 31 sets of theoretical and practical test question banks, and the development of 45 courses (including general, professional knowledge, and skill training courses). We adopt the scientific appraisal method of knowledge and skills certification, combined with external evidence collection, to provide “double insurance” for employees’ knowledge and skills to meet the standards, so that abilities of employees upon admission transfer and on jobs to perform their duties can be effectively guaranteed, effectively reducing the risk of safe production and operation.

Training for New Employees

We recognize that new employees bring vitality to the Group’s culture. To facilitate their integration into China Gas’s culture, we provide regular training for new employees. Each new employee receives monthly training, consisting of 12 online courses covering various topics such as career development, welfare protection systems, labor safety, integrity, and reporting of violations.

6. EMPLOYEE CARE

Total number of employees trained and training hours:

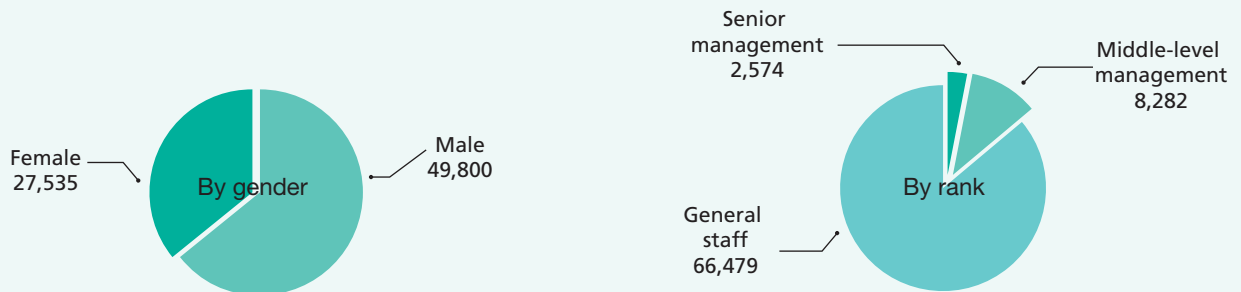


Total number of employees trained
77,335

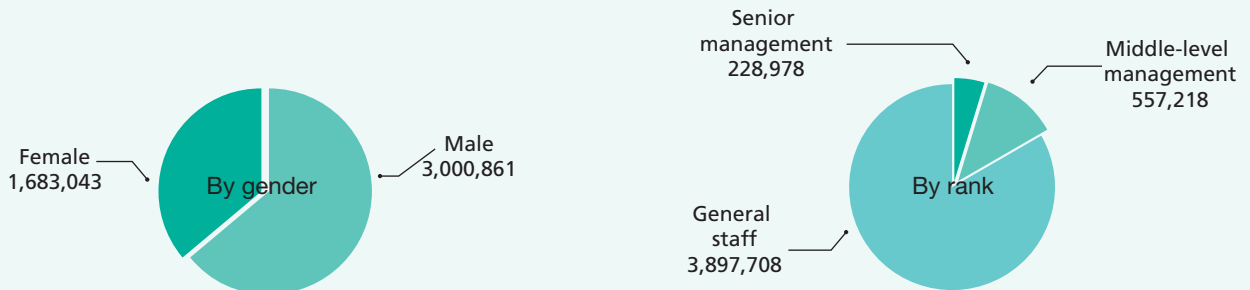


Total training hours
4,683,904 hours

Total number of trained employees by gender and rank

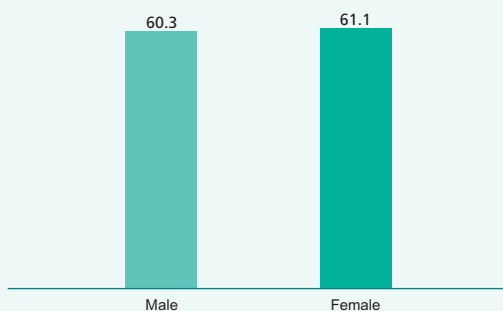


Total training hours by gender and rank (hours)

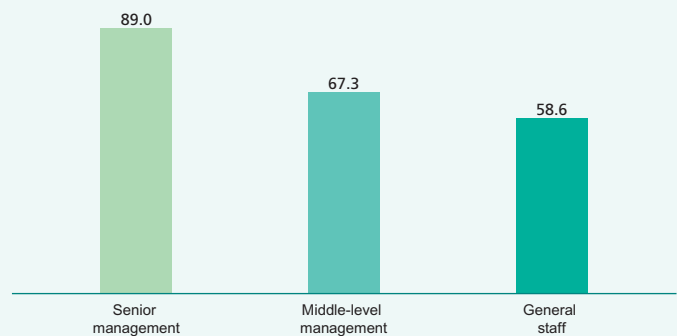


Average training hours by gender and rank (hours)

By gender



By rank



Internal Digital Learning Platform

To promote flexibility in learning, we have established an internal digital learning platform accessible to all employees. The platform offers a total of 8,132 fruitful courses, covering subjects such as career development, welfare systems, labor safety, and user service safety instructions with over 420,000 participants.

Cooperation with Universities

As a key player in the national dual-carbon strategy, China Gas actively engages in strategic cooperation with colleges and universities, fostering a school-enterprise cooperation model. This collaboration serves as a crucial mechanism for nurturing future talent within the China Gas Group. In order to facilitate school-enterprise cooperation and contribute to enterprise development, skills improvement, and employment promotion, we have established standardized management protocols outlined in the *Administrative Measures for School-Enterprise Cooperation of China Gas*. Since 2011, we have partnered with esteemed institutions such as Wuhan Gas Reli School, the China Gas Engineering School of Hebei Normal University, among others, effectively cultivating exceptional professionals for the Group.

Aligned with our management reform initiatives “headquarters at the core, regions in promotion, and front-lines towards optimization”, we aim to enhance our standards and requirements for front-line skilled talent. To achieve this, we have planned strategic cooperation with 10 colleges and universities within the next one to two years, with the coverage of the nine regions.

During the fiscal year, we issued a notice outlining the “2022 Student Recruitment Plan for the Training Class of Wuhan Gas Reli School.” We finalized specific arrangements for graduation assessments and on-the-job internships for the trainees in 2022. As a result, 44 students successfully passed the interview process and will undergo internships in eight out of 25 project companies under China Gas.

Furthermore, we assigned 32 interns from Hebei Institute of Technology to the design institute, and 21 interns to project companies, who will join the China Gas Group for internships in phases.

6. EMPLOYEE CARE

6.5 WELL-BEING OF EMPLOYEES

We place great importance on the health and welfare of our employees, recognizing that a work environment focused on employee well-being is crucial for the long-term development of our enterprise. Our Staff Care Committee regularly organizes various leisure activities and provides comprehensive welfare programs to create a harmonious working atmosphere.

Welfare and Protection

China Gas offers a range of benefits. We have established a competitive welfare system, including welfare packages based on the number of employees, as well as welfare programs tailored based on local conditions and national and company requirements.

- **Welfare and Subsidies**

We provide employees with various benefits and allowances, such as seniority allowance, holiday allowance, physical examination fees, supplementary commercial insurance premiums, medical insurance, and meal allowances. Eligible employees may also receive discretionary bonuses, rewards, and stock options based on the Group's financial performance and their individual achievements. We emphasize employee incentives and care by increasing the salary standard for mid-to-high level employees and adjusting the bonus system to make benefits more accessible. Our aim is to improve opportunities for employees to enjoy benefits and create a motivating work environment.

- **Family-Friendly Employment**

We recognize that employees have family responsibilities outside of offices. To create a family-friendly working environment, we have implemented policies for employee localization and leader localization. These policies help maintain team stability and facilitate resource complementation among teams, allowing employees to work more comfortably while balancing their family obligations.

Care for Special Employees

We consider every employee as an essential part of our organization. The Group is committed to supporting employees and their families, while encourage the staff to care for and support those in need facing difficulties. To address the actual needs of employees, we have implemented several provisions and programs, including the *Interim Provisions on Employee's Wedding, Burial, Work-related Injuries, and Visits to Major Diseases*, *Headquarters Staff Care Program*, and *Staff Care Committee Assistance Application Guide*. These initiatives allow us to provide assistance to employees facing illness or coming from low-income families, demonstrating our commitment to supporting them and overcoming life challenges together.

Protection of Rights and Interests of Female Employees

The Group is dedicated to creating a supportive working environment and favourable conditions for female employees. We strictly adhere to relevant laws and regulations, such as the *Law on the Protection of Women's Rights and Interests and the Special Rules on the Labor Protection of Female Employees*. We provide equal career development opportunities for female employees and ensure their full protection through maternity and lactation leave regulations. Those who are pregnant for seven months or more and those during breast feeding can clock in one hour later or clock off one hour earlier on workdays. China Gas reserves positions for employees on parental leave and encourages their re-entry into the Company, ensuring that their career development and remuneration remain unaffected. We actively strive for equal pay and equal opportunities for career development between men and women.

6. EMPLOYEE CARE

China Gas promotes true equality in daily work, taking into account the objective differences between men and women. We care for women's special needs in a positive and considerate manner, leveraging the unique strengths of women. We aim to provide women with a sense of participation and accomplishment, and we pay attention to the well-being of female employees in our daily practices to enhance their happiness at work.

Furthermore, China Gas is committed to providing more development opportunities and channels for female employees within the Company. We aim to expand channels for women to participate in management and decision-making roles. In terms of employee promotion and development, we will continue to strengthen the training and selection of female executives, promoting a certain proportion of women to hold key leadership positions in important departments and key roles.

Ratio of remuneration of male to female by rank in FY2022/23



Senior management

(Male: Female)

1:0.88



Middle-level management

(Male: Female)

1:0.91



General staff

(Male: Female)

1:0.97

Employee maternity/paternity leave statistics in FY2022/23



Female

563



Male

560

Percentage of employees who returned to work after maternity/paternity leave in FY2022/23



Female

81.71%



Male

95.18%

6. EMPLOYEE CARE

Percentage of employees on the job after maternity/paternity leave in FY2022/23 by the end of FY2022/23



Female
79.40%



Male
90.00%

Work-life Balance

We recognize that work-life balance is crucial for maintaining work efficiency. Therefore, the Group strives to create an environment where employees can live fulfilling lives beyond work. At the headquarters where there are new gyms and multifunctional rooms for staff to workout, on offer are dance, yoga and aerobic classes weekly, along with Ping-Pong, basketball and badminton activities all available, all for better synergy within the Group. Our Staff Care Committee regularly organizes leisure activities, including summer camps, fun sports days, jogging competitions, outdoor development activities, drawing sessions, and public welfare classes. These initiatives aim to promote the physical and mental health of employees, enabling them to work energetically and with enthusiasm for mutual benefits for the Group and employees.

Case: Employee Family Fun Day



China Gas recognizes the importance of work-life balance and its impact on the well-being of employees. In addition to daily care, we are dedicated to promoting communication between employees and their families to strengthen their bonds for more happiness and synergy of the staff. To achieve this, we regularly organize cultural activities such as Employee Family Open Days, inviting employees and their family members to participate and enjoy quality time together.

With the aim to bring a refreshing experience to the families of China Gas's employees in the summer, a themed activity called "DIY Group Fan" is specially held in the Employee Family Open Day. With the guidance of a handicraft teacher, participants used their creativity to decorate fans with dried flowers, creating unique and delicate group fan artworks. Families appreciated and exchanged their creations, fostering a harmonious atmosphere. Five exceptional artworks were selected as the "best works" of the event.

Apart from the creative activity, we also arranged visits to China Gas's exhibition center, providing families with an opportunity to learn about the Company's history, business model, and achievements. Participants were on a tour to the studio, gym, and employee workstations, allowing them to experience the working and living environment of their family members and immerse themselves in China Gas's strong corporate culture.

Although there is still a long way to go, we believe that we are on the way to a better future. Looking ahead, China Gas is committed to organizing more diverse employee cultural activities, building a bridge between the Company and employees' families. Through these activities, we aim to strengthen two-way communication and exchange, foster a sense of unity within the "one family, one heart" cultural concept of China Gas, and further enhance the sense of belonging, fulfilment, and happiness among our employees.

7. SUSTAINABILITY OVERVIEW



FINANCIAL PERFORMANCE

HK\$'000

	For the year ended 31 March		
	FY2022/23	FY2021/22	FY2020/21
Direct economic value generated			
Revenue	91,988,445	88,225,193	69,975,381
Other income	1,373,913	1,378,291	923,333
Share of results of associates	344,838	920,714	892,995
Share of results of joint ventures	(100,983)	514,583	715,006
Economic value distributed			
Staff costs	4,333,831	4,134,311	3,424,801
Other costs ⁽¹⁾	78,561,421	72,060,228	51,416,802
Finance costs	1,855,358	1,456,530	1,418,781
Dividends	2,992,185	3,062,449	2,608,662
Taxation ⁽²⁾	1,235,969	2,188,817	2,602,007
Profit attributable to non-controlling interests	820,940	1,120,834	1,193,600
Charitable donations ⁽³⁾	5,437	7,853	2,343
Economic value retained			
Retained for China gas sustainable operation and development	3,801,072	7,007,759	9,839,719

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 the year.
3. Represents the FY2022/23 charitable donations but excludes donations from non-holding companies.

7. SUSTAINABILITY OVERVIEW

OPERATIONAL PERFORMANCE

	Unit	FY2022/23	FY2021/22	FY2020/21
Number of piped gas projects	No.	661	660	642
Total number of long distance natural gas transmission pipelines	No.	32	32	32
Total length of natural gas pipelines	km	551,688	525,461	480,159
Number of CNG/LNG refilling stations for vehicles and vessels	No.	533	533	557
Number of LPG distribution projects	No.	106	106	113
Total natural gas sales volume	m ³	39,249,100,000	36,703,200,000	31,210,700,000
Total LPG sales volume	million ton	4.132	4.268	4.248

SUPPLIER OVERVIEW

	Unit	FY2022/23	FY2021/22	FY2020/21
Cumulative number of centralized suppliers certified by China Gas Bidding and Procurement Platform	No.	224	302	242

7. SUSTAINABILITY OVERVIEW



ENVIRONMENTAL PERFORMANCE

	Unit	FY2022/23	FY2021/22	FY2020/21
Greenhouse gas (GHG) emissions⁽¹⁾				
Scope 1 (direct emissions) — Internal use	tCO ₂ e	79,186.73	73,153.11	72,176.26
Scope 1 (direct emissions) — Integrated energy business	tCO ₂ e	152,357.78	139,664.05	140,628.47
Scope 2 (energy related indirect emissions)	tCO ₂ e	106,205.14	90,430.27	75,513.15
Scope 3 (other indirect emissions)	tCO ₂ e	410.85	23.76	535.54
Total GHG emissions	tCO ₂ e	338,160.50	303,271.18	288,853.42
Total GHG emissions (excluding integrated energy business)	tCO ₂ e	185,802.72	163,607.13	148,224.95
GHG intensity	kgCO ₂ e/GJ of energy sold	0.21	0.20	0.22
GHG intensity (excluding integrated energy business)	kgCO ₂ e/GJ of energy sold	0.12	0.11	0.11
Direct gas emissions				
Particulate matter (PM)	ton	28.96	54.40	8.60
Sulphur dioxide (SO ₂)	ton	9.52	20.67	11.84
Nitrogen oxides (NO _x)	ton	133.05	188.80	96.98
Energy consumption				
Petrol	ton	7,546.69	5,108.74	5,232.87
Natural gas — Internal use	m ³	14,236,803.05	15,357,872.35	15,066,913.84
Natural gas — Integrated energy business	m ³	75,325,451.71	69,049,694.42	69,526,500.00
LPG	ton	27.83	150.53	90.44
Diesel	ton	4,101.51	3,966.38	3,857.03
Heavy Oil	ton	1,295.62	1,334.15	1,614.39
Fuel oil	ton	0	0	0
Kerosene	ton	0.02	0.30	5.59
Electricity (non-renewable energy)	kWh	174,078,248.26	148,222,038.31	123,771,764.33
Electricity (renewable energy)	kWh	380,500.00	337,440.80	274,408.80
Total energy consumption ⁽²⁾	GJ	3,817,229.60	3,540,441.42	3,458,811.26
Total energy consumption (excluding integrated energy business) ⁽²⁾	GJ	1,135,003.25	1,081,685.38	983,076.89
Energy intensity	GJ/GJ of energy sold	0.002	0.002	0.003
Energy intensity (excluding integrated energy business)	GJ/GJ of energy sold	0.001	0.001	0.001

7. SUSTAINABILITY OVERVIEW

	Unit	FY2022/23	FY2021/22	FY2020/21
Material use				
LPG cylinder	No.	266,877	400,397	331,185
Antifreeze oil	barrel	0	0	0
Lubricant	ton	33.73	44.23	35.40
Paper product/cardboard	ton	641.72	933.48	2,135.91
Plastic	ton	6.05	23.66	537.77
Wood board	ton	0	10.35	6.20
Styrofoam	ton	344.32	340.98	393.13
Odorant	ton	0.00	236.10	103.67
Water consumption				
Total water consumption	ton	2,754,576.41	2,451,087.55	2,195,885.18
Water consumption intensity	kg/GJ of energy sold	1.72	1.63	1.66
Wastewater and waste				
Total wastewater discharged	ton	1,604,239.31	1,399,728.91	1,333,797.35
Non-hazardous waste produced ⁽³⁾	ton	22,427.15	22,820.10	21,555.99
Non-hazardous waste production intensity	ton/employee	0.29	0.29	0.29
Hazardous waste produced ⁽³⁾	ton	77.34	78.69	74.33
Hazardous waste production intensity	ton/employee	0.001	0.001	0.001
Environmental compliance				
Environmental regulatory non-compliances	No.	0	0	0

Notes:

1. In FY2020/21, the Group updated the calculation basis of GHG emissions. The data of this year was calculated according to the Environmental, Social and Governance Reporting Guide of the HKEX and other international reference. The calculation basis of previous years' data can be referred to the internationally-recognised Clean Development Mechanism (CDM) in the United Nations Framework Convention on Climate Change.
2. Energy consumption is calculated based on the conversion factors provided in China Energy Statistical Yearbook 2019.
3. The non-hazardous and hazardous waste production data were obtained through estimation.

7. SUSTAINABILITY OVERVIEW



EMPLOYMENT

	Unit	For the year ended 31 March		
		FY2022/23	FY2021/22	FY2020/21
Total number of employees	people	77,335	78,690	74,331
By employment type				
Full-time	people	77,335	78,690	74,331
Part-time	people	0	0	0
By gender				
Male	people	49,800	49,920	47,319
Female	people	27,535	28,770	27,012
By age				
Under 30 years old	people	19,042	19,053	18,446
30–50 years old	people	50,149	50,515	48,023
Above 50 years old	people	8,144	9,122	7,862
By rank				
Senior management	people	2,673	2,708	2,541
Middle-level management	people	8,282	8,259	7,526
General staff	people	66,479	67,723	64,264
By ethnicity				
Han	people	71,820	73,594	69,567
Ethnic minorities	people	5,515	5,096	4,764
Male to female ratios by rank				
Senior management				
Male	%	85	85	86
Female	%	15	15	14
Middle-level management				
Male	%	69	69	69
Female	%	31	31	31
General staff				
Male	%	63	62	62
Female	%	37	38	38

7. SUSTAINABILITY OVERVIEW

HEALTH AND SAFETY, TRAINING AND DEVELOPMENT, AND LABOR PRACTICES

	Unit	FY2022/23	FY2021/22	FY2020/21
Health and safety				
Number of work-related injuries ⁽¹⁾	No.	2	3	17
Serious work-related injuries (excluding fatalities) ⁽²⁾	No.	0	1	1
Number of work-related fatalities	No.	0	1	2
Number of occupational disease cases	No.	0	0	0
Number of disability injuries	No.	0	0	9
Rate of work-related injuries ⁽³⁾	/	0	0	0.02
Serious work-related injury rate (excluding fatalities) ⁽⁴⁾	/	0	0	0.001
Work-related fatality ⁽⁵⁾	/	0	0	0.004
Lost working days due to work-related injury	day	130	285	605
Total working hours	hour	126,980,930	109,100,088	146,869,920
Training and development				
Employee training rate	%	100	100	100
Total training hours	hour	4,683,904	3,806,734	3,156,622
Average training hours per employee	hour	60.57	48.39	42.48
Labor practices				
Number of violation cases related to employment or labor regulations	No.	0	0	0
Number of violation cases related to child labor or forced labor	No.	0	0	0
Number of discrimination cases related to gender, ethnicity, age and health during recruitment	No.	0	0	0

Notes:

1. Work-related injuries include work-related fatalities and serious work-related injuries.
2. Serious work-related injuries (excluding fatalities) refer to those work-related injuries which caused the workers to fail or have difficulty recovering to their pre-injury state within six months.
3. Rate of work-related injuries = (Total number of work-related injuries/Total working hours) × 200,000.
4. High-consequence work-related injury rate (excluding fatalities) = (Total number of serious work-related injuries (excluding fatalities)/Total working hours) × 200,000.
5. Work-related fatality = (Total number of fatalities as a result of work-related injury/Total working hours) × 200,000.

7. SUSTAINABILITY OVERVIEW

COMMUNITY INVESTMENT

	Unit	FY2022/23	FY2021/22	FY2020/21
Number of volunteers	people	16,890	15,146	2,052
Hour of voluntary services	hour	2,523	2,652	320
Number of beneficiaries	people	50,916⁽³⁾	300 ⁽²⁾	Data not available ⁽¹⁾
Charitable donations	HK\$	5,437,000	14,170,203 ⁽⁴⁾	2,343,000

Notes:

1. In FY2020/21, the major charitable donations were donated to relevant government departments, thus the number of beneficiaries cannot be counted.
2. The 300 beneficiaries in FY2021/22 mainly benefited from community donations.
3. In FY2022/23, there was a large number of beneficiaries benefiting from charity and volunteering activities, which was only an estimated number.
4. Charitable donations in FY2021/22 includes donations from non-holding companies.

8. CONTENT INDICES

HKEX ESG REPORTING GUIDE CONTENT INDEX

Subject Areas, Aspects, General Disclosures and KPIs	Description	Relevant Chapter or Other Explanation	Page Number
A. ENVIRONMENT			
Aspect A1: Emissions			
General Disclosure	<p>Information on:</p> <p>(a) the policies; and</p> <p>(b) compliance with relevant laws and regulations that have a significant impact on the issuer</p> <p>relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.</p>	<p>Environmental Protection; Environmental Management System</p> <p>China Gas actively complies with the regulatory requirements including the <i>Environmental Protection Law of the People's Republic of China and the State</i>, the <i>Environmental Impact Assessment Law of the People's Republic of China and the State</i>, the <i>Water Pollution Prevention and Control Law of the People's Republic of China and the State</i>. It has also developed internal policies such as the "HSE Management System Work Guidelines" based on the ISO 14001 standard, requiring all business units and subsidiaries to implement relevant policies. Through the establishment and improvement of various energy conservation and environmental protection systems, the Group continues to strengthen energy and resource management, combat climate change and promote environmental protection, so as to minimize the environmental impact caused by production and operation and its own activities. The Group, in proactive response to the national policies against climate change, identifies climate-related risks and opportunities with measures of clean energy promotion and so forth as its share of contributions to GHG emission reduction. During the Reporting Period, China Gas was not subject to any administrative penalties due to violation of the above environmental laws and regulations with a significant impact on the Group.</p>	135

8. CONTENT INDICES

Subject Areas, Aspects, General Disclosures and KPIs	Description	Relevant Chapter or Other Explanation	Page Number
KPI A1.1	The types of emissions and respective emissions data.	Environmental Protection; Sustainability Overview	135;167
KPI A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tons) and, where applicable intensity (e.g. per unit of production volume, per facility).	Green Operation; Sustainability Overview	76;167
KPI A1.3	Total hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Environmental Protection; Sustainability Overview	135;167
KPI A1.4	Total non-hazardous waste produced (in tons) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	Environmental Protection; Sustainability Overview	135;167
KPI A1.5	Description of emission target(s) set and steps taken to achieve them.	Sustainable Development Goals; Environmental Protection, Environmental Management System	26;135
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	Resource Utilization and Waste Management We will continue to conduct detailed recording on hazardous and non-hazardous waste, in order to carry out meaningful comparisons in the future. We also strive to improve our environmental performance continuously.	137
Aspect A2: Use of Resources			
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	Environmental Management System; Sustainability Overview	135;167
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).	Environmental Management System; Sustainability Overview	135;167
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	Environmental Management System; Water Resource Management; Sustainability Overview	135; 139; 167
KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	Environmental Management System; Green Operation	135;76

8. CONTENT INDICES

Subject Areas, Aspects, General Disclosures and KPIs	Description	Relevant Chapter or Other Explanation	Page Number
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	Water Resource Management All water used by the Group were obtained with respective permits. There were no issues related to sourcing water that was fit for purpose. We will continue to strengthen the management and monitoring of water pollution prevention and control, improve sewage treatment facilities, improve the efficiency of sewage treatment, and actively promote sewage treatment measures such as "reduction, classification, treatment and utilization" to make due contributions to protecting the water environment and promoting sustainable development.	139
KPI A2.5	Total packaging material used for finished products (in tons) and, if applicable, with reference to per unit produced.	The Group's main product does not involve packaging material usage.	—
Aspect A3: The Environment and Natural Resources			
General Disclosure	Policies on minimising the issuer's significant impacts on the environment and natural resources.	Environmental Management System	135
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	Environmental Management System	135
Aspect A4: Climate Change			
General Disclosure	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	Climate Change Response	65
KPI A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	Climate Change Response	65

8. CONTENT INDICES

Subject Areas, Aspects, General Disclosures and KPIs	Description	Relevant Chapter or Other Explanation	Page Number
B. SOCIAL			
Employment and Labor Practises			
Aspect B1: Employment			
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.	Employee Rights Protection; Talent Acquisition and Retention	157; 154
KPI B1.1	Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region.	Employee Rights Protection; Sustainability Overview	157;167
KPI B1.2	Employee turnover rate by gender, age group and geographical region.	Talent Acquisition and retention; Sustainability Overview	154; 167
Aspect B2: Health and Safety			
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.	Safety Management System; Occupational Health and Safety; Operational Safety	86; 93; 89
KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	Occupational Health and Safety; Sustainability Overview	93; 167
KPI B2.2	Lost days due to work injury.	Occupational Health and Safety; Sustainability Overview	93; 167
KPI B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	Safety Management System; Occupational Health and Safety; Operational Safety	86; 93; 89

8. CONTENT INDICES

Subject Areas, Aspects, General Disclosures and KPIs	Description	Relevant Chapter or Other Explanation	Page Number
Aspect B3: Development and Training			
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	Employee Training and Development	157
KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	Employee Training and Development; Sustainability Overview	157; 167
KPI B3.2	The average training hours completed per employee by gender and employee category.	Employee Training and Development; Sustainability Overview	157; 167
Aspect B4: Labor Standards			
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 labor.	Employee Rights Protection	151
KPI B4.1	Description of measures to review employment practises to avoid child and forced labor.	Employee Rights Protection The Group regularly reviews its employment practise to ensure compliance with applicable laws and regulations in preventing child and forced labor.	151
KPI B4.2	Description of steps taken to eliminate such practises when discovered.	Employee Rights Protection The Group has zero tolerance towards such practise. Violations are subject to internal disciplinary actions or handled by relevant authorities.	151

8. CONTENT INDICES

Subject Areas, Aspects, General Disclosures and KPIs	Description	Relevant Chapter or Other Explanation	Page Number
Operating Practises			
Aspect B5: Supply Chain Management			
General Disclosure	Policies on managing environmental and social risks of the supply chain.	Business Standards; Supply Chain Management	44; 50
KPI B5.1	Number of suppliers by geographical region.	Supply Chain Management; Sustainability Overview	50; 167
KPI B5.2	Description of practises relating to engaging suppliers, number of suppliers where the practises are being implemented, and how they are implemented and monitored.	Supply Chain Management	50
KPI B5.3	Description of practises used to identify environmental and social risks along the supply chain, and how they are implemented and monitoring methods.	Fair Competition of Integrity in the Supply Chain	53
KPI B5.4	Description of practises used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	Supply Chain Sustainable Guidance and Training	55
Aspect B6: Product Responsibility			
General Disclosure	Information on: <ul style="list-style-type: none"> (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.	Customer Care The Group has not identified material concerns in its operations regarding advertising and labelling matters, thus dedicated policies are not in place. There are no laws and regulations that have a significant impact on the Group regarding health and safety, advertising, labelling and privacy matters relating to products and services provided by the Group.	130
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	Customer Care The percentage of total products sold or shipped subject to recalls for safety and health reasons in FY2022/23 was 0.02%.	130

8. CONTENT INDICES

Subject Areas, Aspects, General Disclosures and KPIs	Description	Relevant Chapter or Other Explanation	Page Number
KPI B6.2	Number of products and service-related complaints received and how they are dealt with.	Customer Care	130
KPI B6.3	Description of practises relating to observing and protecting intellectual property rights.	Intellectual Property Protection	128
KPI B6.4	Description of quality assurance process and recall procedures.	Customer Care; Product Quality Inspection	130; 125
KPI B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	Customer Care; Customer Privacy Protection	130; 48
Aspect B7: Anti-corruption			
General Disclosure	Information: (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.	Business Standards	44
KPI B7.1	Number of concluded legal cases regarding corrupt practises brought against the issuer or its employees during the Reporting Period and the outcomes of the cases.	Business Standards	44
KPI B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	Business Standards	44
KPI B7.3	Description of anti-corruption training provided to directors and staff.	Business Standards	44
Community			
Aspect B8: Community Investment			
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.	Social Responsibility	120
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labor needs, health, culture, sport).	Social Responsibility	120
KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	Social Responsibility; Sustainability Overview	120; 167

GRI STANDARDS AND CASS-CSR4.0

GRI Standards Index

Reporting Principles	China Gas prepared the Report with reference to the GRI Standards for the period from 1 April 2022 to 31 March 2023.
----------------------	--

GRI Standards Used	GRI1: Foundation 2021
--------------------	-----------------------

GRI Standards Indicators and Description		Location of Disclosure or Remarks	Page Number
GRI 2: General Disclosures (2021)			
Organization and Reporting Practises			
2-1	Organization details	About This Report	2
2-2	Entities included in the organization's sustainability report	About This Report	2
2-3	Reporting Period, Frequency and Contact Person	About This Report	2
2-4	Restatements of information	N/A	—
2-5	External assurance/assurance	N/A	—
Activities and Workers			
2-6	Activities, value chain and other business relationships	About China Gas	6
2-7	Employees	Employee Rights Protection; Sustainability Overview	151; 167
2-8	Workers other than employees	Supply Chain Management	50
Governance			
2-9	Governance structure and composition	Corporate Governance	37
2-10	Nominating and selecting the highest governance body	Corporate Governance	37
2-11	Chair of the highest governance body	Corporate Governance	37
2-12	Role of the highest governance body in oversight of impact management	Corporate Governance	37
2-13	Responsibility authorization for impact management	Corporate Governance	37
2-14	Role of the highest governance body in sustainability reporting	Sustainable Development Management	38
2-15	Conflict of interest	Corporate Governance; Annual Report 2022/23	37

8. CONTENT INDICES

GRI Standards Indicators and Description		Location of Disclosure or Remarks	Page Number
2-16	Communication of key significant events	Corporate Governance	37
2-17	Collective knowledge of highest governance body	Corporate Governance; Annual Report 2022/23	37
2-18	Evaluation of the highest governance body's performance	Corporate Governance; Annual Report 2022/23	37
2-19	Remuneration policies	Board Remuneration Linked to Sustainability Performance; Annual Report 2022/23	38
2-20	Process for determining remuneration	2022/23 Annual Report	
2-21	Annual total compensation ratio	Board Remuneration Linked to Sustainability Performance; Annual Report 2022/23	38
Strategies, Policies and Practises			
2-22	STATEMENT ON SUSTAINABILITY STRATEGY	Sustainability Strategies	25
2-23	Policy commitments	Sustainability Strategies	25
2-24	Integration of policy commitments	Regional Management and Control Model	41
2-25	Procedures for remediating negative impacts	Risk Management	43
2-26	Mechanisms for advice and concerns	Sustainability Strategies	25
2-27	COMPLIANCE WITH LAWS AND REGULATIONS	Risk Management	43
2-28	Membership of associations	N/A	—
STAKEHOLDER ENGAGEMENT			
2-29	Approach to stakeholder engagement	Stakeholder Engagement	29
2-30	Collective bargaining agreements	Democratic Management	154
GRI 3: Material Topics 2021			
3-1	Process for determining material issues	Materiality Assessment	31
3-2	List of material issues	Materiality Assessment	31
3-3	Management of material issues	Materiality Assessment; Risk Management	31; 43

8. CONTENT INDICES

Disclosure Number	Description	Relevant Chapter or Other Reference/Explanation	CASS-CSR4.	Page Number
Economic performance				
GRI 201: Economic Performance 2016				
201-1	Direct economic value generated and distributed	Sustainability Overview; Annual Report 2022/23	M1.5, M1.6, M1.7, S1.3	167
201-2	Financial implications and other risks and opportunities due to climate change	Climate Change Response	E1.9	65
201-3	Defined benefit plan obligations and other retirement plans	Employee Rights Protection; 2022/23 Annual Report	S2.10	151
201-4	Financial subsidies from government	FY2022/23 Annual Report	—	—
Energy				
GRI 302: Energy 2016				
302-1	Energy consumption within the organization	Sustainability Overview During the Reporting Period, the net energy consumption of the Group was 1.135003 GJ.	E2.5	167
302-2	Energy consumption outside the organization	Low-carbon Development The energy products sold by China Gas includes natural gas and LPG, which is the most significant indirect energy consumption of the Group. During the Reporting Period, the total sales of energy was 2,682,226 GJ.	E2.5	56
302-3	Energy intensity	Sustainability Overview All energy intensities calculated reflect energy consumption within organization only.	E2.5	167
302-4	Reduction of energy consumption	Low-carbon Development; Sustainability Overview	E2.5	56; 167
302-5	Reduce energy demand for products and services	We will continue to explore solutions on upgrading our energy efficiency.	E2.3, E2.4	—

8. CONTENT INDICES

Disclosure Number	Description	Relevant Chapter or Other Reference/Explanation	CASS-CSR4.	Page Number
Employment				
GRI 401: Employment 2016				
401-1	Turnover rate of new employees and resigned employees	Employee Rights Protection	S2.1, S2.20	151
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	Employee Rights Protection	S2.10	151
401-3	Parental Leave	Employee Rights Protection; Well-being of Employees		151; 164
Occupational Health and Safety				
GRI 403: Occupational Health and Safety 2018				
403-1	Occupational health and safety management system	Occupational Health and safety	S3.1, S2.11	93
403-2	Hazard identification, risk assessment, and incident investigation	Occupational Health and Safety	S2.11, S3.1, S3.2	93
403-3	Occupational health services	Occupational Health and Safety	S2.11, S3.1, S3.2	93
403-4	Occupational health and safety affairs: Worker participation and opinions	Occupational Health and Safety	S2.11, S3.1, S3.2	93
	Consultation and Communication			
403-5	Occupational health and safety training for workers	Occupational Health and Safety	S3.3	93
403-6	Promoting worker health	Operational Safety; Occupational Health and Safety; Well-being of Employees	S2.11, S3.1, S3.2	89; 93; 164
403-7	Prevention and mitigation of occupational health directly related to business relationship	Operational Safety	S2.11, S2.17	89
	Safety impact			
403-8	Workers covered by the occupational health and safety management system	Operational Safety The Group's occupational health and safety management system cover 100% of employees and all contracted third-party workers onsite.	S3.1	89
403-9	Work-related injury	Operational Safety; Sustainability Overview	S3, 6, S3.7	89; 167
403-10	Work-related health issues	Sustainability Overview; Safety Management of Contractors and Suppliers	S2.11	167; 104

8. CONTENT INDICES

Disclosure Number	Description	Relevant Chapter or Other Reference/Explanation	CASS-CSR4.	Page Number
Training and Education				
GRI 404: Training and Education 2016				
404-1	Average hours of training per year per employee	Sustainability Overview	S2.15	167
404-2	Programs for upgrading employee skills and transition assistance programmes	Employee Training and Development The Group provides supportive services such as advisory and counselling supports regarding career prospect to its employees.	S2.16	157
404-3	Employees receiving regular performance and career development assessments Percentage	Employee Training and Development During the Reporting Period, all of the employees gained constructive feedbacks and suggestion on their career planning through performance assessment.	S2.15, S2.16	157
Local Communities				
GRI 413: Local Communities 2016				
413-1	Local community engagement, impact assessments, and development programmes Operation sites	Social Responsibility; Relocation for Local Residents	S4.1, S4.5	120; 117
413-2	Actual or potential significant negative impacts on local communities Operation sites	There were no significant environmental and social impacts to the local community identified or considered at risk during the Reporting Period.	—	—
Marketing and Labelling				
GRI 417: Marketing and Labelling 2016				
417-1	Requirements for product and service information and labelling	Products' information such as product specifications, parameters, sources of raw materials, guide on installation, and guide on safety use and disposal of products etc. are available in all of the Group's products under the brand of "Gasbo".	M2.8	—
417-2	Incidents of non-compliance concerning product and service information and labelling	No such incident occurred in FY2022/23.	M1.4, M2.8	—
417-3	Incidents of non-compliance concerning marketing communications	No such incident occurred in FY2022/23.	M1.4, M2.8	—

8. CONTENT INDICES

CHINA GAS ESG POLICY LIST

Policy Name	Corresponding HKEX ESG Guidelines
Rectification and Management Procedure for Transmission Loss	A1 Emissions
Scheduling and Inspection System	A1 Emissions
Leakage Detection and Prevention Mechanism	A1 Emissions
Emergency Repair Mechanism	A1 Emissions
Vehicle Management System	A1 Emissions, A2 Use of Resources
7S Office Environmental Management System	A2 Use of Resources
Office Printing Improvement Programme	A2 Use of Resources
Environmental and Social Management System	A3 The Environment and Natural Resources, B8 Community Investment
Biodiversity Protection Policy	A3 The Environment and Natural Resources
HSE Management System Work Guidelines	A3 The Environment and Natural Resources
Environmental Impact Assessment Report Outlines	A3 The Environment and Natural Resources
Engineering Construction Risk Management and Control Guidelines	A3 The Environment and Natural Resources
Regulations of Construction Quality Management	A3 The Environment and Natural Resources
Conventional Specifications of Gas Projects Under Construction	A3 The Environment and Natural Resources
Interim Regulations for Civilized Construction and Environmental Management of Construction Sites	A3 The Environment and Natural Resources
Climate Change Policy	A4 Climate Change
Equal Rights and Interests Policy	B1 Employment
Human Resources Management Manual	B1 Employment, B4 Labor Standards
Recruitment Management System	B1 Employment, B4 Labor Standards
Management Method for Cadre Allocation,	B1 Employment
Responsibilities and Annual Targets of Headquarter Departments, Business Departments and Specialized Companies	B1 Employment
Responsibilities and Annual Targets of Regional Management Centers	B1 Employment
Responsibilities and Annual Targets of Project Companies	B1 Employment
Quarterly Performance Appraisal Programme for Management Level at Regional and Project Companies	B1 Employment
Safety Management System	B2 Health and Safety
Occupational Health Management System	B2 Health and Safety
Management System for Safety Exercise	B2 Health and Safety
Dangerous Source Management System	B2 Health and Safety
Management System for Safety Accident	B2 Health and Safety
Safety Monitoring Center Management System	B2 Health and Safety
Management System of Employees Safety Scorecard	B2 Health and Safety
Management System of Safety Experience Feedback	B2 Health and Safety

8. CONTENT INDICES

Policy Name	Corresponding HKEX ESG Guidelines
Management System of General Manager Pre-employment Safety Appraisal of Project Company	B2 Health and Safety
Management System of Safety Performance Evaluation for Various Positions	B2 Health and Safety
Regulation of Safety Supervision	B2 Health and Safety
Interim Provisions on Employee's Wedding, Burial, Work-related Injuries and Visits to Major Diseases	B2 Health and Safety
Headquarters Staff Care Programme	B2 Health and Safety
Staff Care Committee Assistance Application Guide	B2 Health and Safety
Risk Classification and Control Guidelines	B2 Health and Safety
Production and Operation Emergency Response and Preparation Guidelines for Project Companies	B2 Health and Safety
China Gas HSE Management Manual	B2 Health and Safety
Construction Safety Guidelines	B2 Health and Safety
Regulations of Safety Supervision	B2 Health and Safety
Implementation Plan of HSE Management Rating for Project Companies	B2 Health and Safety
Implementation Plan of Safety Supervision and Training	B2 Health and Safety, B3 Development and Training
Implementation and Management of Safety Supervision and Inspection	B2 Health and Safety
Training and Management System	B3 Development and Training
Employees' Code of Conduct	B4 Labor Standards, B6.3 Description of Practises Relating to Observing and Protecting Intellectual Property Rights
Engineering Materials Supplier Management System	B5 Supply Chain Management
Implementation Plan of Tender and Non-Tender Procurement	B5 Supply Chain Management
Contractors' Management Policy	B5 Supply Chain Management
Suppliers' Code of Conduct	B5 Supply Chain Management
China Gas Supplier Reward and Punishment Management Measures	B5 Supply Chain Management
Operational Management System	B6 Product Responsibility
Production and Operation Emergency Repair Maintenance Management System	B6 Product Responsibility
Incoming Inspection System	B6 Product Responsibility
On-site Inspection System	B6 Product Responsibility
Finished Products Inspection System	B6 Product Responsibility
Rectification and Management Procedure for Transmission Loss	B6 Product Responsibility
Regulations on Long-distance Pipeline and Township Gas Transmission and Distribution Management	B6 Product Responsibility
Regulations on Facilities Management	B6 Product Responsibility
Regulations on Township Gas Scheduling Management	B6 Product Responsibility

8. CONTENT INDICES

Policy Name	Corresponding HKEX ESG Guidelines
Regulations on Pressure Tapping of Steel Pipeline at Medium-to-high Pressure	B6 Product Responsibility
Regulations on Dangerous Operations Management in Gas Transmission and Distribution System	B6 Product Responsibility
Operation and Maintenance Management Standards for Gas Facilities	B6 Product Responsibility
CNG Gas Stations' Production and Operation Management Standards	B6 Product Responsibility
Gas Facilities' Operation and Maintenance Standards	B6 Product Responsibility
Guidelines for Home Safety Inspection Management for Gas Users	B6 Product Responsibility
Management Guidelines for Gas Pipeline Network Inspection Against Corrosion Design, Construction, Operation and Maintenance Guidelines for Overhead Gas Pipelines	B6 Product Responsibility
Emergency Response Plan	B6 Product Responsibility
Customer Service Management System	B6.2 Number of Products and Service Related Complaints Received and How They Are Dealt With
Customer Complaint Handling Principles	B6.2 Number of Products and Service Related Complaints Received and How They Are Dealt With
Employee Service Specification	B6.2 Number of Products and Service Related Complaints Received and How They Are Dealt With
Call Center Management Regulations	B6.2 Number of Products and Service Related Complaints Received and How They Are Dealt With
Hotline Personnel Service Manual	B6.2 Number of Products and Service Related Complaints Received and How They Are Dealt With
Privacy Policy	B6.5 Description of Consumer Data Protection and Privacy Policies, and How They Are Implemented and Monitored
Protection of Customer Data Privacy	B6.5 Description of Consumer Data Protection and Privacy Policies, and How They Are Implemented and Monitored
Anti-bribery and Anti-corruption Policy	B7 Anti-corruption
Anti-corruption Work Regulations of China Gas (trial)	B7 Anti-corruption
Supervision and Punishment for Employees' Misconduct	B7 Anti-corruption
Employees' Rewards and Punishments Regulations	B7 Anti-corruption
Internal Audit Supervision and Management System	B7 Anti-corruption
Internal Supervision and Reporting Management System	B7 Anti-corruption
Engineering Materials Supplier Management System	B7 Anti-corruption
Red and Yellow Lines Management Regulations	B7 Anti-corruption
Integrity and Diligence Handbook	B7 Anti-corruption
Charitable and Community Activities Management Policy	B8 Community Investment



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



www.chinagasholdings.com.hk