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CR Gas

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(於百慕達註冊成立之有限公司) (Incorporated in Bermuda with limited liability) 股份代號 stock code: 1193



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# 報告導讀 About This Report



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# 報告目的

本報告為華潤燃氣控股有限公司及其成員公司發佈的第七份獨立《環境、社 會及管治報告》。

本着公開、透明的原則, 華潤燃氣以全面且客觀的方式向社會各界人士匯 報本集團過去一年中在環境管理、社會責任及集團管治議題上的策略和承 諾, 同時通過數據披露詳細展示本集團在相關範圍的表現及績效考核。

本報告以中文和英文發佈,如有內容不一致,請以中文版為準。同時,報 告已上載至香港聯合交易所(聯交所)及本集團網站www.crcgas.com。我 們期待您通過本報告更好地了解我們,並提出寶貴意見。

# **REPORTING PURPOSE**

This report is the seventh standalone Environmental, Social and Governance Report published by China Resources Gas Group Limited and its member companies.

CR Gas reports its strategies and commitments on the topics of environmental management, social responsibility and group governance in the past year in a comprehensive and objective manner to all levels of society in the principles of being open and transparent, while disclosing and displaying in details the Group's performance and performance appraisal in the relevant areas through data.

This report is published in both Chinese and English. In case of any inconsistency, the Chinese version prevails. Meanwhile, the report has been uploaded to the website of The Stock Exchange of Hong Kong Limited (the Stock Exchange) and the Group's website at **www.crcgas.com**. We look forward to your valuable feedback as you get to know us better through this report.

## 稱謂説明

為便於表述,報告中的「華潤燃氣|、「(本)集團|、「(本)公司|、「我們|均指代「華潤燃氣控股有限公司及其成員公司|。

#### **APPELLATION STATEMENT**

For the convenience of presentation, the "CR Gas", the "Group", the "Company", "we", "us" or "our" in this report all refer to "China Resources Gas Group Limited and its member companies".

#### 報告範圍

本報告涵蓋本集團的核心業務,在2023年1月1日至2023年12月31日(統稱「本年度」或「年內」)的環境、社會及管治表現, 個別部分內容超出上述範圍。本報告覆蓋本集團所有業務,包括城市燃氣業務、綜合服務、綜合能源(分佈式光伏、分佈式能 源、交通充能)業務,和營運地點。

#### **REPORTING SCOPE**

This report covers the environmental, social and governance performance of the core business of the Group during the period from 1st January 2023 to 31st December 2023 (the "Year"), with contents of certain sections exceeding the above timeframe. This report covers all business activities, including city gas business, integrated services, integrated energy (distributed photovoltaic, distributed energy and transport charging) business and operational locations of the Group.

#### 報告標準

本報告根據香港聯合交易所有限公司(統稱「聯交所」)《主板上市規則》附錄C2《環境、社會及管治報告指引》進行編製,依照 「不遵守就解釋」條文規定,並以其載列的四項匯報原則:重要性、量化、平衡及一致性,作為披露的基礎。

#### **REPORTING STANDARDS**

In compliance with the "comply or explain" provisions as stipulated in the Environmental, Social and Governance Reporting Guide (《環境、社會及管治報告指引》) in Appendix C2 of the Main Board Listing Rules (《主板上市規則》) of The Stock Exchange of Hong Kong Limited (the "Stock Exchange"), this report has made disclosure based on four reporting principles, namely materiality, quantitative, balance and consistency, as set out in the Guide.

#### 報告審批

董事會負責領導、決策及監督在環境、社會及管治方面的措施、政策及程序,並於2024年3月28日審核通過此份ESG報告的 發佈。

# **APPROVAL OF THE REPORT**

The Board is responsible for leadership, decision-making and supervision of the measures, policies and processes in environmental, social and governance aspects, and reviewed and approved the issuance of this ESG report on 28th March 2024.



# 關於華潤燃氣 About CR Gas

# 集團介紹

華潤燃氣成立於2007年1月,2008年10月 底在香港上市(股票代碼:1193.HK),是 中國華潤集團有限公司旗下的城市燃氣投資 運營平台,主要在中國內地投資經營與大眾 生活息息相關的城市燃氣業務。集團總部位 於深圳,並在中國多個城市設有分支機構 和子公司,是中國最大的城市燃氣運營商 之一。華潤燃氣主要經營業務包括天然氣 購買及銷售、管道設施建設及運營、車船 用氣、冷熱電綜合能源、車輛加氫、車輛 充電、燃氣綜合服務等。截至2023年底, 集團業務已覆蓋25個省份,其中15個省會 城市和76個地級市,共計276個城市燃氣項 目,2023年銷氣量約387.8億立方米,服務 用戶數5,778.0萬戶。

## **GROUP PROFILE**

CR Gas was established in January 2007 and listed in Hong Kong (stock code: 1193.HK) at the end of October 2008. It is the city gas investment and operation platform under China Resources (Holdings) Co., Ltd., mainly investing in and operating city gas business closely related to people's life in the Chinese mainland. Headquartered in Shenzhen, with branches and subsidiaries in many cities in China, the Group is one of the largest city gas operators in China. The principal businesses of CR Gas include the purchases and sales of natural gas, the construction and operation of pipeline facilities, gas for vehicles and vessels, integrated cooling, heating and power energy, vehicle hydrogen refueling, vehicle charging, and integrated gas services, etc. As of the end of 2023, the Group's business has covered 25 provinces, 15 provincial capital cities and 76 prefecture-level cities, with a total of 276 urban gas projects. In 2023, the gas sales volume was approximately 38.78 billion cubic meters, with the number of service users reaching 57.78 million.

憑藉集團不斷提升的業務規模及質量,以及 受益於國家鼓勵天然氣等清潔能源的推廣及 利用,2023年,穆迪(Moody's)維持本集 團信用評級A2、標準普爾(S&P Global)及 惠譽(Fitch Rating)推持本集團A-評級, 反映了本集團聚焦主業發展綜合服務和綜合 能源業務的發展戰略及財務表現得到了市 場的廣泛認可。此外,國際權威指數機構 MSCI維持本集團ESG評級A級,反映了本 集團對長期的、財務上相關的ESG風險和 機遇的適應性表現贏得了市場廣泛認可。同 時,集團突出的ESG治理水平、社會環境 價值創造和風險管理水平讓集團入選2023 年「央企ESG●先鋒100指數」榜單,為國務 院國資委統籌推動央企上市公司ESG工作 提供重要參考。

華潤燃氣積極響應國資委和聯合國ESG倡 議,履行央企社會責任,堅持以提供清潔安 全能源為己任,致力於為客戶提供安全可靠 的能源產品和服務,為構建綠色、低碳、可 持續的未來做出貢獻。 Given the constantly growing business scale and improving business quality of the Group, as well as the encouragement shown by the government in the promotion and use of natural gas and other clean energies, Moody's maintained the Group's credit rating of A2, S&P Global and Fitch Rating maintained the Group's rating at A - in 2023, reflecting the extensive recognition given by the market to the Group's development strategy and financial performance of focusing on the main business to develop comprehensive services and integrated energy business. In addition, MSCI, an international authoritative index institution, maintained the Group's ESG rating of A, reflecting the extensive recognition given by the market to the performance of the Group's adaptability to long-term, financially relevant ESG risks and opportunities. Meanwhile, the Group's outstanding ESG governance, social environmental value creation and risk management level have enabled the Group to be selected in the "ESG Pioneer 100 Index of Central Enterprises" in 2023, providing an important reference for the State-owned Assets Supervision and Administration Commission of the State Council to coordinate and promote the ESG work of central state-owned listed companies.

CR Gas actively responds to the ESG initiatives of the State-owned Assets Supervision and Administration Commission and the United Nations, fulfills its social responsibilities as a central state-owned enterprise, adheres to the responsibility of providing clean and safe energy, and is committed to providing customers with safe and reliable energy products and services, so as to contribute to building a green, low-carbon and sustainable future.



2023年華潤燃氣事業版圖 **BUSINESS NETWORK OF CR GAS, 2023** -0 西氣東輸一期 西氣東輸二期 西氣東輸三期 "West to East 1" "West to East 2" "West to East 3" 川氣東送 中緬油氣 俄羅斯天然氣東線 6 "Myanmar to China" "Russia to China" Eastern "Sichuan to East" Pipeline 俄羅斯天然氣西線 俄羅斯天然氣中線 現有液化天然氣接收站 "Russia to China" Western "Russia to China" Existing LNG Receiving Pipeline Central Pipeline Terminal



**276** 城市燃氣項目 276 city gas projects



5,778 萬戶接駁用戶 57.78 million customers connected



**15** 省會城市 15 provincial capitals

**30.69** 萬公里管網 306,900 km pipelines



76 地級城市 76 prefecturelevel cities

	企業文化 CORPORATE CULTURE					
企業基因 DNA	為中華民族偉大復 Determined to rea rejuvenation of th 為創造人民幸福生 Pursue to create people	alize the great e Chinese nation 活而立命		命 ssion	Embrace g	後展 共創美好生活 green development and build I life together
	為實現國家經濟繁 Strive for the eco the country			景 sion	世界一流能 Become a	言賴和喜愛的 ₺源服務企業 world-leading energy service trusted and preferred by the public
	使命 MISSION			直觀 lue	業績導向 以人為本	
願景 VISION	企業基因 DNA	價 V/		業精神 irit	敢為人先的	oneself to the cause of the country
	且織氛圍 MOSPHERE	企業精神 SPIRIT			篤定前行的 To forge a	的堅守精神 ahead with perseverance
					自強不息的 Exert cons	5奮鬥精神 stantly for the betterment
組織氛圍 Atmosphe	ere	真誠 Sincerity	團結 Solidarity	Open	開放 -mindednes	進取 ss Proactivity

# 表彰獎項 RECOGNITIONS AND AWARDS



入選《中央企業上市公司ESG藍皮書(2023)》 發布的「央企ESG •先鋒100指數」 Selected in the "ESG Pioneer 100 Index of Central Enterprises" issued by the ESG Blue Book of Central-Controlled Listed Companies (2023) (《中央 企業上市公司ESG藍皮書(2023)》)



2023年香港綠色企業大獎 「超卓環保安全健康獎」金獎 Hong Kong Green Awards 2023 – "Environmental, Health and Safety Award" – Gold



華潤燃氣 CB Gas 在2023年國務院國資委主辦的首屆 「國企數字場景創新專業賽」榮獲二等獎 (「業財税一體化智慧運營實踐」)

Second Prize in the first "Professional Competition on Innovation in Digital Scenarios of SOEs" hosted by the State-owned Assets Supervision and Administration Commission of the State Council in 2023 ("Business-Finance-Taxation Integrated Intelligent Operation Practice")

入選2023年第十四屆全國「百篇優秀管理案例」獲獎案例(由南京大學黨委常務副書記楊忠教授團 隊編寫的《從「學一流」到「創一流」: 華潤燃氣的學標桿成長之路》) Selected in the award-winning cases in 2023 in the 14th National "Excellent 100 Management Cases" (From "Learning First Class" to "Creating First Class": CR Gas's Path to Benchmarking Growth (《從「學一流」到「創一流」: 華潤燃氣的學標桿成長之路》) compiled by the team of Professor Yang Zhong, Executive Deputy Secretary of the Party Committee of Nanjing University)



華潤燃氣代表隊參加第四屆全國石油石化專業職業技能競賽燃氣管網運行工競賽獲得團隊賽金牌。 CR Gas team won the Gold Medal in the Team Competition in the 4th National Petroleum and Petrochemical Professional Vocational Skills Competition for Gas Pipeline Network Operators 邯鄲華潤燃氣峰峰礦區華潤燃氣巡檢班組 CR Gas Inspection Team of Fengfeng Mining Area, Handan CR Gas

合肥合燃華潤燃氣有限公司後勤服務公司 綜合維修班 Comprehensive Maintenance Class of Hefei Heran CR Gas Co., Ltd. Logistics Service Company

廈門華潤燃氣有限公司液化石油氣儲配站 Xiamen CR Gas Liquefied Petroleum Gas Storage and Distribution Station

福州華潤燃氣有限公司管網運行部 Fuzhou CR Gas Co., Ltd. Pipeline Network Operation Department

鄭州華潤燃氣股份有限公司棉紡路 客戶服務中心 Zhengzhou CR Gas Co., Ltd. Mianfang Road Customer Service Center





2023年全國燃氣行業安全發展勞動和技能競賽「先進班組」榮譽稱號 Honored as the "Advanced Unit" in the 2023 National Gas Industry Safety Development Labour and Skills Competition

廈門華潤燃氣液化石油氣儲配站。 調度中心調度班組 Xiamen CR Gas Liquefied Petroleum Gas Storage and Distribution Station, Dispatching Unit of Dispatching Center



2023年全國燃氣行業工會聯委會第三十六次年會安全競賽「先進班組」 "Advanced Unit" in the Safety Competition of the 36th Annual Meeting of the China Gas Labour Union Joint Committee in 2023







此外<sup>9</sup> 2023年<sup>9</sup> 華潤燃氣應國家住建部要求<sup>9</sup> 高質量完成了全國城鎮燃氣安全專項整治信息系統的開發<sup>9</sup>、運行服務等工作任 務<sup>9</sup> 有力支撐了專項整治工作的推進<sup>9</sup> 2024年1月16日<sup>9</sup> 國務院國資委社會責任局向華潤集團發來《表揚信》<sup>9</sup> In addition, in response to the requirement of MOHURD in 2023, CR Gas completed the development and operation tasks of the special improvement system on urban gas safety of the country with high quality, giving strong support to promote the special improvement work. On 16th January 2024, China Resources Group received a "Letter of Commendation" from the Bureau of Social Responsibility of the State-owned Assets Supervision and Administration Commission of the State Council.

#### 業務回顧

#### 主要業務

華潤燃氣主要從事下游城市燃氣分銷業 務,綜合能源業務以及燃氣綜合服務等。華 潤燃氣的業務戰略布局遍及中國各地,主要 位於經濟較發達、人口稠密的地區和天然氣 儲量豐富的地區。

華潤燃氣全力發展天然氣供應業務,向工 業、商業、居民客戶及天然氣汽車供應天然 氣,並推動綜合能源、綜合服務業務快速發 展。截至2023年底,本集團在全國多座大 中城市投資發展燃氣項目共276個,業務遍 及全國25個省份覆蓋15個省會城市和76個 地級市。2023年集團總共銷售天然氣387.8 億立方米,新開發工商業用戶4.13萬戶, 新開發居民用戶331.3萬戶,其中:新房接 駁用戶288.3萬戶,舊房接駁用戶38.4萬 戶,煤改氣用戶4.6萬戶。累計鋪設管網長 度約30.69萬公里,建設加氣站共315座。

## **BUSINESS REVIEW**

#### **Primary Business**

CR Gas is principally engaged in downstream city gas distribution business, integrated energy business and integrated gas services. Its operations are strategically located across China, mainly in areas which are economically more developed and densely populated and those with rich reserves of natural gas.

CR Gas has made every effort to develop its natural gas supply business, pipeline natural gas to industrial, commercial and residential customers as well as natural gas vehicles, and promoted the rapid development of integrated energy and integrated service business. As of the end of 2023, the Group invested in a total of 276 gas projects in a number of large and medium cities in China, with operations spanning 25 provinces and covering 15 provincial capital cities and 76 prefectural-level cities. In 2023, the Group sold a total of 38.78 billion cubic meters of natural gas. New industrial and commercial users reached 0.0413 million, and new residential users reached 3.313 million. In particular, new house connection users, existing house connection users and coal-to-gas conversion users reached 2.883 million, 0.384 million and 0.046 million. The total length of the pipeline network was approximately 0.3069 million kilometers, and a total of 315 gas filling stations were built.



集團總共銷售天然氣 387.8 億立方米 The Group sold a total of 38.78

新開發工商業用戶 4.13萬戶

新開發居民用戶 331.3萬戶

其中:新房接駁用戶 288.3萬戶

煤改氣用戶 38.4萬戶 4.6萬戶

舊房接駁用戶

## 低碳業務擴展

近年,國家整體經濟轉型向低碳發展,清潔 能源的需求極速增長。為響應國家的低碳發 展戰略,本集團積極利用客戶資源及技術優 勢,聚焦園區、建築、交通三大場景,穩步 發展分佈式光伏、分佈式能源和交通充能 三大業務,不斷提升綜合能源方案解決能 力,打造具有華潤燃氣特色的綜合能源業 務,供應清潔能源來滿足客戶的用能需求。

#### Low-carbon Business Development

In recent years, the state's overall economy has shifted to low-carbon development, with a significant increase in the demand for clean energy. In response to the state's low-carbon development strategy, the Group proactively leverages its customer resources and technical advantages and focuses on the three scenarios of parks, buildings and transportation to steadily develop the three major businesses of distributed photovoltaic, distributed energy and transport charging, continue to enhance its comprehensive energy solution capability to build a comprehensive energy business with the characteristics of CR Gas and supply clean energy to meet the energy demand of customers.



在綜合能源領域,截止2023年底,分佈式 能源業務新簽約30個項目,累計項目數量 達到173個,裝機規模1.2GW;新簽約分佈 式光伏項目98個,累計項目數量達到168 個,裝機規模達213.7MW。年內,本集 團利用城市燃氣主業優勢,共用資源和渠 道,在江蘇省南京市江寧區合作開發整域分 佈式光伏項目,裝機規模100MW,發電量 1億度/年;在雲南省昆明宜良工業園開發 分佈式集中供熱項目,項目投資4.896萬元 人民幣,蒸汽銷量38萬噸/年;本集團亦 積極拓展交通充電業務在浙江省台州市等地 成立專業化汽車充電公司,不斷拓展綁定公 交用戶的站點,並嘗試社會充電站業務。年 內,新投運充電站61座,累計投運充電站 232座, 售電較去年同期增長14.7%至3.1 億度。

In the field of comprehensive energy, as of the end of 2023, in terms of distributed energy business, 30 new projects were signed, and the cumulative number of projects reached 173, with an installed capacity of 1.2GW; and 98 new distributed photovoltaic projects were signed, and the cumulative number of projects reached 168, with an installed capacity reaching 213.7MW. During the Year, the Group leveraged on the strengths of its city gas business and shared resources and pipelines to cooperatively develop the distributed photovoltaic project in the whole region of Jiangning District, Nanjing, Jiangsu Province, with an installed capacity of 100MW and electricity generation of 100 million kWh per annum; and developed the distributed central heating project in Yiliang Industrial Park, Kunming, Yunnan Province, with a project investment of RMB48.96 million and sales of steam of 0.38 million tonnes per annum. The Group also actively expanded the transport charging business by establishing specialized car charging companies in Taizhou, Zhejiang Province and other places and continued to expand its sites for bonding bus users and piloted social charging station business. During the Year, 61 charging stations were newly put into operation, resulting in a total of 232 charging stations being put into operation, and the sales of electricity increased by 14.7% to 310 million kWh as compared with the same period of last year.





回望2023年,地緣政治危機加劇,經濟復 甦遲滯乏力,變革與動盪併駕齊驅,團結與 分裂相互激盪。可持續發展是破解當前全球 性問題的「金鑰匙」,企業作為經濟力量的 載體,保障可持續發展任重道遠。華潤燃氣 堅持將可持續發展理念融入公司日常經營與 管理,強化精益經營、精細管理,關注自身 業務與經濟、社會、環境的和諧發展,與利 益相關方共同打造包容性、可持續、有韌性 的未來。

## 堅守合規 穩健發展

華潤燃氣堅持合規經營,不斷完善公司治 理,設立董事會成員多元化政策,提名委員 會每年報告董事會在多元化層面的進展, 並監察政策的執行情況,2023年新增加一 位女性董事。同時,我們建立了一體化的 風險防範體系,通過強化內控審計監督 制,持續優化風險管理流程,完善反腐倡 廉機制,注重舉報人保護,開展商業道德 培訓,深化員工公平競爭觀念和商業道德 素養。我們將可持續發展融入日常經營管 理,通過建立有效多元的利益相關方溝通渠 應用到改善企業可持續發展策略中,為集團 的可持續發展提供明確方向。

# 匠心品質 卓越服務

華潤燃氣堅持質量至上原則,為客戶提供穩 定安全的城市燃氣。我們建立內部質量保 證體系,規範質量管理流程,從設計、施 工、供應三方面嚴格把控產品質量,全面提 高產品品質和安全性。同時,積極推進綜合 服務、輸配運行與經營管理等業務領域的智 數化項目新建與試點,不斷提升關鍵環節數 字化覆蓋率。此外,我們秉承[以客戶為導 向]的服務理念,洞察客戶真實需求、不斷 提升服務質量,規範服務標準,保障服務質 量,提升客戶對本集團產品和服務的滿意 度。 Looking back on 2023, the geopolitical crisis intensified, the economic recovery was sluggish, changes and turmoil went hand in hand, and unity and division were stirred with each other. Sustainable development is the "golden key" to solving current global problems. As a carrier of economic force, enterprises have a long and arduous task to ensure sustainable development. CR Gas adheres to integrate the concept of sustainable development into its daily corporate operations and management, strengthens streamlined operation and refine management, pays attention to the harmonious development of its business with the economy, society and environment, and works with stakeholders to create an inclusive, sustainable and resilient future.

# ADHERING TO COMPLIANCE TO PROMOTE STEADY DEVELOPMENT

CR Gas adheres to compliance operations, continuously improves corporate governance, establishes a board diversity policy, and the Nomination Committee reports annually on the Board's progress on diversity, and monitors the implementation of the policy. A new female director was appointed in 2023. At the same time, we have established an integrated risk prevention system, continued to optimize the risk management process by strengthening the internal control, audit and supervision mechanism, improved anti-corruption and integrity mechanism, focused on whistleblower protection and conducted business ethics training, so as to enhance employees' awareness of fair competition and business ethics. We integrate sustainable development into daily operations and management, conduct questionnaire surveys on major issues by establishing effective and diversified stakeholder communication channels, and apply the results of survey to improve corporate sustainable development strategy, so as to provide a clear direction for the Group's sustainable development.

# PROVIDING CRAFTSMANSHIP QUALITY AND EXCELLENT SERVICE

CR Gas upholds the principle of quality first and provides customers with stable and safe city gas. We have established an internal quality assurance system to regulate the quality management process, strictly control product quality from the three aspects of design, construction and supply, and comprehensively improve product quality and safety. At the same time, we actively promote the construction and piloting of intelligent and digital projects in business areas such as integrated services, transmission and distribution operation, and business management, and continuously expand the digital coverage of key links. In addition, by upholding the "customer-oriented" service philosophy, we gain insight into the real needs of customers, continuously improve service quality and regulate service standards to ensure service quality, thus enhancing customers' satisfaction with the Group's products and services.

# 強化管理 築牢安全

華潤燃氣始終以「追求零事故,超越零責 任」為目標,堅持將安全管理理念貫徹至企 業生產營運的各個方面,持續優化安全管 理體系,形成具有燃氣特色的安全管理模 式,建立雙重安全預防控制體系,通過內部 審核與外部核驗,不斷強化安全風險監管力 度。此外,我們通過開展安全管理強化年度 行動、重大事故隱患專項排查整治2023行 動、「安全生產月」活動、城鎮燃氣專項排 查整治等工作,推進安全技術創新,加大安 全風險監督管理力度以及加強相關方安全管 理,打造良好的安全生產企業文化。2023 年,公司未發生重大安全生產事故。

#### 低碳發展 和諧共生

華潤燃氣將可持續發展理念深植於業務之 中,積極響應國家「雙碳」政策,推動綠色 變革,按照「立足城燃、面向終端」的業務 總體定位,堅持渠道融合、業務協同、多品 創值,聚焦「園區、建築、交通」3大場景, 採用「分佈式光伏、分佈式能源、交通充 能|3種業務路徑,為用戶提供「綜合能源產 品」及「能源綜合服務」。2023年,華潤燃 氣新簽約分佈式光伏項目98個,累計項目 數量達到168個,裝機規模達213.7兆瓦, 全年售電2,763.25萬千瓦時,助力下游用 戶實現碳減排達1.61萬噸;新投運充電站 61座,累計投運充電站232座,售電較去年 同期增長14.7%至3.1億度,助力下游用戶 實現碳減排達30.1萬噸。此外,本集團計 劃逐步開展各業務氣候變化風險識別及應對 工作,同時不斷完善碳排查工作,逐步披露 範圍三相應類別排放數據,提升公司可持續 發展和應對氣候變化的能力。

# STRENGTHENING MANAGEMENT TO SAFEGUARD SAFETY

With the goal to "pursue zero accidents and incur no liability", CR Gas insists on implementing the safety management concept into all aspects of the Company's production and operation, and continuously optimizes the safety management system. We have developed a safety management model with gas characteristics, and established a dual safety prevention and control system to continuously strengthen safety risk supervision through internal audit and external verification. In addition, we have carried out a series of activities including the annual action to strengthen safety management, the action of special investigation and rectification of major accident hazards in 2023, "Safe Production Month" and special investigation and rectification of city gas to promote safety technology innovation, step up efforts in safety risk monitoring and management as well as safety management of stakeholders to create a good corporate culture of production safety. In 2023, the Company had no major production safety accidents.

# PURSUING LOW-CARBON DEVELOPMENT FOR HARMONIOUS COEXISTENCE

CR Gas has deeply rooted the concept of sustainable development in its business, actively responded to China's "dual carbon" policy to promote green transformation. In accordance with the overall business positioning of "based on city gas business and oriented to terminals", it adheres channel integration, business synergy and multi-products to create value, focuses on the 3 major scenarios of "parks, buildings and transportation" and adopts 3 business paths of "distributed photovoltaic, distributed energy and transport charging" to provide users with "integrated energy products" and "integrated energy services". In 2023, CR Gas signed 98 new distributed photovoltaic projects, and the cumulative number of projects reached 168, with an installed capacity reached 213.7MW and the sales of electricity throughout the year of 27.6325 million kWh, enabling the downstream users to achieve a reduction in carbon emissions of 16,100 tonnes; 61 charging stations were newly put into operation, resulting in a total of 232 charging stations being put into operation; and the sales of electricity increased by 14.7% to 310 million kWh as compared with the same period of last year, enabling the downstream users to achieve a reduction in carbon emissions of 0.301 million tonnes. In addition, the Group plans to gradually carry out climate change risk identification and response work for each business and at the same time continues its work to optimize carbon verification by gradually disclosing the emission data of the corresponding categories in scope 3, so as to enhance the Company's sustainable development and ability to cope with climate change.

# 以人為本 暖心回饋

華潤燃氣始終積極履行企業公民職責,重 視人權保護,深耕厚植以人為本的文化土 壤,努力打造平等、包容的工作環境。我們 積極維護員工合法權益,為員工提供有競爭 力的薪酬福利與人文關懷,注重與員工共 同成長,不斷凝聚企業發展的向心力。此 外,我們積極構建合作共贏的行業生態,熱 心公益事業,勇擔社會責任。我們向上下游 企業傳遞可持續發展理念,推進負責任供應 鏈的生態建設。我們積極推動社會公益事 業,聚焦鄉村振興戰略,響應國家天然氣體 制改革,幫助政府加強市場治理和監管,配 合地區燃氣市場區域化整合,為實現「一城 一網」建設的新格局做出貢獻。

華潤燃氣將持續踐行「促進綠色發展 共創 美好生活」的企業宗旨, 錨定國際知名、國 內一流綠色能源綜合供應商的遠景目標, 堅 持價值創造與價值實現兼顧, 努力更好地服 務國家戰略及行業發展, 堅定履行社會責 任, 奮進成為創造卓越社會價值的標桿企 業, 為社會的可持續發展傳遞源源動力。



## UPHOLDING THE PEOPLE-ORIENTED PRINCIPLE AND GIVING BACK TO SOCIETY

CR Gas always actively fulfills its responsibilities as a corporate citizen, attaches great importance to the protection of human rights, deeply cultivates a people-oriented culture, and strives to create an equal and inclusive working environment. We actively safeguard the legitimate rights and interests of our employees, provide them with competitive remuneration package and humanistic care, focus on aligning employees with corporate growth, and continuously gather the centripetal force for corporate development. In addition, we are active in building a win-win industry ecosystem, enthusiastic about public welfare, and courageous in assuming social responsibilities. We convey the concept of sustainable development to upstream and downstream enterprises and promote the ecological construction of responsible supply chains. We actively promote social welfare undertakings, focus on the rural revitalization strategy, respond to China's reform in the natural gas system, assist the government in strengthening market governance and supervision, and cooperate with regions in the integration of regional gas markets to contribute to the realization of the new pattern of "one city, one grid" construction.

CR Gas will continue to put into practice the corporate purposes of "promoting green development and creating a better life", anchor the long-term goal of becoming an internationally renowned and China's first-class integrated green energy supplier, adhere to both value creation and value realization, make efforts to better serve the national strategy and industry development, firmly fulfill social responsibilities, strive to become a benchmark enterprise in creating outstanding social value, and transmit continuous impetus to the sustainable development of society.

# 堅守合規經營 完善可持續發展 Adhering to Compliance Operation and

# **Improving Sustainable Development Management**

華潤燃氣始終堅持夯實企業治理根基,不斷加強風險防控能力,嚴守商業道德底線。同時我們致力於完善ESG管治體系 可持續發展,為公司高質量發展提供有力支撐。

CR Gas is committed to strengthening the foundation of corporate governance, enhancing risk prevention and control capabilities, and adhering to business ethics. At the same time, we are dedicated to improving the ESG governance system, providing strong support for the high-quality development of our Company.

	2023責任績效 2023 Responsibility Performance		
17-44			
		and the second	
$\diamond$	資產總額		
	1,378.71 億港元		
	I, OIO.II 隐港元 Total assets of HK\$137.871 billion	新申請專利數	
		168個	
	利潤總額	168 new patents	
	89.09億港元		
	Total profit of HK\$8.909 billion		

SDGs

8

FCONOMIC GROWTH



9

AND INFRASTRUCTURE



SUSTAINABLE CITIES 16 PEACE, JUSTICE AND STRONG INSTITUTIONS AND COMMUNITIES

16 和平、正



堅守合規經營,完善可持續發展管理 Adhering to Compliance Operation and Improving Sustainable Development Management

# 1.1 夯實企業治理

華潤燃氣持續推進公司治理體系現代化, 嚴格遵守商業道德規範,強化重大風險管 理,以保障企業的可持續發展。

#### 健全企業管治

本集團致力於健全企業管治架構,股東大 會、董事會及高級管理層嚴格按照《公司章 程》賦予的職責,行使權力及履行義務,並 充分發揮董事會轄下四個委員會(審核與風 險管理委員會、薪酬委員會、提名委員會及 企業管治委員會)的作用,有效實施公司治 理。我們已根據企業管治守則,設立董事會 成員多元化政策,提名委員會將每年於本公 司的《企業管治報告》內報告董事會在多元 化層面的組成,並監察政策的執行。

# **1.1 SOLIDIFYING CORPORATE GOVERNANCE**

CR Gas continues to promote the building of a modern corporate governance system, strictly abides by business ethics and strengthens major risk management to ensure the sustainable development of the Company.

#### Improving Corporate Governance

The Group is committed to improving its corporate governance structure. The general meeting of shareholders, the Board of Directors and the senior management strictly exercise their powers and perform their obligations in strict accordance with the responsibilities under the Articles of Association (《公司章程》), and give full play to the functions of four committees under the Board of Directors (Audit and Risk Management Committee, Remuneration Committee, Nomination Committee and Corporate Governance Committee) to effectively implement corporate governance. We have established a board diversity policy in accordance with the Corporate Governance Code. The Nomination Committee will report on the composition of the Board of Directors in terms of diversity in the Company's Corporate Governance Report (《企業管治報告》) every year and monitor the implementation of the policy.

#### 關鍵績效 Key Performance

- 董事會/委員會會議17次
- 17 Board/committee meetings
- 各董事會/委員會會議董事/委員平均出席率90%
- The average attendance rate of directors/members at each Board/committee meeting is 90%
- 報告期內新增1名女性董事
- One new female director was appointed during the reporting period

2023年,華潤燃氣修訂了《華潤燃氣權責運 行手冊(2023版)》《華潤燃氣「三重一大」 決策事項清單(2023版)》《華潤燃氣黨委會 議事規則(2023版)》《華潤燃氣黨委前置研 究討論重大經營事項清單(2023版)》。我們 依據《華潤燃氣成員企業董事會事務管理制 度》建立成員企業董事會線上管理台賬、子 企業董事會規範運作評價表,規範成員企業 董事會事務管理,有效地提高董事會事務管 理的水平。 In 2023, CR Gas revised the Operation Manual for Powers and Responsibilities of CR Gas (2023 Revision) (《華潤燃氣權責運行手冊 (2023版)》), the List of "Three Major and One Significant" Decisionmaking Items of CR Gas (2023 Revision) (《華潤燃氣「三重一大」決策事 項清單(2023版)》), the Rules of Procedure of Party Committees of CR Gas (2023 Revision) (《華潤燃氣黨委會議事規則(2023版)》) and the list of Significant Operational Items for The Party Committee's Studying and Discussion in Advance of CR Gas (2023 Revision) (《華潤燃氣黨 委前置研究討論重大經營事項清單(2023版)》). In accordance with the CR Gas Board Affairs Management Policy for Member Companies (《華 潤燃氣成員企業董事會事務管理制度》), we established an online board management ledger for member companies and standard board operation evaluation forms for subsidiary companies to regulate the management of board affairs of member companies and effectively improve the management of board affairs.

#### 強化防控風險

為確保各項風險得到有效識別、評估與控制,華潤燃氣建立了一體化的風險防範體 系,通過強化內控審計監督機制,持續優化 風險管理流程,實現公司的穩健發展。

#### 建立一體化風險防範體系

華潤燃氣以「強內控、促合規、防風險」為 目標,根據《華潤燃氣控股有限公司法律、 合規、內控及風險一體化管理制度》,建立 以風險管理為導向,法律、合規、內控、風 險管理四項職能相互協同的一體化防風險體 系。

集團董事會是法律、合規、內控、風險管 理一體化管理的最高決策機構,並且在總 部、大區及區域公司層面成立「依法治企、 風控與合規管理委員會」(以下簡稱「風控委 員會」),由各單位負責人擔任主任,部門 負責人擔任委員,秘書處負責落實風控委員 會具體工作。此外,總部、大區及區域公司 各部室設立風控合規官,與法律及風控部 門共同組成合規風控工作組,定期舉行會 議,加強風險防範。

#### **Strengthening Prevention and Control of Risks**

In order to ensure that various risks are effectively identified, evaluated and controlled, CR Gas has established an integrated risk prevention system, and continues to optimize the risk management process by strengthening the internal control, audit and supervision mechanism, so as to achieve the sound development of the Company.

#### Establishing an Integrated Risk Prevention System

With the objective of "strengthening internal control, promoting compliance and preventing risks", and in accordance with the Integrated Management Policy for Law, Compliance, Internal Control and Risk Management of China Resources Gas Group Limited (《華潤 燃氣控股有限公司法律、合規、內控及風險一體化管理制度》), CR Gas has established a risk management oriented integrated risk prevention system with synergies among the four functions of law, compliance, internal control and risk management.

The Board of Directors of the Group is the highest decision-making body for the integrated management of law, compliance, internal control and risk management. We have established the "Lawful Governance, Risk Control and Compliance Management Committee" (hereinafter referred to as the "Risk Control Committee") at the levels of headquarters, major regions and regional companies, with the heads of each unit serving as the director, department heads serving as members, and the secretariat responsible for implementing the specific work of the Risk Control Committee. In addition, we have established the position of Risk Control and Compliance Officer at the levels of headquarters, major regions and regional companies, who formed a compliance and risk control working group with the legal and risk control departments to strengthen risk prevention and control through regular meetings.

#### 健全風險管理流程

依據華潤燃氣風險管理流程,我們每年定期 梳理及評估風險,並跟進風險表現及應對措 施落實情況,其中區域公司定期向區域風控 委員會、大區風控委員會、總部法律合規部 匯報,以保證統一開展風險防控工作的效率 與質量。

#### Improving Risk Management Process

According to the risk management process of CR Gas, we regularly sort out and evaluate risks every year, and follow up on risk performance and the implementation of response measures. Regional companies regularly report to the Regional Risk Control Committee, Major Regional Risk Control Committee, the Legal and Compliance Department of headquarters to ensure the efficiency and quality of the risk prevention and control work carried out in a uniform manner.

華潤燃氣風險管理流程
<b>CR Gas Risk Management Process</b>

識別與評估 Identification and evaluation	依據華潤燃氣全面風險庫每年年初梳理年度重大風險並提出防控建議,經總部法律合規部匯總、總部 風控委員會決議後,形成本年度公司級的風險清單,並根據不同風險類型,綜合採取風險防範措施, 避免對同一風險重複跟進。 Based on CR Gas's comprehensive risk pool, at the beginning of each year, we identify major risks for the year and put forward prevention and control suggestions, form a company- level risk list for the year after being summarized by the Legal and Compliance Department of headquarters and resolved by the Headquarters Risk Control Committee, and adopt comprehensive measures to guard against risks based on different risk types to avoid repeated follow-up of same risk.
監測與預警 Monitoring and alert	結合年初風險評估結果,科學設置風險量化監測指標,建立健全重大經營風險季度監測工作,及時上 報新增重大風險並採取防控措施,做到風險早預防、早發現、早處置。 Based on the risk assessment results at the beginning of the year, we set quantitative risk monitoring indicators in a scientific way, establish and improve quarterly monitoring of major operating risks, report new major risks in a timely manner, and take prevention and control measures to achieve early prevention, early detection and early disposal of risks.
監督與整改 Supervision and rectification	對識別出的重大風險流程與環節,採取發送風險提示函等方式進行風險提示,督促整改發現的內部控制缺陷,切實採取措施防範相關風險。 For processes and stages with significant risks identified, we would inform risks by such means as sending risk alert letter, supervise the rectification of internal control deficiencies identified, and take effective measures to prevent relevant risks.
總結與改進 Review and improvement	總部法律合規部每年撰寫風險管理及內部控制工作報告,向公司審核委員會匯報,對具有典型性、普遍性的風險事件,深入分析原因,研究相應管理措施。 The Legal and Compliance Department of headquarters prepares an annual risk management and internal control report and reports to the Audit Committee of the Company, conducts in- depth analysis of the causes of typical and common risk events and studies corresponding management measures.

#### 加強內控審計監督工作

為進一步提升集團應對各類風險的能力,本 集團不斷完善審計監督與內部控制機制。在 原有制度的基礎上,我們新增並修訂11項 總部層面審計制度,推動總部與區域級審計 職能在計劃管理、質量管控、問題整改、資 源調配方面的一體化運作。

#### Strengthening Audit and Supervision of Internal Control

To further enhance the Group's ability to cope with various risks, the Group continuously improves its audit supervision and internal control mechanisms. On the basis of the original policy, we have added and revised 11 audit policies at headquarters level to promote the integrated operation of audit functions at the headquarters and regional levels in terms of plan management, quality control, problem rectification and resource allocation. 我們定期開展內控體系監督檢查,嚴格遵 循「區域公司內控評價兩年一次,成員公司 內控自查一年一次」的要求。為實現內部控 制體系自評價全覆蓋的目標,本年度我們組 織開展所有區域的內控評價工作,覆蓋包括 反腐敗在內的商業道德、風險管控、資金管 理、工程管理、應收賬款等7個方面內容, 並對發現的問題及時整改。根據《華潤燃氣 經濟責任審計中長期規劃》,所有區域公司 五年內將實現內部審計全覆蓋。

#### 商業道德管理

華潤燃氣建立健全商業道德體系,通過完善 反腐倡廉機制,注重舉報人保護,開展商業 道德培訓,從而在各環節形成有力銜接,促 進公司的可持續發展。

#### 完善反腐倡廉機制

華潤燃氣嚴格遵守反腐倡廉相關法律法 規,於公司內部發佈了《海外反商業賄賂合 規管理制度》等政策文件,為識別和處理貪 腐問題提供指引。同時,為確保規定符合公 司實際情況,董事會亦不定期審閱相關政 策,以確保相關規定符合現行法律規定及公 司實際情況。

本集團建立「大監督」體系,由華潤燃氣黨 委統一領導,其下成立「大監督」體系工作 領導小組,紀委辦公室作為領導小組的日常 辦事機構,聚焦黨風廉政建設、反腐敗工作 等重點領域,具體落實各項管理工作。 We strictly follow the requirements that "regional companies must conduct internal control evaluation once every two years, and member companies must conduct internal control self-inspection once a year" to carry out regular supervision and inspection on internal control systems. In order to achieve the goal of full coverage of the internal control system self-evaluation, we organized and carried out internal control evaluation in all regions during the Year, covering 7 aspects including anti-corruption, business ethics, risk management and control, capital management, project management and accounts receivable, and rectified the problems identified in a prompt way. According to the Medium and Long-Term Plan for Economic Responsibility Audit of CR Gas (《華潤燃氣經濟責任審計中長期規劃》), all regional companies will have full coverage of internal audits within five years.

#### **Business Ethics Management**

CR Gas has established a sound business ethics system by improving anti-corruption and integrity mechanism, focusing on whistleblower protection and conducting business ethics training, thereby forming a strong connection in all links to promote the sustainable development of the Company.

#### Improving Anti-corruption and Integrity Mechanism

In strict compliance with the laws and regulations related to anticorruption and integrity, CR Gas issued internal policy documents such as Overseas Anti-Commercial Bribery and Compliance Management Policy (《海外反商業賄賂合規管理制度》) to provide guidance for identifying and handling corruption issues. At the same time, the Board will review the policy from time to time to ensure that the relevant provisions comply with the prevailing laws and regulations as well as the actual situation of the Company.

The Group has established a "comprehensive supervision" system under the unified leadership of the CR Gas Party Committee, under which a "comprehensive supervision" system leading group has been set up, with the Discipline Inspection Commission Office serving as the daily office of the leading group, focusing on key areas such as improving Party conduct, building integrity and anti-corruption, and specifically implementing various management tasks. 我們採取廉潔承諾、自查自糾、審計監督等 舉措,規範員工不得以任何形式接受或要求 供應商、客戶、分包商或其他與本集團業務 有往來人士提供利益。我們亦將相關政策的 廉潔要求與考核延伸至供應商,要求所有供 應商簽署陽光宣言,並將反腐敗要求傳遞 給其員工及其合作夥伴。(相關內容請參閱 「規範供應鏈管理 | 章節)。

廉潔承諾:邀請施工單位、監理單位 共同觀看了《良心工程》等視頻,簽署 了《廉潔從業承諾書》《安全生產承諾 書》,助力廉潔優質工程建設。

廉潔教育:持續組織開展形式多樣的 廉潔教育月活動,實現廉潔教育全覆 蓋。

審計監督:聚焦經理人落實黨風廉政 建設責任和遵守廉潔從業規定情況, 並在現場張貼《審計公告》,公示舉報 郵箱信息。 We have taken measures such as integrity commitment, selfexamination and self-correction, and audit supervision to strictly require that employees must not accept or solicit any benefits in any form from suppliers, customers, subcontractors or other persons affiliated with the Group's business operations. We have also extended the integrity requirements and assessments of relevant policies to our suppliers, requiring all suppliers to sign the Transparency Declaration (陽光宣言) and pass on anti-corruption requirements to their employees and partners. (For related information, please refer to the chapter of "Regulating Supply Chain Management").

- Integrity commitment: We invited construction units and supervision units to watch videos such as "Conscience Projects" (《良心工程》) and signed the Undertakings on Integrity (《廉潔從 業承諾書》) and Undertakings on Production Safety (《安全生產承 諾書》) to contribute to the construction of clean and high-quality projects.
- Integrity education: We continuously organize and carry out various forms of integrity education month activities to achieve full coverage of integrity education.
- Audit supervision: We focus on managers' implementation of responsibilities for improving Party conduct, building integrity and compliance with the regulations on integrity in work, and post an "Audit Announcement" (《審計公告》) on site to publicize the information of reporting email address.

#### 加強舉報人保護

華潤燃氣發佈《合規工作投訴舉報管理指 引》《華潤燃氣控股有限公司紀律審查保密 工作規定》等內部制度,規範貪腐違規事件 的舉報、處置流程,為保護舉報人提供必要 的政策依據。

- 舉報渠道暢通:設立貪腐違規舉報熱 線、舉報郵箱及舉報信郵寄地址,以 保證任何人士均可以在保密情況下通 過電話、郵件及親自上訪等方式舉報 違規行為。
- 確保信息保密:要求執行工作人員嚴格遵守國家法律及公司內部的保密規定,簽署保密協議書,並將舉報材料和記錄列入密件管理,確保舉報內容嚴格保密。
- 禁止打擊報復:嚴厲打擊報復舉報人 的行為,若舉報人收到威脅、打擊、 報復,我們將給予相應的法律支持與 保護,保護舉報人權益不受侵犯。

#### 推進商業道德培訓

我們面向所有僱員(包括兼職)、承包商 開展商業道德培訓。通過定期發送廉潔提 醒,我們開展廉潔教育以及警示案例研討 等,鞏固員工的廉潔自律意識,營造風清氣 正的工作環境。報告期內,我們面向董事成 員及集團全體員工開展廉潔教育,總時長 736小時,共計44,820人次。

#### Enhancing Whistleblower Protection

CR Gas has issued internal policies such as the Guidelines for Complaint Reporting and Management of Compliance Work (《合規工作 投訴舉報管理指引》) and Disciplinary Review Confidentiality Regulations of China Resources Gas Group Limited (《華潤燃氣控股有限公司紀律審 查保密工作規定》) to standardize the reporting and handling process of corrupt and non-complying practices and provide the necessary policy basis for the protection of whistleblowers.

- Smooth reporting channels: We have a whistle-blowing hotline, a mailbox, and a mailing address in place for reporting corrupt and non-complying practices to ensure that anyone can confidentially report violations through the hotline, mailbox and personal visits.
- Ensure information confidentiality: We require executive personnel to strictly abide by national laws and the Company's internal confidentiality requirements and sign a confidentiality agreement and whistle-blowing materials and records will be managed as confidential documents to ensure that the contents of the report are strictly kept confidential.
- Prohibit retaliations: All retaliations against whistleblowers are prohibited. In case a whistleblower is threatened, retaliated against, or revenged against, we will offer the corresponding legal support and protection to the whistleblower to protect the rights and interests of the whistleblower from being infringed.

#### Promoting Business Ethics Training

We provide business ethics training to all employees (including part-time employees) and contractors. We consolidate employees' awareness of integrity and self-discipline and create a clean and incorrupt working environment through regular integrity reminders, integrity education, warning case studies and other activities. During the reporting period, we delivered integrity education at directors and all employees of the Group of 736 hours in total, with total attendances amounting to 44,820.

## 亮點績效 Highlight Performance

- ▶ 面向中層以上及關鍵(敏感)崗位人員、年輕幹部講授廉政黨課490餘次,覆蓋13,500餘人。
- > Delivered more than 490 Party lectures on clean administration to personnels at mid-level and above, personnels in key (sensitive) positions and young cadres, with over 13,500 participants.
- 組織學習廉潔自律準則、黨紀處分條例、國有企業領導人員廉潔從業有關要求等內容共計300餘次,覆蓋近1.5萬人。
- Organized more than 300 study sessions on the code of integrity and self-discipline, regulations on Party discipline, and the relevant requirements for the integrity of leaders of state-owned enterprises, covering nearly 15,000 people.
- > 召開警示教育大會、傳達集團和總部警示教育大會精神、組織觀看《永遠吹衝鋒號》《零容忍》等專題片等方式開展警示教育420餘次,參與人數近1.5萬人。
- Conducted more than 420 warning education sessions by holding warning education conference, conveying the spirit of the warning education conference of the Group and the headquarters, and watching Always Blow the Charge (《永遠吹衝鋒號》), Zero Tolerance (《零容忍》) and other thematic films, with nearly 15,000 participants.
- 發揮所在地區紅色文化資源的育人功能,參觀革命博物館、紀念館、黨史館等紅色資源和廉政教育基地220餘次,涵 蓋將近5,800人。
- Giving full play to the education function of the red cultural resources in the region where we are located, we organized more than 220 visits to revolution museums, memorial halls, Party history museums and other red resources and integrity education bases, covering nearly 5,800 people.
- 組織近40個區域開展廉潔教育視頻展播,並且通過主題板報、漫畫宣傳冊、動漫宣教片以及書法等作品,營造廉潔文化氛圍。
- Organized nearly 40 regions to carry out integrity education video broadcasts, and created a cultural atmosphere of integrity through themed posters, comic brochures, animation educational films, calligraphy and other works.

# 案例:聚焦黨風廉政建設<sup>,</sup>築牢反腐敗鬥爭防線 Case Study: Focus on Improving Party Conduct and Building a Solid Defense Line in the Fight Against Corruption

2023年4月13日,華潤燃氣召開2023年黨風廉政建設和反腐敗工作會議暨警示教育大會。會議通報了2022年華潤燃 氣各級紀檢機構執紀審查情況和近期查處的違規違紀違法典型案例,分析了當前全面從嚴治黨面臨的新形勢、新任 務、新要求。認真謀劃2023年黨風廉政建設和反腐敗工作重點任務,壓緊壓實管黨治黨各項責任,全力打好華潤燃氣 黨風廉政建設和反腐敗鬥爭攻堅戰持久戰。華潤燃氣管理團隊成員、總部各部室資深主管及以上人員、各大區紀檢專 員、各企業黨組織書記、紀委書記、紀檢工作人員、各區域公司中層及以上人員、各區域公司其他關鍵崗位人員等, 共計4,000餘人通過現場和視頻參會。

On 13th April 2023, CR Gas held the 2023 Work Conference on Improving Party Conduct, Building Integrity and Anti-Corruption cum Warning Education Conference, which reported the disciplinary review status of CR Gas's discipline inspection agencies at all levels in 2022 and the typical cases of violations of discipline and law recently investigated and dealt with, and analyzed the current new situation, new tasks, and new requirements facing the comprehensive and strict Party governance. CR Gas earnestly planned the key tasks of work on improving Party conduct, building integrity and anti-corruption in 2023, enforced accountability for the responsibilities of managing the Party and governing the Party, and made every effort to fight CR Gas's tough and protracted battle of improving Party conduct, building integrity and anti-corruption. A total of more than 4,000 people participated in the conference through on-site and video, including CR Gas's management team members, senior leaders and above of various departments of the headquarters, discipline inspectors from major regions, Party organization secretaries of enterprises, discipline committee secretaries, discipline inspection staff, middle-level and above personnel of regional companies, and personnel in other key positions from regional companies, etc.



圖:2023年黨風廉政建設和反腐敗工作會議暨警示教育大會 Picture: 2023 Work Conference on Improving Party Conduct, Building Integrity and Anti-Corruption cum Warning Education Conference

# 案例:以「學思想 強黨性 樹廉心」為主題<sup>,</sup>舉辦廉潔教育學習月活動 Case Study: Holding Integrity Education and Learning Month Activity under the Theme of "Learning Ideology, Strengthening Party Spirit and Building Integrity"

2023年10月,華潤燃氣組織開展了廉潔教育學習月活動,該活動採取「規定動作+自選活動」的活動模式。各區域公司結合所在地區及公司實際分階段、多層次從「學」廉、「悟」廉、「督」廉、「倡」廉、「創」廉等五個方面開展,包括講授廉政黨課、革命傳統教育、警示教育、紀法教育、廉政談話、自查自糾、廉潔家訪及挖掘傳統化中的廉潔基因等活動,實現廉潔教育全覆蓋。

In October 2023, CR Gas held the integrity education and learning month activity which adopted the model of "prescribed activities + optional activities". Based on the actual situation of the region and the company, each regional company carried out the activity in stages and at multiple levels from five aspects: "learning" integrity, "understanding" integrity, "supervising" integrity, "promoting" integrity, and "creating" integrity, including delivering a Party lecture on clean administration, education on revolutionary tradition, warning education, education on discipline and law, talks on clean administration, self-examination and self-correction, home visits on integrity, and exploring the integrity gene in traditional culture, which achieved full coverage of integrity education.



圖:新任直管幹部廉政談話會 Picture: Integrity Talk for Newly Appointed Cadres under Direct Management

# 1.2 完善ESG管治

華潤燃氣嚴格遵守國家監管要求,健全內部 規章制度,完善可持續發展管理體系,落 實社會責任管理與實踐,強化利益相關方溝 通,不斷築牢可持續發展管理根基。

#### 可持續發展管理體系

華潤燃氣高度重視ESG管理,建立董事會 領導的ESG管治架構,完善ESG理念和管 理機制,全面落實可持續發展工作。

#### **ESG**理念

我們立足集團「十四五」戰略文化理念體 系,秉持「促進線色發展•共創美好生活」的 使命,以提供清潔安全能源為己任,將可持 續發展理念融入日常經營管理和業務發展的 全過程,踐行「誠實守信•業績導向•以人為 本•合作共贏」的企業價值觀,協同員工、 消費者、供應商等各利益相關方,共同推 進線色低碳發展,最終實現「成為大眾信賴 和喜愛的世界一流能源服務企業」的美好願 景。

#### ESG戰略

我們立足集團城市燃氣核心業務發展現 狀,結合「1+2+N」戰略發展方向,制定與 公司願景、價值觀一致的ESG戰略、推行 ESG理念、形成並管理可持續發展議題, 持續推進可持續發展工作,並將其融入企業 經營戰略,努力實現經濟、環境與社會效益 的均衡發展。

#### **1.2 IMPROVING ESG GOVERNANCE**

CR Gas strictly abides by national regulatory requirements to improve internal rules and regulations, enhance the sustainable development management system, implement social responsibility management and practice, strengthen communication with stakeholders, and continuously build a solid foundation for sustainable development management.

#### Sustainable Development Management System

CR Gas attaches great importance to ESG management, establishes an ESG governance structure led by the Board of Directors, improves ESG concepts and management mechanisms and fully implements sustainable development work.

#### ESG Concepts

Setting foot on the Group's "14th Five-Year Plan" strategic culture system, upholding the mission of "embracing green development and building a beautiful life", and taking the responsibility of providing clean and safe energy, we incorporate sustainable development concepts into daily operation and management and the whole process of business development, practicing the corporate values of "being honest and trustworthy, performance-oriented, customer-based and collaborative for mutual benefits" and collaborate with employees, consumers, suppliers and other stakeholders to promote green and low-carbon development, so as to eventually achieve the vision of "being a trustworthy and beloved world-leading energy services enterprise".

#### ESG Strategies

We set foot on the status quo of the Group's core business development of city gas and combine the "1+2+N" strategic development direction to formulate ESG strategies that are consistent with the Company's vision and values, implement ESG concepts, form and manage sustainable development issues, continue to promote work on sustainable development, and integrate it into corporate business strategies, striving to achieve balanced development of economic, environmental and social benefits.

- 深化ESG共識:ESG理念與國家「雙 碳」目標高度契合,華潤燃氣充分發 揮中央企業ESG實踐的先鋒模範作 用,落實ESG管理實踐,通過ESG培 訓和治理逐步深化對ESG的認識,深 刻理解可持續發展的核心內涵,進一 步形成可持續發展的企業文化,推動 公司踐行長期主義。
- 完善ESG管理:我們持續完善ESG管 理機制,落實各部門管理職責,加強 對可持續發展議題的識別、評估和管 理,強化利益相關方溝通,不斷提高 ESG管理水平,推動內部ESG工作穩 定運行,攜手各利益相關方共同踐行 可持續發展。

#### ESG管治架構

為順利推動ESG戰略落地和執行,公司不 斷完善ESG治理頂層設計,並已建立董事 會領導的ESG管治架構,落實各部門職 責,打通ESG戰略決策、管理和執行的全 流程,提高ESG管理效率,進一步夯實 ESG管理基礎。

- 董事會:負責公司ESG戰略方向的 領導、決策和推進,聽取、審視和檢 討辦公室匯報的EGS管理的政策、治 理、戰略、規劃、報告以及目標制定 及完成進度等。
- ➤ ESG跨部門工作小組:以安全管理 部牽頭組織,辦公室、營運部、人力 資源部、財務部等職能部門協同的形 式,開展ESG規劃、管理工作,並定 期向董事會匯報ESG工作情況。

- Deepening ESG consensus: ESG concept is highly consistent with the national goal of "carbon peak and carbon neutrality". CR Gas gives full play to its pioneering and exemplary role as a central state-owned enterprise in ESG practice, implements ESG management practices, gradually deepens its understanding of ESG through ESG training and governance, thoroughly understands the core connotation of sustainable development, further forms a corporate culture of sustainable development and promotes the Company to practice long-termism.
- Improving ESG management: We continue to improve the ESG management mechanism, implement the management responsibilities of each department, strengthen the identification, evaluation and management of sustainable development issues, strengthen communication with stakeholders, continuously improve the level of ESG management, promote the stable operation of internal ESG work, and work with all stakeholders to practice sustainable development.

#### ESG Governance Structure

In order to smoothly promote the implementation and execution of ESG strategies, the Company continues to improve the top-level design of ESG governance. It has established an ESG governance structure led by the Board to implement the responsibilities of each department, open up the entire process of ESG strategic decision-making, management and execution, improve ESG management efficiency, and further lay a solid foundation for ESG management.

- The Board: responsible for the steering, decision-making, and promoting of the strategic direction of ESG of the Company, the receiving, examining and reviewing of ESG management policies, governance, strategies, plans and reports as reported by the Office, as well as goal setting, completion progress and others.
- The inter-departmental ESG working group: led and organized by the Safety Management Department to carry out ESG planning and management by coordinating with functional departments including the Office, Operation Department, Human Resources Department and Finance Department, and to regularly report to the Board on ESG efforts.

相關部門:各職能部門及區域公司負 責落實、實施ESG跨部門工作小組相 關決策與工作計劃。

#### 董事會聲明

華潤燃氣嚴格執行聯交所《環境、社會及管 治報告指引》,參考ISSB《國際財務報告可 持續披露準則》披露要求,開展氣候相關治 理工作,持續完善可持續發展管理,形成有 效運轉的ESG管治體系。

華潤燃氣董事會對環境、社會及管治事宜承 擔最終責任。我們負責ESG戰略方向的領 導、決策和推進,對戰略執行情況進行監 督;定期開展利益相關方溝通,管理重要性 議題並建立環境、社會及管治議題庫;識別 評估和管理ESG風險和機遇(包含氣候變化 相關),制定風險應對措施及長期ESG計劃 與目標,持續監督目標達成情況;確保已建 立適當和有效的ESG風險管理和內部監督 機制,完善ESG治理架構,推動形成ESG 自上而下高效落實的協同工作機制。

董事會將繼續發揮ESG工作的決策和監督 作用,不斷提升ESG治理水平,推動ESG 事項全面融入企業戰略,踐行可持續發展承 諾。

#### 責任溝通

華潤燃氣高度重視與利益相關方的責任溝 通,通過建立「日常、定期、年度」三位一 體的可持續發展溝通機制,深入研究利益相 關方關切,拓寬溝通渠道,與利益相關方保 持長遠緊密的聯繫。我們通過信息報送、 專題匯報、戰略合作、股東會議、企業網 站、滿意度調查、公益活動、媒體溝通等 渠道,向股東、政府、用戶、員工、供應 商、社區等利益相關方傳播社會責任理念和 履責動態,攜手各利益相關方共同履行可持 續發展義務。我們定期收集利益相關方的意 見和建議,並將其納入企業可持續發展戰 略,實現與利益相關方協同發展。 Related departments: all functional departments and regional companies are responsible for implementing decisions and carrying out working plans of the inter-departmental ESG working group.

#### **Board Statement**

In strict compliance with the Stock Exchange's Environmental, Social and Governance Reporting Guide (《環境、社會及管治報告指引》) and with reference to the disclosure requirements under the IFRS Sustainability Disclosure Standards (《國際財務報告可持續披露準則》) of ISSB, CR Gas conducts climate-related governance work and continues to improve the management of sustainable development, and forms an effectively functioning ESG governance system.

The Board of CR Gas assumes the ultimate responsibility for ESG matters. We are responsible for the leadership, decision-making and promotion of the ESG strategic direction, and overseeing the implementation of the strategy; regularly communicating with stakeholders, managing important issues and establishing the pool of ESG issues; identifying, assessing and managing ESG risks and opportunities (including those related to climate change), formulating risk response measures and long-term ESG plans and goals, and continuously monitoring the achievement of goals; ensuring an appropriate and efficient ESG risk management and internal monitoring mechanism is put in place to improve the ESG governance structure and promoting the formation of a collaborative working mechanism for efficient top-down implementation of ESG.

The Board will continue to play its decision-making and supervisory role in ESG work, continuously improve the level of ESG governance, promote the full integration of ESG matters into corporate strategies, and put into practice its commitment to sustainable development.

#### **Responsible Communication**

CR Gas attaches great importance to the responsible communication with stakeholders. By building a three-in-one sustainable development communication mechanism for daily, regular and annual information, CR Gas conducts in-depth research on stakeholder concerns and broadens communication channels to maintain long-term and close contact with stakeholders. We disseminate the concept of social responsibility and performance dynamics to shareholders, governments, users, employees, suppliers, communities and other stakeholders through information reporting, thematic reports, strategic cooperation, shareholder meetings, corporate website, satisfaction surveys, charity activities, media communication and other means, and working with stakeholders to fulfil sustainable development obligations. We collect the opinions and suggestions from stakeholders on a regular basis and incorporate them into the Company's sustainable development strategy to achieve coordinated development with stakeholders.

# 華潤燃氣與利益相關方的溝通方式 Communication Channels between CR Gas and Stakeholders

利益相關方 Stakeholder	期望與訴求 Expectations and Aspirations	華潤燃氣的回應 Response from CR Gas		
政府與監管部門 Government and regulatory bodies	公司治理和合規 Corporate governance and compliance 商業道德與反腐敗 Business ethics and anti-corruption 保障安全穩定供氣 Ensuring safe and stable gas supply 緑色低碳發展 Green and low-carbon development	建立健全風控管理組織 Established a sound risk management structure 開展安全文化建設 Carried out safety culture development 深化安全管理體系建設 Deepened development of safety management systems 環保指標滿足國家標準 Met national standards on environmental protection indicators		
股東與投資者 Shareholders and investors	獲取投資回報 Obtaining investment returns 信息公開透明 Information disclosure and transparency 保障股東權益 Protection of shareholders' rights 降低經營風險 Reducing operational risks	建立完善科學的決策與監督機制 Established and improved scientific decision-making and supervision mechanism 做好公開、透明的信息披露 Made open and transparent information disclosure 組織不同類型的股東活動 Hosted activities for different types of shareholders 加強風險管控,開展內部審計 Strengthened risk management and conducted internal audit		
客戶 Customers	產品質量管理與客戶服務 Product quality management and customer services 客戶健康與安全 Customer health and safety 信息安全興客戶隱私保護 Information security and protection of customer privacy 保護知識產權 Protecting intellectual property rights 技術和自主創新 Technology and self-dependent innovation	internal audit 產品質量控制 Product quality control 制定完善的服務目標 Set comprehensive service targets 保護客戶隱私 Protected customer privacy 滿意度調查 Satisfaction survey 開通多元化繳費通道 Opened up diversified payment channels		

# 華潤燃氣與利益相關方的溝通方式 Communication Channels between CR Gas and Stakeholders

利益相關方	期望與訴求	華潤燃氣的回應		
Stakeholder	Expectations and Aspirations	Response from CR Gas		
員工 Employees	員工權益保障 Protecting employees' rights and interests 員工培訓與發展 Employee training and development 職業健康和安全 Occupational health and safety 平等僱佣機會 Equal employment opportunities 員工滿意度 Employee satisfaction 防止童工或強制勞工 Prohibiting employment of child labour or forced labour	依法簽訂勞動合同 Signed labour contracts in accordance with the law 積極開展各類培訓 Proactively conducted various types of training sessions 完善人才晉升與薪酬機制 Improved talent promotion and remuneration mechanism 加強職業健康與安全管理 Strengthened occupational health and safety 推行多樣化的員工福利 Implemented diversified employee benefits		
供應商及合作夥伴 Suppliers and partners	誠信履約 Performance with integrity 供應鏈管理 Supply chain management 共贏發展 Win-win development	依法履行合同 Performed contracts in accordance with the law 規範供應鏈管理 Regulated supply chain management 參加行業交流活動 Participated in industry exchange activities		
社區與公眾 Community and the public	扶弱助困 Poverty alleviation 捐資助學 Donations to schools 志願服務 Volunteer services	支持鄉村振興戰略 Supported rural revival strategy 支持教育事業發展 Supported educational development 鼓勵員工參加志願服務 Encouraged employees to participate in volunteer services		
環境 Environment	<ul> <li>清潔能源使用</li> <li>Using clean energy</li> <li>減少溫室氣體排放</li> <li>Reducing greenhouse gas emission</li> <li>加強生物多樣性保護</li> <li>Strengthening biodiversity</li> <li>preservation</li> <li>應對氣候變化</li> <li>Addressing climate change</li> <li>資源與能源節約</li> <li>Saving resources and energy</li> <li>提升資源使用效益</li> <li>Enhancing efficiency in the use of</li> <li>resources</li> <li>加強廢棄物管理</li> <li>Strengthening waste management</li> <li>水資源使用及效益</li> <li>Water resources use and efficiency</li> </ul>	發展新能源         Developed new energy         污染物達標排放         Discharged pollutants discharge under certain         standards         推進煤改氣項目         Promoted coal-to-gas projects         倡導綠色辦公         Advocated green office         加強環境信息披露         Strengthened environmental information disclosure		
#### 重要性議題管理

2023年,我們開展ESG議題重大性調研工 作,結合企業經營實際與國內外同行ESG 議題,制定華潤燃氣可持續發展重要性議題 庫,同時發佈調查問卷邀請各利益相關方對 可持續發展管理議題進行評估,根據重大性 議題分析結果對2023年可持續發展議題重 要性進行排序,形成重大性矩陣並作為本報 告的編制基礎。

#### **Management on Material Issues**

In 2023, we carried out a survey on the materiality of ESG issues, taking into account of the actual business operations with the ESG issues of domestic and foreign peers, formulated a pool of material issues for the sustainable development of CR Gas, and issued a questionnaire to invite all stakeholders to evaluate the sustainable development management issues, ranked the importance of sustainable development issues in 2023 based on the analysis results of material issues, forming a materiality matrix and serving as the basis for the preparation of this report.



下表中與公司高度相關的重要性議題以粗體 顯示,有關議題將在本報告內進行重點描述 和討論。 The items shown in bold in the table below represent material issues highly relevant to the Company, which will be highlighted and discussed in the report.

環境         感対気候變化           Addressing climate change         資源與能源節約           Saving resources and energy         高xing resources and energy           清潔能源使用         Dising clean energy           加強廢棄物管理         Strengthening waste management           基升資源使用效益         Enhancing efficiency in the use of resources           加強全物多様性保護         Strengthening biodiversity preservation           减少温室氣體排放         Reducing greenhouse gas emission           水資源使用及效益         Katerial bioxity		
應對氣候變化           Addressing climate change           資源與能源節約           Saving resources and energy           清潔能源使用           Using clean energy           加強廢棄物管理           Strengthening waste management           提升資源使用效益           Enhancing efficiency in the use of resources           加強生物多樣性保護           Strengthening biodiversity preservation           減少溫室氣體排放           Reducing greenhouse gas emission		華潤燃氣重要性議題列表
環境       Addressing climate change         資源與能源節約       Saving resources and energy         清潔能源使用       Using clean energy         加強廢棄物管理       Strengthening waste management         提升資源使用效益       Enhancing efficiency in the use of resources         加強生物多樣性保護       Strengthening biodiversity preservation         減少溫室氣體排放       Reducing greenhouse gas emission		Material Issues of CR Gas
環境       Addressing climate change         資源與能源節約       Saving resources and energy         清潔能源使用       Using clean energy         加強廢棄物管理       Strengthening waste management         提升資源使用效益       Enhancing efficiency in the use of resources         加強生物多樣性保護       Strengthening biodiversity preservation         減少溫室氣體排放       Reducing greenhouse gas emission		
資源與能源節約 Saving resources and energy 清潔能源使用 Using clean energy 加強廢棄物管理 Strengthening waste management 提升資源使用效益 Environment 提升資源使用效益 Enhancing efficiency in the use of resources 加強生物多樣性保護 Strengthening biodiversity preservation 減少溫室氣體排放 Reducing greenhouse gas emission		應對氣候變化
環境       Strengthening waste management         提升資源使用效益       Environment         提升資源使用效益       Enhancing efficiency in the use of resources         加強全物多樣性保護       Strengthening biodiversity preservation         減少溫室氣體排放       Reducing greenhouse gas emission		Addressing climate change
清潔能源使用         Using clean energy         加強廢棄物管理         Strengthening waste management         提升資源使用效益         Environment         Environment         Environment         Environment         Environment         Barback         Environment         Barback         Environment         Barback         Environment         Barback         Barback		資源與能源節約
環境       Using clean energy 加強廢棄物管理         Brownent       Strengthening waste management         提升資源使用效益       Enhancing efficiency in the use of resources         加強生物多樣性保護       Strengthening biodiversity preservation         減少溫室氣體排放       Reducing greenhouse gas emission		Saving resources and energy
環境加強廢棄物管理環境Strengthening waste managementEnvironment提升資源使用效益Enhancing efficiency in the use of resources加強生物多樣性保護Strengthening biodiversity preservation減少溫室氣體排放Reducing greenhouse gas emission		清潔能源使用
環境       Strengthening waste management         Environment       提升資源使用效益         Enhancing efficiency in the use of resources         加強生物多樣性保護         Strengthening biodiversity preservation         減少溫室氣體排放         Reducing greenhouse gas emission		Using clean energy
Environment       提升資源使用效益         Enhancing efficiency in the use of resources         加強生物多樣性保護         Strengthening biodiversity preservation         減少溫室氣體排放         Reducing greenhouse gas emission		加強廢棄物管理
Enhancing efficiency in the use of resources         加強生物多樣性保護         Strengthening biodiversity preservation         減少溫室氣體排放         Reducing greenhouse gas emission	環境	Strengthening waste management
加強生物多樣性保護 Strengthening biodiversity preservation 減少溫室氣體排放 Reducing greenhouse gas emission	Environment	提升資源使用效益
Strengthening biodiversity preservation 減少溫室氣體排放 Reducing greenhouse gas emission		Enhancing efficiency in the use of resources
減少溫室氣體排放 Reducing greenhouse gas emission		加強生物多樣性保護
Reducing greenhouse gas emission		Strengthening biodiversity preservation
		減少溫室氣體排放
水資源使用及效益		Reducing greenhouse gas emission
		水資源使用及效益
Water resources use and efficiency		Water resources use and efficiency

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華潤燃氣重要性議題列表					
Material Issues of CR Gas					
員工 Employees	員工權益保障 Protecting employees' rights and interests 職業健康和安全 Occupational health and safety 員工培訓與發展 Staff training and development 平等僱傭機會 Equal employment opportunities 防止童工或強制勞工 Prohibiting employment of child labour or forced labour 員工滿意度 Employee satisfaction				
供應鏈與合作伙伴 Supply chain and partners	<b>保障安全穩定供氣</b> Ensuring safe and stable gas supply 供應鏈管理 Supply chain management				
客戶 Customers	信息安全與客戶隱私保護 Information security and protection of customer privacy 產品質量管理與客戶服務 Product quality management and customer services 保護知識產權 Protecting intellectual property rights 客戶健康與安全 Customer health and safety 技術和自主創新 Technological and independent innovation				
社區 Community	社區公益管理 Community charity management 經濟效益增長 Economic benefits growth 帶動本地發展 Promoting local development				

華潤燃氣重要性議題列表 Material Issues of CR Gas					
治理 Governance	<ul> <li>商業道德與反腐敗</li> <li>Business ethics and anti-Corruption</li> <li>公司治理和合規</li> <li>Corporate governance and compliance</li> <li>反對不當競爭行為</li> <li>Anti-unfair competition</li> <li>風險管控</li> </ul>				
	Risk control				

## 保障產品質量 提供品質服務 Guaranteeing Product Quality and Providing Quality Service

華潤燃氣始終堅持質量至上原則,為客戶提供清潔安全的燃氣,秉承「以客戶為導向」的服務理念,不斷提升服務質量,以優質服務改善生活品質。

CR Gas always adheres to the principle of quality first to provide customers with safe and clean gas, and upholds the "customer-oriented" service philosophy to continuously improve service quality and enhance the quality of life with high-quality services.

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2023責任績效 2023 Responsibility Performance	
Iran	
☆ 產品合格率 100%	客戶滿意度得分96.4
Product qualification rate 100%	Customer satisfaction score 96.4
	· · · · · · · · · · · · · · · · · · ·
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SDGs 0 产业、创新和 10 负责任 17 促进目标实现的	
SDGs 9 产业、创新和 12 负责任 17 促进目标实现的	
9 INDUSTRY, INNOVATION 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 17 PARTNERSHIPS FOR THE GOALS	





#### 保障產品質量,提供品質服務 Guaranteeing Product Quality and Providing Quality Service

#### 2.1打造匠心品質

華潤燃氣始終將產品質量放在核心位置,通 過質量管控、數字化建設和科技創新推動品 質提升,提高燃氣質量和安全水平,推動國 家燃氣行業質量管理標準化。

#### 產品質量管控

華潤燃氣嚴格遵循《天然氣》(GB 17820-2018)、《城鎮燃氣設計規範》(GB 50028-2020)等國家質量相關標準,建立內部質量 保證體系,完善工程管理信息化系統,規 範質量管理流程,從方案設計、施工、物 資、竣工驗收全過程嚴格把控產品質量,全 面提高產品品質和安全性。

#### 標準化設計管控

2023年,公司持續推進設計項目標準化管 理工作,優化設計系統,通過設計派工管 理、設計圖紙接收管理、圖紙會審管理、圖 紙交底會議記錄等流程管控設計質量,推動 常規工程標準化、高端工程統一化、質量監 督常態化,以確保燃氣項目本質安全。

#### 2.1 CREATING CRAFTSMANSHIP QUALITY

CR Gas always puts product quality at the core, promotes quality improvement through quality control, digital construction and technological innovation, improves gas quality and safety, and promotes the standardization of quality management in the national gas industry.

#### **Product Quality Control**

CR Gas strictly complies with relevant national quality standards including Natural Gas (《天然氣》) (GB 17820-2018) and Urban Gas Design Code (《城鎮燃氣設計規範》) (GB 50028-2020), establishes internal quality assurance system, improves project management information system, regulates quality management process, and strictly controls product quality from the whole process of program design, construction, material and completion and acceptance to comprehensively improve product quality and safety.

#### Control of Standardized Design

In 2023, the Company continued to proceed with the standardized management of design projects, optimize the design system, and control the quality of design through the process of design dispatch management, design drawing receipt management, drawing review management, and minutes of drawing submission meetings, and promote the standardization of conventional projects, the unification of high-end projects, and the normalization of quality supervision to ensure the intrinsic safety of gas projects.

#### 全過程施工管理

公司高度重視施工質量,制定《質量安全獎 懲規定》《壓力管道安裝質量保證體系作業 指導書》《工程建設管理指引》《現場施工 操作手冊》《華潤燃氣常見工程質量通病案 例集》等內部制度,落實人員管理職責, 不斷提高工程質量。2023年5月,公司結 合自身燃氣輸配施工經驗,協助編制國家 標準《城鎮燃氣輸配工程施工及驗收標準》 (GBT51455-2023),推動城鎮燃氣工程質 量管理標準化,全面提升質量管理水平。

#### Management across Construction Process

The Company attaches great importance to construction guality, and has formulated internal policies including Provisions on Quality and Safety Awards and Punishments (《質量安全獎懲規定》), Operational Guide on Quality Assurance System for Pressure Pipeline Installation (《壓力管道安裝質量保證體系作業指導書》), Guidelines on Project Construction Management (《工程建設管理指引》), Operation Manual on Site Construction (《現場施工操作手冊》) and Collection of Cases on General Quality Problems of Common Works of CR Gas (《華潤燃氣 常見工程質量通病案例集》), and implemented personnel management responsibilities to continuously improve project quality. In May 2023, based on its own experience in gas transmission, distribution and construction, the Company assisted in the preparation of the national standard of Construction and Acceptance Standards for Urban Gas Transmission and Distribution Projects (《城鎮燃氣輸配工程施 工及驗收標準》) (GBT51455-2023) to promote the standard quality management of urban gas project and comprehensively improve quality management.

#### 案例:完善工程管理信息化系統<sup>,</sup>實施全過程質量管控 Case Study: Improve the Project Management Information System and Implement Whole-Process Quality Control

工程管理信息化系統以「三控三管一協調」為核心,實現工程項目方案設計、施工監理、施工進度、質量安全等全過程 管理。在設計和施工管理方面,系統以項目專業管理為重點,對項目各管理維度、各業務環節信息進行真實記錄和實 時共享,全方位保障產品質量。系統自上線以來,已有399家成員燃氣公司分批上線使用,2023年度系統創建並使用 系統運行的項目任務為92,860項。

The project management information system takes "three controls, three management and one coordination" as the core to achieve the whole-process management covering project design, construction supervision, construction progress, quality and safety, etc. In terms of design and construction management, the system focuses on professional project management, maintains true records and real-time sharing of the information on each management dimension and business link of the project, so as to guarantee product quality in an all-round way. Since its launch, the system has been used by 399 member gas companies in batches. In 2023, there were 92,860 project tasks created and run using the system.



#### 產品數智化

2023年,我們圍繞「1+2+N」業務戰略,推 進綜合服務、輸配運行與經營管理等業務領 域的智數化項目新建與試點,同時推動已 建成的業務系統在華潤燃氣範圍內推廣應 用,對現有系統進行優化改造以適應新增業 務需求,實現年內關鍵環節數字化覆蓋率達 到66.04%。推動實現十四五末關鍵環節數 字化覆蓋率80%的目標。

#### 升級數字化平台

2023年,燃氣行業首家基於雲原生架構、 完全自主掌控的數字化平台-潤格數字化 平台,進行全面升級,對內支撐25個業務 智能化應用建設,進一步實現技術標準統 一、數據集中分析利用、通用業務功能沉澱 複用,對外承接住建部燃氣安全專項整治工 作系統(SIS),實現高併發、高可用項目的 快速交付,為後續數字化生態打造奠定基 礎。

#### **Digital and Smart Products**

In 2023, focusing on the "1+2+N" business strategy, we promoted the establishment and piloting of smart and digital projects in business areas such as comprehensive services, transmission and distribution operation, and operation management, and facilitated the promotion and application of established business systems within the scope of CR Gas, optimized and transformed the current systems to meet new business needs, achieving a digital coverage of 66.04% in key links during the Year, indicating a step closer to our target of 80% coverage in key links by the end of the 14th Five Year Plan.

#### Upgrading the Digital Platform

In 2023, the first self-developed digital platform based on cloudnative architecture in the gas industry, the Rig Digital Platform, was comprehensively upgraded, which would internally support the construction of 25 business intelligent applications and further achieve the unification of technical standards, central analysis and use of data, and frequent use of general business functions, and externally, undertake the Gas Safety Special Improvement System (SIS) of the MOHURD to achieve rapid delivery of high-concurrency and highavailability projects, laying a foundation for subsequent digital ecosystem construction.



圖:潤格數字化平台 Figure: Rig Digital Platform

#### 案例:建設全業務鏈數智化系統<sup>,</sup>保障燃氣安全輸配 Case Study: Build a Digital and Smart System for the Whole Business Chain to Ensure Safe Gas Transmission and Distribution

華潤燃氣充分應用5G、物聯網、大數據等新技術,上線雲地理信息系統(IGIS)、易作業巡檢系統(EIS)、數據採集監控系統(R-SCADA)和安全管理系統(SMS),實現安全輸配板塊全業務線上化。

CR Gas makes full use of new technologies such as 5G, the Internet of Things and big data to launch the Cloud Geographic Information System (IGIS), Easy Inspection System (EIS), Supervisory Control and Data Acquisition (R-SCADA), and Safety Management System (SMS), so as to realize the online operation of all businesses in the safe transmission and distribution sector.

- IGIS採用北斗精準定位和數字化技術,建立標準化的管網數據模型、測繪規範,2023年上線管網基礎數據核對 及修正工具,有效提高數據質量。目前已覆蓋16.8萬餘公里管道。
- IGIS uses Beidou precise positioning and digital technology to establish standard pipeline data models and surveying and mapping specifications. In 2023, basic pipeline data verification and correction tools were launched to effectively improve data quality, currently covering more than 168,000 kilometers of pipelines.
- EIS可實時獲取人員位置和軌跡、作業內容等,實現管網巡查、檢漏、維保、末端檢測及第三方工地監護等核心 環節全流程線上化管理,以及4,700名巡檢人員的全方位管理。系統上線後巡檢計劃完成率從60%提升至95%, 第三方施工工地發現率從70%提升至90%,管網及設施隱患發現率從55%提升至95%。
- EIS can obtain the location and trajectory of personnel, work content, etc. in real time, realizing fullprocess online management of core links such as pipeline inspections, leakage detection, maintenance, terminal inspection, and third-party construction site monitoring, as well as the all-round management of 4,700 inspection personnel. After the system went online, the completion rate of the inspection plan increased from 60% to 95%, the discovery rate of third-party construction sites increased from 70% to 90%, and the discovery rate of hidden dangers in pipelines and facilities increased from 55% to 95%.
- R-SCADA集成監測設備、視頻監控、激光雲台等監控信息,對廠站、重點管網部位等進行24小時動態監測。該 系統可統一展示公司各站點監測數據,通過對閾值和變化率報警分級管理,極大提高了信息監控和報警處置效 率,同時系統支持遠程閥控功能,及時保障現場安全。
- R-SCADA integrates monitoring equipment, video surveillance, laser PTZ and other monitoring information to conduct 24-hour dynamic monitoring of factory stations, key pipelines, etc. The system can uniformly display the monitoring data of each site of the Company, and greatly improves the efficiency of information monitoring and alarm processing through hierarchical management of thresholds and change rate alarms. At the same time, the system supports remote valve control function to ensure the safety of the site in a timely manner.

- SMS是行業首創的新一代隱患治理系統,實現輸配運行側全業務鏈搶維修、危險作業、停複供等高危環節的全過 程管控,以及隱患跨系統流轉的全流程閉環管理。2023年系統全面上線後,首次實現安全檢查線上化,該系統通 過集約化建設有效提高管理效率,預計每年節省費用10,565.45萬港元,節省工時137萬小時。
- SMS is the first new-generation hidden danger management system in the industry, which realizes the fullprocess management and control of high-risk links such as emergency repairs, dangerous operations, and supply suspension and resumption in the whole business chain on the transmission and distribution operation side, as well as full-process closed-loop management of the cross-system transfer of hidden dangers. After being fully launched in 2023, the system realized the on-line safety inspection for the first time, which can save estimated HK\$105.6545 million in cost and 1.37 million working hours per year through improved management efficiency by intensive construction.



#### 建設物聯網平台

華潤燃氣積極搭建燃氣行業自有的物聯網採 集雲平台,通過技術融合實現華潤燃氣民 用、工商、場站等不同通信類型和不同協議 類型終端設備統一、安全、穩定的數據採集 與控制,提供統一數據感知與數據輸出平 台,對外賦能。截至2023年,物聯網採集 雲平台已接入民用智能表超1,600萬隻,工 商業表及流量計設備13萬隻,基本實現華 潤燃氣智能表具集中管理全覆蓋,業務應用 規模達行業第一,並榮獲華潤集團優秀項 目。

#### Building an Internet of Things Platform

CR Gas actively builds the Internet of Things collection cloud platform of the gas industry, realizing unified, safe and stable data collection and control of terminal equipment with different communication types and different protocols for civil, industrial and commercial use, and stations of CR Gas through technology integration, providing unified data perception and data output platform for external empowerment. As of 2023, the Internet of Things collection cloud platform has accessed more than 16 million civilian smart meters and 130,000 industrial and commercial meters and flowmeter equipments, basically achieving the full coverage of centralized management of smart meters of CR Gas, ranking first in the industry in terms of the business application scale, and was awarded as the Outstanding Project of China Resources Group.



圖:華潤集團優秀項目 Picture: Outstanding Project of China Resources Group

#### 低碳技術創新

華潤燃氣始終將創新視為發展的第一引 擎。建立並優化科技創新組織和制度體系 建設,組建科技創新委員會統籌科技創新 工作。2023年,我們以《中華人民共和國科 學技術進步法》等國家科技創新法律法規為 本,制定發佈一系列內部科技創新規章,修 編發佈《科技項目管理辦法(2023版)》、新 增《科技項目立項管理指引》《科技項目預算 編製指引》,對項目來源、項目管控、知識 產權管理、激勵、容錯等方面做進一步完善 和細化,不斷提升科技創新能力。

#### Low-carbon technological innovation

CR Gas always regards innovation as the first driving force of development, establishes and optimizes the building of scientific and technological innovation organizations and institutional systems. It has established the Science and Technology Innovation Committee to coordinate the work of scientific and technological innovation. In 2023, based on the Law of the People's Republic of China on Science and Technology Progress (《中華人民共和國科學技術進步法》) and other national laws and regulations on scientific and technological innovation, we formulated and released a series of internal regulations on scientific and technological innovation, revised and released the Management Measures for Science and Technology Projects (2023 Edition) (《科技項目管理辦法(2023版)》), and added the Management 技項目立項管理指引》) and the Budget Preparation Guidelines for Science and Technology Projects (《科技項目預算編製指引》) to further improve and refine project sources, project management and control, intellectual property rights management, incentives, fault tolerance, etc., and continuously enhance scientific and technological innovation capabilities.

#### 技術研發與攻關

華潤燃氣立足燃氣主業,積極開展產學研合 作和校企合作項目,持續推進關鍵領域技術 攻關,致力構建高質量燃氣產業新生態。 2023年華潤燃氣研發投入2.78億元,與國 內10餘家高校和科研院所開展深度合作, 承擔研發經費超3,000萬元。

- 搭建高能級科研平台:華潤燃氣聯合 多家單位成功申建國家住建部燃氣工 程技術創新中心,將基於該平台開展 燃氣輸配系統安全關鍵技術、工業 用戶節能減碳技術、低碳高效供暖技 術,探索天然氣摻氫燃、產業鏈中下 游甲烷排放的監測與評估等技術,助 力產業結構優化升級和構建清潔低碳 安全高效的能源體系。
- 助力國家重點專項課題攻關:華潤燃 氣加入國家重點專項課題組,共同實 施科技部「氫進萬家」科技示範工程, 承擔子課題純氫管道輸送和掺氫示範 應用研究,實現「產一學一研一用」 深度融合,努力構建城燃行業在天然 氣管道掺氫輸配領域的技術體系。

#### Technological R&D and Making Breakthrough

Based on its main gas business, CR Gas actively carries out industryuniversity-research cooperation and school-enterprise cooperation projects, continues to promote technological research in key areas, and is committed to constructing a new ecosystem of high-quality gas industry. In 2023, CR Gas invested RMB278 million in R&D, conducted in-depth cooperation with more than 10 domestic universities and research institutes, with a R&D expenditure of more than RMB30 million.

- Building a high-level scientific research platform: CR Gas, in conjunction with a number of units, has successfully applied for the establishment of the Gas Engineering Technology Innovation Center of the MOHURD. Based on the platform, we will develop key safety technologies for gas transmission and distribution systems, energy-saving and carbon-reducing technologies for industrial users, low-carbon and high-efficient heating technologies, as well as explore technologies such as hydrogen-mixed natural gas, and the monitoring and assessment of methane emissions in the middle and lower reaches of the industrial chain to help optimize and upgrade the industrial structure and build a clean, low-carbon, safe and efficient energy system.
- Supporting the research of national key special projects: CR Gas joined the national key special project team to jointly implement the science and technology demonstration project of "Hydrogen into Thousands of Households" of the Ministry of Science and Technology, and undertook the sub-project of pure hydrogen pipeline transportation and hydrogen doping demonstration application research to realize the in-depth integration of "industry – university – research – application", and strive to build a technical system for the urban gas industry in the field of hydrogen doping transmission and distribution of natural gas pipelines.



圖:國家住建部燃氣工程技術創新中心 Figure: Gas Engineering Technology Innovation Center of the MOHURD

#### 知識產權保護

華潤燃氣嚴格遵守《企業知識產權保護指 南》等國家法律法規,制定《科技項目管 理辦法(2023版)》等內部知識產權管理制 度,不斷提高知識產權保護力度和業務創新 能力。2023年,華潤燃氣累計獲得專利授 權77項,其中發明專利5項、實用新型專利 68項、外觀專利4項;參與編制1項國家標 準,發表4篇核心期刊論文。

#### 2.2 提供優質服務

華潤燃氣秉承「尊重客戶、專業待人、高效 服務」的理念,踐行真誠負責的服務承諾, 不斷改進服務能力和產品質量,持續提升客 戶滿意度,與客戶共同追求高品質生活。

#### 客戶權益

華潤燃氣嚴格遵循國家《消費者權益保護 法》,全面做好客戶權益保障工作,為客戶 持續提供真誠的、可靠的、高效的服務。

#### Protection of Intellectual Property

CR Gas strictly abides by national laws and regulations such as the Enterprise Intellectual Property Protection Guidelines (《企業知識產權保 護指南》), and has formulated internal intellectual property management policies such as the Sci-Tech Project Management Measures (2023 Version) (《科技項目管理辦法(2023版)》) to continuously improve the intellectual property protection and business innovation capabilities. In 2023, CR Gas was granted a total of 77 patents, including 5 invention patents, 68 utility model patents and 4 design patents; participated in the compilation of 1 national standards and published 4 core journal papers.

#### 2.2 PROVIDING QUALITY SERVICE

CR Gas adheres to the concept of "respecting customers, providing professional and efficient services", practices sincere and responsible service commitment, keeps improving service capabilities and product quality, and continuously enhances customer satisfaction, with an effort to pursue high-quality life with customers.

#### **Customers' Rights and Interests**

CR Gas fully protects the rights and interests of customers in strict accordance with the Law of the People's Republic of China on the Protection of Consumer Rights and Interests (《消費者權益保護法》), and continues to provide customers with sincere, reliable and efficient services.

#### 保護信息安全

隨着華潤燃氣加速推進數智化轉型,網絡信 息安全和客戶隱私的保護同步受到集團重點 關注及管理。我們嚴格遵守《中華人民共和 國網絡安全法》《華潤(集團)有限公司網絡 安全管理辦法》《華潤(集團)有限公司信息 安全標準(修訂版)》等制度和規範,制定了 《華潤燃氣網絡安全管理辦法》,建立網絡 安全三層防護管理體系,完善網絡安全風險 管理機制,在此基礎上積極建立網絡信息預 警管理機制,持續提高網絡安全整體水平。

#### Protection of Information Security

As CR Gas accelerates its digital and intelligent transformation, the Group attaches great importance to the protection of network information security and customer privacy. We strictly abide by policies and regulations such as the Cybersecurity Law of the People's Republic of China (《中華人民共和國網絡安全法》), the Cybersecurity Management Measures of China Resources (Holdings) Company Limited (《華潤(集團)有限公司網絡安全管理辦法》) and the Information Security Standards of China Resources (Holdings) Company Limited (Revised Edition) (《華潤(集團)有限公司信息安全標準(修訂版)》), and have formulated the Measures of CR Gas for Cybersecurity Management (《華潤燃氣網絡安全管理辦法》), to establish a three-layer cybersecurity protection management system, improve the cybersecurity risk management mechanism and actively establish an early warning management mechanism for network information on this basis, so as to continuously improve the overall level of cybersecurity.



圖:網絡安全三層防護架構 Picture: Three-layer Cybersecurity Protection System

在數據雲服務方面,集團總部及各單位逐步 建立健全監控體系,發佈《華潤燃氣控股有 限公司雲服務管理規範(試行)》明確雲服務 組織職責、規劃建設、運維安全、雲安全等 相關規範,並定期開展數據恢復演練,確保 網絡數據安全。同時,集團每年邀請獨立第 三方機構開展信息安全風險評估,確保集團 網絡信息的安全性,並獲得了ISO 27001信 息安全認證、ISO 22301計算機業務連續性 認證、CMMI軟件工程質量管理認證、以及 ITSS信息技術服務認證,進一步保障集團 網絡信息的安全性。 In terms of data cloud services, the Group's headquarters and each unit have gradually established a sound monitoring system, launched the Cloud Service Management Specification of China Resources Gas Group Limited (Trial) (《華潤燃氣控股有限公司雲服務管理規範(試 行)》) to clarify cloud service organization responsibilities, planning and construction, operation and maintenance safety, cloud security and other relevant specifications, and conduct data recovery drills on a regular basis to ensure the security of network data. At the same time, the Group invites independent third-party organizations to conduct information security risk assessment each year to ensure the security of the Group's network information, and has obtained ISO 27001 information security certification, ISO 22301 computer business continuity certification, CMMI software engineering quality management certification, and ITSS information technology services certification, further guarantee the security of the Group's network information.



圖:ISO 27001信息安全認證證書 Figure: ISO 27001 Information Security Certification

集團於2023年出台了《企業微信燃氣管家禁止事項》,結合業務場景通過加密、分級審 批和權限管理等方式,嚴格規範平台客戶個 人信息處理方式,有效保護客戶隱私。 The Group issued the Prohibited Matters for Enterprise WeChat Gas Butler (《企業微信燃氣管家禁止事項》) in 2023, which strictly regulates the processing of personal information of platform customers through encryption, hierarchical approval and authority management based on business scenarios to effectively protect customer privacy.

#### 關鍵績效 Key Performance

報告期內,公司系統記錄並追蹤的客戶信息洩露事件的數量為0件。

• During the reporting period, the number of customer information leakage incidents recorded and tracked by the Company's system was 0.

#### 負責任營銷

華潤燃氣堅持責任營銷,在遵守《中華人民 共和國廣告法》《反不正當競爭法》等相關法 律法規的基礎上,主動公開經營範圍內產品 和服務的價格、質量等有關信息。

集團持續加強公平營銷管理和業務培訓,嚴 格規範營銷人員在宣傳和銷售公司產品和服 務時的行為,嚴禁編造、傳播虛假的或者引 人誤解的產品或服務信息,嚴禁欺騙、誤導 客戶或出現過度承諾現象,嚴格保障產品和 服務的透明度和客戶的知情權。

#### 優化客戶服務

華潤燃氣堅持以客戶為導向,專注於解決業 務痛點,致力於為客戶提供更加專業、便利 的服務。2023年,集團結合《華潤燃氣控股 有限公司客戶服務標準手冊》等內部規章制 度,進行客戶滿意度等學標杆指標晾曬,實 現管理模式與管理工具的聯動升級,實施網 格化管理和精準服務對接,定期主動為客戶 安排安檢、抄表、維修、綜合服務等售後服 務,提高客訴響應效率,增強客戶黏性。同 時,集團引入企業微信,搭建智慧客服服務 通道,打造燃氣管家專屬服務,實現一對一 溝通及業務辦理,提高服務時效性。

#### Responsible Marketing

CR Gas adheres to responsible marketing, and proactively discloses the price, quality and other relevant information of products and services within its business scope on the basis of complying with relevant laws and regulations including the Advertising Law of the People's Republic of China (《中華人民共和國廣告法》) and Anti-Unfair Competition Law (《反不正當競爭法》).

The Group continues to strengthen fair marketing management and business training, strictly regulates the acts of marketing personnel in the process of promoting and selling the Company's products and services, strictly prohibits the fabrication or dissemination of false or misleading information about products or services, and strictly prohibits acts to deceive, mislead customers or make overcommitment, so as to guarantee the transparency of products and services and customers' right to know.

#### **Improving Customer Service**

CR Gas adheres to a customer-oriented approach, focuses on solving business pain points, and is committed to providing customers with more professional and convenient services. In 2023, based on internal rules and regulations such as the Customer Service Standard Handbook of China Resources Gas Group Limited (《華潤燃氣控股 有限公司客戶服務標準手冊》), the Group disclosed benchmarking indicators such as customer satisfaction, realized the linkage upgrade of management models and management tools, and implemented grid management and precise service docking. It arranged security inspection, meter reading, maintenance, comprehensive services and other after-sales services for customers in a regular and proactive manner to improve the efficiency of response to customer complaints and enhance customer stickiness. At the same time, the Group introduced enterprise WeChat to build a smart customer service channel, provide gas butler exclusive services, realize one-onone communication and business processing and improve service timeliness.

#### 積極處理投訴意見

2023年,華潤燃氣結合《華潤燃氣控股有限 公司客戶投訴管理指引》,持續優化客戶投 訴管理流程,縮短投訴處理時限,確保投訴 得到有效處理,提高服務質量。同時上線企 業微信服務工具,拓寬與客戶的溝通和投訴 渠道,實現投訴和日常輿情動態監測、高效 處理及反饋;打造95777,提升接通率、縮 短內部工單派工週期,快速響應用戶需求。

#### Active Handling of Complaints

In 2023, based on the Guidelines for Customer Complaint Management of China Resources Gas Group Limited (《華潤燃氣控 股有限公司客戶投訴管理指引》), CR Gas continued to optimize the customer complaint management process and shorten the time limit for complaint handling, so as to ensure efficient handling of compliant and improve service quality. At the same time, CR Gas launched the enterprise WeChat service tool to broaden the communication and compliant channels with customers to achieve the dynamic monitoring, efficient handling and feedback of complaints and daily public opinions. It also offers the 95777 service hotline to increase the call-through rate, shorten the cycle of dispatching internal work orders, and quickly respond to user needs.

#### 2023年華潤燃氣客戶處理流程 Customer Complaint Handling Process of CR Gas in 2023

	受理 Acceptance	投訴處理渠道包括但不限於客戶服務中心、客戶服務熱線、客戶經理、客戶 來信、移動營業廳(華潤燃氣APP)、媒體辦公室等 Complaint acceptance channels include but are not limited to customer service center, customer service hotline, account managers, customer letter, mobile service hall (CR Gas APP), media office, etc.
	跟進 Follow-up	根據投訴事件的嚴重程度,會立即轉交相關負責部門跟進調查。 Based on the severity of the complaint incident, a complaint will be promptly transferred to the responsible department for follow-up investigation.
投訴處理流程 Complaint handling process	處理 Handling	根據事件情況對投訴進行分類,並按照承諾的投訴處理時間完成處理,識別 各環節責任人。 We will classify the complaint based on the facts of the incident, and handle it within the time frame as promised and identify responsible persons in each section.
	回訪 Call-back	利用電話回訪和其他形式了解客戶對公司投訴處理情況的意見。 We will obtain the customer's feedback on the complaint handling results by phone call or other means.
	歸檔 Archiving	填寫投訴處理匯總意見進行歸類,並移交成員公司進行歸檔和評估。 Advice on handling the complaint will be summarized and categorized, and then transferred to relevant member company for archiving and evaluation.



#### 關鍵績效指標 Key Performance Indicators

- 報告期內,公司已解決的客戶投訴的總數量為43,104件。
- During the reporting period, the Company resolved a total of 43,104 customer complaints.
- 報告期內,公司系統記錄並追蹤的有責投訴解決率為100%。
- During the reporting period, the responsible complaint resolution rate recorded and tracked by the Company's system was 100%.

#### 提升客戶評價

2023年,華潤燃氣開展客戶滿意度調研, 滿意度得分為96.43分,通過微網廳業務辦 理平台,對用戶服務開展工單實時評價工 作,從營業廳、維修改造、通氣複供、抄表 算費、安檢服務、線上服務等六個維度,識 別客戶服務薄弱環節,分析和挖掘存在的問 題,並及時採取有效的改進措施,持續提升 服務品質和客戶體驗。

#### **Improving Customer Evaluation**

In 2023, CR Gas conducted a customer satisfaction survey, with a customer satisfaction score of 96.43. Through the WeChat business platform, the Group carried out real-time evaluation of work orders for user services, identified weak links in customer service, analyzed and explored existing problems, and took timely and effective improvement measures from six aspects including business halls, maintenance and renovation, gas supply restoration, meter reading and fees calculation, security inspection services and online services to continuously improve service quality and customer experience.

#### 關鍵績效指標 Key Performance Indicators

2023年客戶滿意度調查顯示,集團滿意度得分為96.4分。

The 2023 Customer Satisfaction Survey shows that the Group's satisfaction score is 96.4.

# 勇擔社會責任

### Undertaking Social Responsibility to Pass on Warmth

華潤燃氣堅持履行央企社會責任,持續提升應急管理能力和安全管理水平,開發智慧運營系統賦能安全管理工作,全方位保障實現安全穩定供氣,同時積極投身社會公益事業,參與社區建設及鄉村振興,努力成為值得社會 信任的責任企業。

CR Gas insists on fulfilling the social responsibility of a central state-owned enterprise, continuously improves emergency management capability and safety management level, develops intelligent operation systems to empower safety management work, guarantees safe and stable gas supply. At the same time, CR Gas actively engages in social welfare undertakings, participates in community construction and rural revitalization, and strives to become a responsible enterprise worthy of social trust.



SDGs

NO POVERTY







QUALITY Folication 10 REDUCED



SUSTAINABLE CITIES AND COMMUNITIES





#### 勇擔社會責任,傳遞溫暖愛心 Undertaking Social Responsibility to Pass on Warmth

#### 3.1 保障安全生產

華潤燃氣建立健全安全管理體系,不斷強化 安全培訓及應急管理工作,利用創新技術保 障客戶用氣安全。同時,我們通過定期開展 安全教育活動,不斷提升員工安全意識,強 化整體安全管理水平,確保企業穩健發展。

#### **3.1 SECURING SAFE PRODUCTION**

CR Gas establishes and improves the safety management system, continuously strengthens safety training and emergency management, and uses innovative technologies to ensure the safety of customers' gas consumption. At the same time, we continue to enhance employees' safety awareness and strengthen overall safety management through regular safety education activities to ensure the steady development of the enterprise.

#### 建立安全管理體系

華潤燃氣持續打造完善「12365」安全管理 體系,以世界一流的高質量安全管理體系為 目標,壓實全員安全生產責任制、構建風險 分級管控和隱患排查治理雙重預防機制為抓 手。從員工、部門、公司三個層級完善管理 體系,強化包括相關方管理在內的六項年度 專項工作,加強完善安全管理體系在內的五 大板塊。

#### **Building Safety Management System**

CR Gas continues to build and improve the "12365" safety management system, with the objective of a world-class high-quality safety management system, focuses on consolidating the production safety responsibility system for all employees, and building a dual prevention mechanism of hierarchical risk management and control and hidden danger investigation and management. It improves the management system from three levels of employees, departments and the Company, reinforces six annual special tasks including related party management, and strengthens and enhances five major sectors including the safety management system.

	圖:華潤燃氣「12365」安全管理體系 Figure: "12365" Safety Management System of CR Gas			
1目標 1 objective	以構建世界一流的高質量安全管理體系為目標 With the objective of building a world-class high-quality safety management system			
2個抓手 2 focuses	以壓實全員安全生產責任制、構建風險分級管控和隱患排查治理雙重預防機制為抓手 Focusing on consolidating the production safety responsibility system for all employees, and building a dual prevention mechanism of hierarchical risk management and control and hidden danger investigation and management			
<b>3</b> 個層級 3 levels	從員工、部門、公司三個層級完善管理體系 Improves the management system from three levels of employees, departments and the Company			
6項年度專項工作 6 annual special tasks	<ul> <li>深化崗位明白卡</li> <li>Intensifying position description cards</li> <li>推動風險管控落地</li> <li>Promoting the implementation of risk management and control</li> <li>強化廠站安全管理</li> <li>Strengthening safety management of stations</li> <li>客戶端安全隱患整治</li> <li>Rectifying security hazard at user terminals</li> <li>提高安全檢查實效</li> <li>Improving the effectiveness of safety inspections</li> <li>強化相關方管理</li> <li>Enhancing related party management</li> </ul>			

		圖:華潤燃氣「12365」安全管理體系 Figure: "12365" Safety Management System of CR Gas
	>	安全強基:樹牢安全理念,強化安全基礎管理
	$\succ$	Strengthen safety foundation: Establish a firm safety concept to intensify basic safety
		management
	$\succ$	安全強本:防範化解重大風險,強化本質安全
	$\succ$	Strengthen intrinsic safety: Prevent and resolve major risks to reinforce intrinsic safety
	$\succ$	安全強檢:強化監督檢查,壓實安全生產責任
5大板塊	$\succ$	Strengthen safety inspection: Strengthen supervision and inspection to consolidate
5 major sectors		responsibility for production safety
	$\succ$	安全強培:強化教育培訓,打造專業人才隊伍
	$\succ$	Strengthen safety training: Enhance education and training to build a team of professional
		talents
	$\succ$	安全強智:推動數字化轉型,強化智慧運營
	$\succ$	Strengthen smart operation safety: Promote digital transformation to strengthen smart

#### 安全管理制度

本集團嚴格遵守《中華人民共和國安全生產 法》《中華人民共和國消防法》及《中華人民 共和國職業病防治法》等國家法律法規,參 考ISO 45001、安全生產標準化等國內外 標準,編制發佈了覆蓋全集團的《華潤燃氣 EHS管理體系》《華潤燃氣崗位EHS責任制 度》《華潤燃氣控股有限公司相關方安全管 理制度》等安全管理制度,規範包括相關方 在內的安全管理及責任追究,將健康與安全 表現和高管績效掛鉤,以有效管控安全風 險。

operation

#### Safety Management Policy

The Group strictly complies with national laws and regulations including the Production Safety Law of the People's Republic of China (《中華人民共和國安全生產法》), the Fire Protection Law of the People's Republic of China (《中華人民共和國消防法》), and the Law of the People's Republic of China on the Prevention and Control of Occupational Diseases (《中華人民共和國職業病防治法》), and has formulated and issued the EHS Management System of CR Gas (《華 潤燃氣EHS管理體系》), EHS Responsibility Policy of CR Gas (《華潤燃 氣崗位EHS責任制度》), Safety Management Measures for Stakeholders of China Resources Gas Group Limited (《華潤燃氣控股有限公司相關 方安全管理制度》) and other safety management policies covering the whole Group with reference to domestic and foreign standards such as ISO 45001 and production safety standardization, to regulate safety management and accountability including stakeholders, and align health and safety performance with senior management performance to effectively manage and control safety risks.

#### 安全管理架構

華潤燃氣成立EHS委員會,集團總裁擔任 委員會主任,由分管安全工作的副總裁擔任 副主任,其他成員由分管業務副總裁、總部 各部室負責人擔任。EHS委員會作為華潤 燃氣最高安全管理機構,在集團董事會的領 導下,貫徹國家安全管理法律法規和行業標 準、規範,研究安全工作中的重大舉措,協 調、解決安全管理中的重大問題,指導全集 團安全工作開展,實現對所屬區域公司及下 屬成員企業安全集中管理。華潤燃氣定期按 季度召開不少於1次EHS委員會會議,指導 全集團有序開展安全工作。

#### 安全管理認證

華潤燃氣持續健全安全管理體系,夯實安全 管理基礎,積極開展職業健康管理體系認證 工作。截至報告期末,公司獲得相關認證情 況如下:

#### Safety Management Structure

CR Gas has established the EHS Committee with Group's Chief Executive Officer serving as the chairman of the committee, the vice president in charge of safety works as the vice-chairman and the vice president in charge of operations and department heads of headquarters as committee members. The EHS Committee is the highest safety management body of CR Gas. Under the leadership of the Board of the Group, it ensures compliance with national safety management laws and regulations and industry standards and specifications, develops major safety measures, coordinates and addresses major problems in safety management, guides the safety efforts within the Group, and has achieved the centralized safety management of regional companies and subordinate member companies. CR Gas holds EHS Committee meetings not less than once on a quarterly basis to guide the entire Group to carry out safety work in an orderly manner.

#### Safety Management Certification

CR Gas continues to improve its safety management system, consolidate the foundation of safety management, and actively carry out occupational health management system certification. As of the end of the reporting period, the Company obtained the following relevant certifications:

認證類型	Type of certification	企業數量	Number of companies	覆蓋比例 Coverage
ISO 45001認證	ISO 45001 certification	121	121	43.84%
安全生產標準化認證	Standard production safety certification	113	113	40.94%

右間公司

開日

职业健康安全管理体系认证证书

南京华润燃气有限公司 (统一社会信用代码。11201150555080012) (地址: 南京市江宁区林陵铁道路谷振八号 新編。211110

GB/T45001-2020/ISO45001:2018

润燃气有限公司及下属门站、高中压调压站及 加气站、管网的燃气输送及其网点的相关管理

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圖:蘇州公司獲ISO 45001認證 Picture: Suzhou Company obtained the ISO 45001 certification

圖:南京公司獲ISO 45001認證 Picture: Nanjing Company obtained the ISO 45001 certification

圖:海東平安公司獲ISO 45001認證 Picture: Haidong Ping'an Company obtained the ISO 45001 certification





#### 安全目標與責任

本集團制定了涵蓋承包商在內的「追求零事故,超越零責任」安全目標,持續追蹤評估 「職業健康應體檢人數、新增疑似職業病人 數、健康管理投入資金、工作場所職業病危 害日常監測執行率」等安全指標績效,及時 跟進檢討安全責任目標的達成情況。

#### Safety Goals and Responsibilities

The Group has developed the safety goals to "pursue zero accidents and incur no liability", which include contractors, and continues to track and evaluate the performance of safety indicators including "the number of people who should undergo occupational health checkups, the number of people who have been newly diagnosed with suspected occupational diseases, the amount of funds invested in health management, and the implementation rate of daily monitoring of occupational disease hazards in the workplace" to follow up and review the achievement of safety responsibility goals in a timely manner.

我們制定健康與安全管理計劃,通過覆蓋 全員的崗位EHS責任清單,層層簽訂明確 崗位EHS責任書,建立全員崗位安全責任 體系。同時,我們根據《EHS責任追究制 度》,設置高於國家與上級單位規定的處罰 範圍與標準,有效促進安全工作及目標落實 到位。

此外,我們設立安全績效制度,將EHS管 理工作和安全生產責任事故等安全管理表現 與相關業務單位主管、高管等責任人的績效 薪酬相關聯。各區域公司亦將安全生產績效 獎金在工資總額中單列,提高安全業績在職 工收入中的權重,全面推動安全生產管控措 施落實。報告期內,華潤燃氣未發生員工人 身傷亡事故及有責的生產安全事故。 By formulating a health and safety management plan, we have established a position safety responsibility system for all employees through a position EHS responsibility list covering all employees and the signing of EHS responsibility letters to clarity position at all levels. At the same time, according to the EHS Accountability Policy (《EHS責 任追究制度》), we set the scope and standard of penalties higher than those stipulated by the state and superior units, so as to effectively promote the implementation of safety work and targets in place.

In addition, we have established a safety performance policy to align the safety management performance such as EHS management and production safety accidents with performance remuneration of executives and other responsible persons of the relevant business units. Each regional company also lists the bonus of production safety performance separately in total wages to increase the weight of safety performance in employees' income and comprehensively promote the implementation of measures for production safety control. During the reporting period, there were no casualties involving employees of CR Gas and production and safety incidents for which CR Gas was accountable.

#### 強化安全監管

華潤燃氣建立雙重安全預防控制體系,通過 內部審核與外部核驗,不斷強化安全風險監 管力度。

- 內部審核:秉承「應抽盡抽」的審核 原則,定期開展年度EHS審核及班組 考評,實現。報告期內,累計完成75 家區域EHS審核,審核平均分88.41 分,較2022年提升0.06分。
- 外部核驗:至少每三年邀請有資質的 外部機構對安全生產管理政策執行效 果,以及包括安全現狀、安全生產標 準化達標認證、職業危險有害因素等 在內的所有業務安全風險進行排查。

此外,我們制定《華潤燃氣控股有限公司 安全風險分級管控及隱患排查治理管理指 引》,整合已有風險辨識管控及隱患排查治 理制度標準,通過設備風險提示卡、場站風 險四色圖、班組安全管控要點、崗位明白 卡,有效識別風險,落實安全管控措施。

#### Strengthening Safety Supervision

CR Gas has established a dual safety prevention and control system, and continuously strengthens safety risk supervision through internal audit and external verification.

- Internal audit: Adhering to the audit principle of "sampling as much as possible", the Company regularly conducts annual EHS audit and unit assessment. During the reporting period, a total of 75 regional companies received EHS audits, with an average audit score of 88.41, an increase of 0.06 from that of 2022.
- External verification: We invite qualified external organizations at least once every three years to conduct inspection on the implementation effect of the production safety management policy, as well as all operation risks including the safety status quo, certification of standardization of safety production, and vocational hazardous and harmful factors, etc.

In addition, we formulated the Management Guidelines for Hierarchical Control of Safety Risks and Hidden Hazard Investigation and Management of China Resources Gas Group Limited (《華潤燃氣控股 有限公司安全風險分級管控及隱患排查治理管理指引》), integrated the policy standards for existing risk identification, management and control as well as hidden hazard investigation and management, and effectively identified risks and implemented safety control measures through equipment risk reminder cards, four-color diagrams of station risks, key points of unit safety control and position description cards.

在此基礎上,我們編制了《燃氣業務安全管 控點抽檢標準》《華潤燃氣管線及附屬設施 巡查監護、檢測及維護保養管理標準》,明 確區域總經理、安全及業務分管領導與部門 負責人等五類人員的安全檢查頻次,構建標 準化檢查體系。根據《企業總經理安全檢查 制度》,各層級安全檢查頻次遵循以下檢查 頻率:

- ▶ 總部業務部室總經理每兩月一次。
- ➤ 安全管理部室總經理每月一次。
- ▶ 大區總經理每季度一次。
- ▶ 區域公司總經理每月一次。

同時,我們組織開展了安全管理強化年度 行動、重大事故隱患專項排查整治2023行 動、「安全生產月」活動、城鎮燃氣專項排 查整治等工作,做到全方位、系統性安全隱 患排查。報告期內,華潤燃氣230餘家成員 企業開展各層級安全大檢查共計905次,累 計組織排查近9萬次,其中企業主要負責人 帶隊檢查5,000餘次、分管安全負責人帶隊 檢查6,000餘次、安全監管部門檢查近2萬 次、業務保障部門檢查近4萬次。 On this basis, we compiled the Sampling Inspection Standards for Gas Business Safety Control Points (《燃氣業務安全管控點抽檢標準》) and Management Standards of CR Gas for Pipelines and Ancillary Facilities Inspection Monitoring, Testing and Maintenance (《華潤 燃氣管線及附屬設施巡查監護、檢測及維護保養管理標準》) to clarify the frequency of safety inspections for five categories of personnel including the general manager of regional companies, leaders of the Safety Management Department and department heads, etc. to establish a standardized inspection system. According to the Policy for Safety Inspections by General Managers (《企業總經理安全檢查制 度》), the frequency of safety inspections at each level is as follows:

- once every two months by the general manager of the Business Department of the headquarters.
- once a month by the general manager of the Safety Management Department.
- > once a quarter by the general manager of each major region.
- > once a month by the general manager of each regional company.

At the same time, we organized and carried out the Annual Actions to Strengthen Safety Management, the 2023 Action for the Special Investigation and Rectification of Major Accident Hazards, the "Safe Production Month", and the Special Investigation and Rectification of City Gas to achieve comprehensive and systematic investigation of potential safety hazards. During the reporting period, more than 230 member companies of CR Gas conducted a total of 905 safety inspections at all levels, and organized a total of nearly 90,000 inspections, including more than 5,000 inspections led by the Company's main persons in charge and more than 6,000 inspections led by the persons in charge of safety, nearly 20,000 inspections by the safety supervision department and nearly 40,000 inspections by the business assurance department.

#### 案例:開展城鎮燃氣安全專項整治工作 Case Study: Conducting Special Safety Investigation and Rectification of City Gas

2023年6月,寧夏銀川「6•21」事故發生後,華潤燃氣高度重視、快速反應,立即召開安全工作緊急會議,部署推動液 化石油氣用戶及天然氣商業用戶安全隱患排查整治工作,重點整治氣液兩相鋼瓶違規使用、雙氣源、油氣混用等安全 隱患。

In June 2023, after the "6•21" accident in Yinchuan, Ningxia, CR Gas attached great importance and responded quickly, immediately convened an emergency meeting on safety work, deployed to promote the investigation and rectification of safety hazards for liquefied petroleum gas users and natural gas commercial users, focusing on the rectification of the illegal use of gas-liquid two-phase cylinders, dual gas sources, mixed use of oil and gas, and other potential safety hazards.

區域管理團隊開展檢查2,835人次,中基層管理人員開展檢查12,146人次,完成商業用戶100%全覆蓋排查,其中發現 並整改嚴重隱患22,047處,整改一般隱患22,000處。

The regional management team conducted inspections for 2,835 people, and the middle and grass-roots managers conducted inspections for 12,146 people, completing 100% full coverage inspections of commercial users, of which 22,047 serious hazards were discovered and rectified, and 22,000 general hazards were rectified.



圖:華潤燃氣總裁赴景德鎮公司安全檢查工作 Picture: President of CR Gas Went to Jingdezhen Company for Safety Inspection

#### 相關方安全管理

華潤燃氣堅決貫徹落實華潤集團相關方管理 的「三個全覆蓋」要求,包括合同管理全覆 蓋、安全管理全覆蓋,責任追究全覆蓋,將 華潤燃氣生產經營場所涉及的相關方人員視 同己方人員納入統一管理,並且持續優化 完善《華潤燃氣控股有限公司相關方安全管 理制度》,明確安全管理部門、使用單位、 相關方單位的權責,督促相關方做到授權 明確、資質符合、人證一致,嚴格人員備 案、規範派工,明確集團安全管理制度同樣 適用於相關方單位。

我們亦將搶險維修相關方人員納入安全管理 系統,並對工程管理系統等相關方管理情況 開展重點檢查,切實強化相關方作業流程管 控,進一步完善相關方安全管理。同時,相 關方勞務用工備案也被納入EHS指標考核 評價,通過定期統計、通報備案情況,督促 下屬單位重新簽訂安全協議,進一步明確相 關方安全責任。報告期內,我們累計對75 家區域相關方管理情況進行安全審查,平均 得分率85.10%。

#### Safety Management of Stakeholders

CR Gas resolutely implements the "three full coverage" requirement of China Resources Group on stakeholder management, including full coverage of contract management, safety management and accountability, which incorporates the stakeholder personnel involved in CR Gas's production and operation sites into unified management as if they were its own personnel, and continues to optimize and improve the China Resources Gas Group Limited Safety Management Policy for Stakeholders (《華潤燃氣控股有限公司相關方安全管理制度》), clarifying the rights and responsibilities of the safety management department, the user units, and the stakeholders units, and urges the stakeholders to ensure clear authorization, conformity of qualifications, consistency of personnel and certificates, strict personnel registration, and standard worker dispatch, specifying that the Group's safety management policy also applies to stakeholders' unit.

We also include emergency maintenance personnel of stakeholders into the safety management system, and carry out key inspection on the management of stakeholders such as the project management system, effectively strengthen the operation process management and control of stakeholders, and further improve the safety management of stakeholders. At the same time, the labour employment record of stakeholders has also been included in the assessment and evaluation of EHS indicators. Through regular statistics and reporting of record status, we urge our subordinate units to re-sign safety agreements to further clarify the safety responsibilities of stakeholders. During the reporting period, we conducted safety reviews on the management of 75 regional stakeholders, with an average score of 85.10%.

#### 增進安全技能

為提升員工安全技能,華潤燃氣依託華潤集 團EHS教育培訓系統,搭建涵蓋「總部一大 區一區域一下屬公司一相關方」的五級培 訓框架,培訓人員從區域公司總經理覆蓋至 相關方人員,由此形成了具有華潤燃氣特色 的全員安全教育培訓體系。

在全員安全教育培訓體系下,本集團將日常 安全教育培訓與安全專項培訓相結合,着重 提升華潤燃氣各級管理人員安全管理水平和 一線作業人員業務能力。

在日常安全教育培訓方面,我們每月組織安 全管理人員學習,涵蓋法律法規、規章制 度、體系建設、職業健康、節能環保、業務 知識等,並利用安全學習日活動,研討管理 方法、分享優秀經驗。

在安全專項培訓方面,我們關注一線員工技 能達標,安全專項審核員、國家註冊安全工 程師、安全生產知識和管理能力培訓認證等 情況,幫助關鍵崗位員工掌握正確的操作技 能和應急處理能力、夯實安全基礎,從源頭 減少事故發生概率。

#### **Improving Safety Skills**

In order to enhance employees' safety skills, CR Gas leveraged the Group's EHS education and training system to build a fivelevel training framework covering the "headquarters – major regions – regions – subordinate companies – stakeholders", with the training personnel ranging from the general manager of the regional companies to the personnel of stakeholders, thus forming a safety education and training system for all employees with the characteristics of CR Gas.

Under the safety education and training system for all employees, the Group combines daily safety education and training with special safety training, focusing on improving the safety management capacity of management personnel at all levels of CR Gas and the business capabilities of front-line personnel.

In terms of daily safety education and training, we organize monthly studies for safety management personnel, covering laws and regulations, rules and regulations, system construction, occupational health, energy conservation and environmental protection, business knowledge, etc., and make use of the activity of safety study day to discuss management methods and share excellent experience.

In terms of special safety training, we pay attention to the frontline employees skills certification, special safety auditors, national registered safety engineers, safe production knowledge and management ability training certification, etc., to help employees in key positions master correct operation skills and emergency response capabilities, and consolidate safety foundation to reduce the probability of accidents from the source.

安全專項培訓體系 Special Safety Training System				
一線員工技能達標 認證工作 Frontline employees skills certification	搭建安全、輸配、客服管理等認證模塊37個,近3萬人次參與培訓,一線崗位人員覆蓋率達到 100%,進一步提高一線員工整體技能水平。 Build 37 certification modules including safety, transmission and distribution, and customer service management, with nearly 30,000 attendances in the training and 100% coverage rate of frontline employees, further improving the overall skill level of frontline employees.			
國家註冊安全工程 師隊伍 National registered safety engineers team	每年組織註冊安全工程師考前培訓。截至報告期末,本集團擁有國家註冊安全工程師1,089人,位 於行業前列。 We organize pre-examination training for registered safety engineers every year. As of the end of the reporting period, the Group had 1,089 national registered safety engineers, ranking at the forefront of the industry.			
安全生產知識和管 理能力培訓認證 Safe production knowledge and management ability training certification	<ul> <li>按照「兩個層級、三個崗位、四個部分」開展認證工作,形成《華潤燃氣安全管理人員崗位資格認證</li> <li>學習手冊》,累計組織開展認證人員線上學習1,600餘人次,考前全仿真模擬練習11,000餘次,共完成1,094名主要安全管理人員認證工作。</li> <li>We carried out the certification work in accordance with "two levels, three positions, and four parts" and formed the Study Manual for the Position Qualification Certification of Safety Management Personnel of CR Gas (《華潤燃氣安全管理人員崗位資格認證學習手冊》), organized online study sessions for certified personnel with more than 1,600 attendances, conducted more than 11,000 full simulation exercises before the examination, and completed the certification of 1,094 key safety management personnel.</li> <li>&gt; 兩個層級: 區域及下屬公司</li> <li>&gt; 工wo levels: Regions and subordinate companies</li> <li>&gt; 三個崗位:總經理、分管安全副總、安全部門負責人</li> <li>&gt; Three positions: General managers, vice presidents in charge of safety, safety department heads</li> <li>&gt; 四個部分: 法律法規、規章制度、專業技術、事故案例</li> <li>&gt; Four parts: Laws and regulations, rules and policies, professional technology, accident cases</li> </ul>			
安全專項審核員培 訓 Training for special safety auditors	組織專項審核員提供線上學習途經,鼓勵區域內薄弱板塊專項培養:梳理往年審核表單、審核重點 要素、審核紀律等主要內容,開展審核員專題培訓。截至報告期末,共培訓人員近2萬人次。 We organize special auditors to provide online learning channels and encourage special training of weak sectors in the region; sort out the main contents such as audit forms, key elements of audits, and audit disciplines in previous years, and conduct special training for auditors. As of the end of the reporting period, a total of nearly 20,000 personnel have been trained.			
全員安全教育培訓 Safety education and training for all employees	持續搭建全員日常安全培訓體系:縱向包含總經理至一線員工,橫向包含安全、工程、廠站、管 網、客戶等強相關業務部門,截至報告期末共累計培訓人員5萬餘人次。 We continue to build a daily safety training system for all employees: vertically including the general manager to frontline employees, horizontally including security, engineering, stations, pipelines, customers and other strongly relevant business departments. As of the end of the reporting period, a total of more than 50,000 personnel have been trained.			

2023年,公司已覆蓋安全強相關人員約1.8 萬人。2023年,公司在安全培訓方面共投 入3,850.27萬港元,開展安全培訓772,641 小時,共計372,758人次參與,安全培訓覆 蓋率達100%。 In 2023, the Company covered approximately 18,000 personnel with strong safety relevance. In 2023, the Company spent a total of HK\$38.5027 million to carry out 772,641 hours of safety training, with a total attendance of 372,758 and a safety training coverage of 100%.

安全培訓績效 Performance of Safety Training						
指標	Indicators	單位	Unit	2023	2022	2021
安全培訓投入	Safety training investment	萬港元	HK\$'0,000	3,850.27	3,320.20	2,804.77
安全培訓總時長	Total hours of safety training	小時	hours	772,641	726,935	740,816
安全培訓參與人次	Attendance of safety training	人次	attendance	372,758	357,763	338.874
安全培訓覆蓋率	Safety training coverage	%	%	100	100	100

除安全培訓外,為確保員工的健康安全,華 潤燃氣為員工配備個人防護裝備,包括集 定位、視頻、通話、安全預警等多種功能於 一體的智能安全帽,確保搶修人員安全作 業。同時定期為全體員工安排健康檢查,面 向任職高危崗位的員工實行輪替和強制休 假,設置專職人員負責安全檢查,如季度安 全標兵和安全人員,以調動更多員工投身安 全建設工作。 Apart from safety training, in order to ensure the health and safety of employees, CR Gas equips employees with personal protective equipment, including smart helmets that integrate multiple functions such as positioning, video, calls and safety warnings to ensure the safe operation of emergency repair personnel and regularly arranges health examination for all employees, implements shift work and compulsory leave policies for employees in high-risk positions, and sets up dedicated personnel in charge of safety inspection, such as quarterly safety pacesetters and safety personnel, in order to motivate more employees to participate in safety efforts.

#### 重視應急管理工作

本集團高度重視應急管理工作,建立並完善應急管理體系,通過應急演練、公共應急管理。應用應急技術和裝備,實現應急管理能 力提升。

#### 建立應急管理體系

根據《生產安全事故管理制度》《華潤燃氣 EHS應急管理指引》等安全制度,我們建立 了四級應急預案體系,要求集團及各成員 單位制定綜合應急預案,包括《華潤燃氣安 全生產事故綜合應急預案》《生產安全事故 綜合應急預案》《突發環境事件綜合應急預 案》,以提高處置生產安全事故能力,及時 有效開展應急處置和救援工作。

#### **Paying Attention to Emergency Management Work**

The Group attaches great importance to emergency management work, establishes and improves the emergency management system, and strives to improve emergency management capabilities through emergency drills, public emergency management, and the application of emergency technologies and equipment.

#### Establishing an Emergency Management System

In accordance with the Management Policy for Production Safety Accidents (《生產安全事故管理制度》), Guidelines for EHS Emergency Management of CR GAS (《華潤燃氣EHS應急管理指引》) and other safety policies, we established a four-level emergency plan system, requiring the Group and member units to develop comprehensive emergency plans, including the Comprehensive Emergency Plan for Production Safety Incidents of CR GAS (《華潤燃氣安全生產事 故綜合應急預案》), Comprehensive Emergency Plan for Production Safety Incidents (《生產安全事故綜合應急預案》) and Comprehensive Emergency Plan for Environmental Emergencies (《突發環境事件綜合應 急預案》), to improve the ability to handle production safety accidents and carry out emergency response and rescue work in a timely and effective manner.

集團預案 The Group's emergency plans 公司綜合預案

Company-level comprehensive emergency plans

部門專項預案 Departmental emergency plans

班組現場處置預案 Project teams' on-site emergency response plans

> 圖:應急預案體系 Figure: Emergency Plan System

此外,為加強安全事故應急處置,我們建立 區域應急搶維中心、3大應急搶維基地,以 及271個應急搶維隊,並要求區域公司成立 了由區域總經理擔任組長的應急處置工作 組,承擔事故隱患排查、輿情監控應對等工 作,力爭將事故影響與損失降到最低。 In addition, in order to strengthen the emergency response to safety incidents, we have established a regional emergency rescue and maintenance center, 3 major emergency rescue and maintenance bases, and 271 emergency rescue and maintenance teams, and require regional companies to establish an emergency response working group headed by the regional general manager, which undertakes the work of investigating hidden accident hazards, monitoring and responding to public opinions., striving to minimize the impact and losses of accidents.

#### 應急演練

華潤燃氣要求成員企業至少每三年聯合地方 政府有關部門進行一次綜合應急演練,每年 至少開展一次公司級專項應急演練,各班組 每月至少開展一次現場處置方案演練,不斷 檢驗應急預案可行性、完備性,提高人員應 急素質。2023年,華潤燃氣下屬各單位共 開展應急演練4,817次,其中安全生產月期 間,累計開展各類應急演練330餘次,參演 人數達1.3萬餘人。

#### Emergency Drills

CR Gas requires member companies to conduct comprehensive emergency drills in collaboration with relevant local government authorities at least once every three years, carry out company-level emergency drills at least once a year, and each unit conduct an onsite disposal plan drills at least once a month to continuously test the feasibility and completeness of emergency plans and improve the emergency response quality of personnel. In 2023, the subordinate units of CR Gas carried out a total of 4,817 emergency drills. During the Safe Production Month, more than 330 emergency drills were conducted, with a total attendance of over 13,000.

#### 案例:「以演促練<sup>,</sup>以練築防」 Case Study: "Promote Practice with Drills, and Build Defense with Practice"

2023年6月起,廈門、鎮江等區域公司聯合當地政府相關部門,開展了天然氣管道閥門洩漏應急搶險、LNG儲配站洩 漏搶險、消防應急搶險等形式多樣的應急演練活動,讓員工熟悉應急響應程序,了解安全逃生出口和避災路線,切實 有效地提高員工自救互救能力和企業安全生產事故應急處置能力,為保障燃氣安全生產運行奠定了基礎。

Since June 2023, Xiamen, Zhenjiang and other regional companies have joined forces with relevant local government departments to carry out various emergency drills such as emergency rescue of natural gas pipeline valve leakage, LNG storage and distribution station leakage rescue and fire emergency rescue to familiarize employees with emergency response procedures, understand the safe escape exits and disaster avoidance routes, effectively improve employees' self-rescue and mutual rescue capabilities and the Company's emergency response capabilities for production safety accidents, laying a foundation for ensuring the safe production and operation of gas.



#### 公共應急管理

我們建立完備的公共應急管理機制。在廈 門,我們與市公共安全管理領導小組辦公室 緊密合作,共享「雪亮工程」中的1,000多個 視頻監控資源,以識別並管控第三方施工對 燃氣管道安全的影響。在成都,我們推行網 格化安全管理,與當地政府網格化管理實現 分級對接,確保燃氣安全和應急管理能深入 到物業、社區、學校等基層單位。

#### Public Emergency Management

We have put in place a well-established public emergency management mechanism. In Xiamen, we collaborated with the Xiamen Public Safety Management Leading Group Office to gain access to the video resources of over 1,000 video surveillance points under the "Sharp Eye Project" to identify and control the impact of the third-party construction on gas pipeline safety. In Chengdu, we carried out gridlike safety management and collaborated with the local government on grid-like management at different levels to integrate gas safety and emergency management into grassroots units such as properties, communities and schools.
#### 應急技術和裝備

華潤燃氣根據各成員企業的業務特點和實際 需要,鼓勵成員企業不斷加大應急裝備的 投入,配備行業內先進的燃氣應急裝備,如 採用雙封雙堵工藝、配置移動應急撬等方 式,持續提升成員企業的應急處置能力。

#### 創新安全新技術

華潤燃氣以先進技術賦能安全高效運營,通 過各類安全和業務信息化系統,實現智慧安 全運營。

- ➤ 安全管理系統:打通跨業務系統的隱患處理,實現安全管理系統集中派單,集中反饋,完成隱患全閉環管理。並且通過分類梳理上千條檢查標準支持場景式使用,實現全過程規範化安全檢查。
- 工程管理系統:利用物聯網、5G等新 技術手段實現焊機監控、自動生成竣 工資料等新功能,實現工程各個環節 精準管控,有效提升現場施工作業安 全監管能力。
- > 雲地理信息系統:作為行業內首款雲端部署的地理信息系統,採用北斗定位、現場自動成圖等智能測繪技術, 解決了一線管道數據採集效率低的痛點,為後續在役管網的智能化仿真、 巡檢、調度指揮等奠定了基礎。

#### **Emergency Technology and Equipment**

According to the business characteristics and actual needs of member companies, CR Gas encourages them to continuously increase investment in emergency equipment, equip themselves with advanced gas emergency equipment in the industry, such as using double sealing and double blocking technology, and configuring mobile emergency skids, and constantly improve their emergency response capabilities.

#### Innovation of New Safety Technology

CR Gas empowers safe and efficient operations with advanced technology and achieves smart and safe operations through various security and business information systems.

- Safety Management System: Open up the hidden hazards processing across business systems to realize the centralized order dispatch and feedback of the safety management system, and complete the full closed-loop management of hidden hazards, also support scenario-based use by classifying and sorting out thousands of inspection standards to achieve standardized safety inspections throughout the process.
- Engineering Management System: Using new technologies such as the Internet of Things and 5G to realize new functions such as welding machine monitoring and automatic generation of completion data, to achieve precise control of all aspects of the project, and effectively improve the safety supervision capabilities of on-site construction operations.
- Cloud Geographic Information System: As the first clouddeployed geographic information system in the industry, it adopts Beidou positioning, on-site automatic mapping and other intelligent surveying and mapping technologies, which solves the pain point of low efficiency in data collection of first-line pipelines and lays a foundation for the subsequent intelligent simulation, inspection, dispatching and commanding of in-service pipelines.

- 易作業巡檢系統:開展用戶安檢和隱 患整改的全流程智慧管理,實現巡檢 計劃完成率提升至95%,第三方施工 工地發現率提升至90%,管網及設施 隱患發現率提升至95%。
- 數據採集監控系統:集成監測設備、 視頻監控、激光雲台等監控信息,通 過對閾值和變化率報警分級管理,極 大提高了信息監控和報警處置效率。 同時系統支持遠程閥控功能,及時保 障現場安全。
- 高精準洩漏檢測系統:通過高精準檢 測車和天眼鐵塔等第三方視頻監控系 統等先進設備的應用,配合易巡檢和 安全管理系統,大幅提高洩漏檢測效 率和質量。
- ▶ 智慧燃氣安全監控平台:接收管道氣 及液化氣用戶洩漏報警器遠傳數據, 當濃度超過上限後,會通過彈窗及聲 音報警並推送手機短信和APP消息提 醒等通知用戶。
- 工商安檢系統:完成下屬企業的全面 普及,提高下屬企業在工商客戶隱患 排查整治方面的工作效率和質量,促 進了客戶端用氣安全風險的有效管控。

- Easy Inspection System: Carry out the whole-process intelligent management of user safety inspection and hidden danger rectification, increasing the completion rate of inspection plans to 95%, the discovery rate of the third-party construction sites to 90%, and the discovery rate of hidden dangers in pipelines and facilities to 95%.
- Supervisory Control and Data Acquisition: Integrate monitoring equipment, video surveillance, laser PTZ and other monitoring information, and greatly improve the efficiency of information monitoring and alarm processing through hierarchical management of thresholds and change rate alarms. At the same time, the system supports remote valve control function to ensure on-site safety in a timely manner.
- High-precision leak detection system: Through the application of advanced equipment such as high-precision detection vehicles and third-party video surveillance systems such as Sky Eye Tower, combined with the easy inspection and safety management systems, the efficiency and quality of leak detection can be greatly improved.
- Smart gas safety monitoring platform: Receive remote data from leak alarms of pipeline gas and liquefied gas users. When the concentration exceeds the upper limit, it will notify users through pop-up windows and sound alarms, and send mobile phone text messages and APP message reminders.
- Industrial and commercial security inspection system: Complete the comprehensive popularization of subordinate enterprises, improve the work efficiency and quality of subordinate enterprises in the investigation and rectification of hidden dangers for industrial and commercial customers, and promote the effective management and control of gas safety risks at customer side.

居民安檢系統:完成下屬企業的全面 普及,終端支持拍照水印生成、居民 安檢現場欠費、保險信息提醒;安檢 片區圖形化、網格化管理;支持安 檢、隱患及隱患派工、隱患處理流水 賬卡片式記錄;人員上下班打卡,工 作人員定位功能。

未來,華潤燃氣將持續專注於新技術的研發 與實施,不斷推出創新的安全產品,以確保 所有利益相關方的健康與用氣安全得到全面 保障。

#### 普及安全知識

華潤燃氣積極組織各類安全教育活動,包括 觀看安全教育片、學習安全知識、開展「安 全反思日」「安全生產月」活動,以及「每日 安全」活動等,鼓勵員工與公司共同守護職 業健康安全。

我們始終將公眾用氣安全放在首位,結合年 度安全宣傳計劃及入戶安全檢查計劃,積極 聯合政府監管部門,開展多樣化、線上線下 相結合的燃氣安全宣傳活動,推動燃氣安全 宣傳進企業、進農村、進社區、進學校、進 家庭,持續向員工和廣大公眾傳播與普及燃 氣安全知識,以提高公眾的安全意識和應對 突發情況的處置能力。 Resident security inspection system: Complete the comprehensive popularization of subordinate enterprises. The terminal supports photo watermark generation, on-site resident security inspection arrears and insurance information reminders; graphical and grid management of security inspection areas; support running card-type recording of security inspection, hidden dangers and hidden dangers personnel dispatch, and hidden dangers handling; personnel clocking in and out, staff positioning function.

In the future, CR Gas will continue to develop and apply new technologies and continuously launch innovative safety products to ensure the health and gas safety of all stakeholders are fully protected.

#### Popularizing Safety Knowledge

CR Gas conducts various safety education activities, such as watching safety education films, learning safety knowledge and conducting "Safety Reflection Day", "Safe Production Month" and "Daily Safety", to encourage employees to work with the Company to protect occupational health and safety.

We always put public gas safety in the first place, and according to our annual safety publicity plan and on-site safety inspection plan, we actively collaborate with government regulatory authorities to carry out gas safety publicity activities for the public in various forms via online and offline channels, advance the gas safety publicity into companies, rural areas, communities, schools and families, constantly disseminate gas safety knowledge to employees and the public, so as to enhance the safety awareness and emergency response capacity of the public.

# 案例:開展「人人講安全、個個會應急」安全生產月活動 Case Study: Carry out the Safe Production Month Activity of "Everyone Pays Attention to Safety and Everyone Knows How to Respond to Emergency"

2023年6月1日,華潤燃氣組織召開了2023年EHS委員會擴大會議暨安全生產月活動啟動會。安全生產月期間,各區 域公司、成員企業通過專題研討、總經理講安全課、集中宣講等多種形式組織開展宣貫學習1,100餘次,覆蓋3.8萬餘 人,牢固樹立安全紅線意識。

On 1st June 2023, CR Gas organized and held the 2023 EHS Committee Expanded Meeting cum the Kick-off Meeting of Safe Production Month Activity. During the Safe Production Month, regional companies and member enterprises organized more than 1,100 publicity activities in various forms such as special seminars, safety lectures by general managers and centralized publicity, covering more than 38,000 people, to firmly build the safety redline awareness.

同時,我們利用主題海報、橫幅等線下方式,以微信公眾號、微網廳、微博、短視頻等線上媒體,開展形式多樣的燃氣安全宣講和科普活動,累計近700場宣講活動,覆蓋5.1萬人次。

At the same time, we used offline methods such as themed posters and banners, and online media such as WeChat public accounts, Weiwangting, Weibo, short videos, etc. to carry out various forms of gas safety publicity and science popularization activities, with a total of nearly 700 publicity activities, covering 51,000 attendences.



圖:濟寧公司開展安全大講堂 Picture: Jining Company holds safety lecture



圖:廈門公司組織社區小朋友安全參觀

Picture: Xiamen Company organizes safety visits

for community children

圖:平潭公司進校園安全宣傳 Picture: Pingtan Company organizes safety publicity in campus

圖:相關方警示教育培訓 Picture: Warning education and training for stakeholders

# 榮譽及績效表現

華潤燃氣在安全生產方面持續努力,榮獲了 諸多榮譽獎項。我們將繼續堅守安全生產 的初心,以實際行動保障每一位員工及相關 方的安全,實現生產流程的每個環節安全無 憂。

#### 榮譽獎項

我們多次榮獲「香港綠色企業大獎一超卓安 全環保健康獎金獎」,多家下屬公司也榮獲 了「安全生產示範單位」「安全生產先進單 位」「安全明星企業」「'安康杯'競賽活動先進 集體」等榮譽稱號。

#### **Accolades and Performance**

CR Gas has made continuous efforts in safety production and won many accolades and awards. We will continue to adhere to our original intention of safe production, take practical actions to safeguard the safety of every employee and stakeholder, and ensure safety in every aspect of the production process.

#### Accolades and Awards

We won the "Hong Kong Green Awards – Environmental, Health and Safety Award – Gold" for multiple times, and a number of our subordinate companies also received honorary titles such as "Production Safety Demonstration Unit", "Advanced Unit for Production Safety", "Safety Star Enterprise", "Advanced Unit of the Ankang Cup Competition" and etc.

績效表現	Performa					
指標	Indicator	單位	Unit	2023	2022	2021
安全生產投入	Investment in production safety	萬港元	HK\$'0,000	101,403	94,515	70,645
安全應急演練次數	Number of safety emergency drills	次	drills	4,817	4,508	4,278
安全生產事故次數	Number of production safety accidents	次	accidents	0	0	0
員工傷亡人數	Number of employee casualties	人	persons	0	0	0
因工傷損失工作日數	Lost days due to work injury	天	days	0	0	0
安全管理人員持證人數	Number of licensed safety management personnel	٨	persons	4,766	4,456	3,513
註冊安全工程師人數	Number of registered safety engineers	Y	persons	1,089	1,057	1,003
損失工作日事故率(LTIFR)-員工	Lost time injury frequency rate (LTIFR) of employees	%	%	0	0	0
損失工作日事故率(LTIFR)一承包商	Lost time injury frequency rate (LTIFR) of contractors	%	%	0	0	0

# 3.2 情系社區鄰里

華潤燃氣積極踐行央企社會擔當,始終懷揣 回饋社會、奉獻社會的使命感和責任感, 投身社會公益、鄉村振興和社區建設,修訂 《華潤燃氣權責運行手冊》《華潤燃氣對外捐 贈管理辦法》等內部制度指導愛心幫扶,以 自身力量推動社會進步。

# **3.2 CARING FOR COMMUNITY**

CR Gas actively fulfills its social responsibilities as a central stateowned enterprise. Upholding the mission and responsibility of giving back to society, CR Gas actively participates in charity undertakings, rural revitalization and community construction, and has revised internal policies, including the Operation Manual for Powers and Responsibilities of CR Gas (《華潤燃氣權責運行手冊》) and Management Measures for External Donations of CR Gas (《華潤燃氣對外捐贈管理辦 法》), to guide caring assistance and promote social progress with its own contribution.

#### **Devoting to Social Charity**

CR Gas takes an active part in charity undertakings and carries out charity activities through social donations, volunteer services, etc. to promote the development of economically disadvantaged areas; in terms of social emergency management, we establish and improve the mechanism to ensure stable operation under major emergencies and strive to improve our ability to cope with social emergencies to fully protect people's lives and property and maintain social security and stability.

In 2023, the Group provided volunteer activities with a total of 79,037 attendances, contributed a total of 264,237 hours.

# 投身社會公益

華潤燃氣積極參與公益事業,通過社會捐 贈、志願服務等方式開展公益活動,促進經 濟困難地區發展;在社會應急管理方面, 我們建立健全重大突發事件下穩定運行機 制,努力提升應對社會緊急事件處置能 力,保障人民群眾生命財產安全,維護社會 安全穩定。

2023年,集團累計提供員工志願活動 79,037人次,公益志願服務時長264,237小時。

# 案例:「微光計劃●小福燕」安全公益活動保障用氣安全 Case Study: Carrying out "Shimmering Light Program ● Little Blessing Swallows" Safety Public Welfare Activity to Ensure Gas Safety

2023年8月,華潤燃氣在福州開展「微光計劃•小福燕」安全公益活動,前往8個商業綜合體和5個居民小區開展「福燕」 到家送福氣——入戶安全檢查、「福燕」巡檐除隱患——管線巡查行動、「福燕」傳音講安全——燃氣安全知識宣講、 「福燕」銜泥築平安——不銹鋼金屬軟管免費換四項行動。此次活動累計巡檢11台調壓箱、71座閥井、204根立管、 3,531米管道,完成3,076戶安全隱患排查,免費更換不銹鋼金屬波紋軟管87條,為居民提供安全公益服務,進一步提 高燃氣設施運行安全性,確保用氣安全。

In August 2023, CR Gas launched the "Shimmering Light Program • Little Blessing Swallows" safety public welfare activity in Fuzhou, travelling to 8 commercial complexes and 5 residential communities to carry out four actions, including "Blessing Swallows" home security inspection, "Blessing Swallows" pipeline inspection to eliminate hidden dangers, "Blessing Swallows" gas safety knowledge publicity, "Blessing Swallows" free replacement of stainless-steel metal hoses for safety. During this activity, a total of 11 pressure regulating boxes, 71 valve wells, 204 risers, and 3,531 meters of pipelines were inspected, 3,076 households were inspected for potential safety hazards, and 87 stainless-steel metal corrugated hoses were replaced for free, providing safety public welfare services to residents and further improve the operation safety of gas facilities and ensure the safety of gas consumption.



圖:管線巡查 Picture: Pipeline inspection



圖:燃氣安全知識宣講 Picture: Gas safety knowledge publicity

# 案例:積石山縣抗震救災工作保障生命財產安全 Case Study: Participating in the Earthquake Relief in Jishishan County to Protect People's Lives and Property

2023年12月,甘肅省臨夏回族自治州積石山縣發生6.2級地震,華潤燃氣立即啟動應急預案,統籌安排震後隱患排查 工作,組織黨員幹部及潤燃先鋒隊,對場站、LNG液化工廠、燃氣管線、跨橋管線、河流穿越點等重點部位進行排 查,確保各項設施運作正常。截至12月19日,華潤燃氣在當地成立的物資採購及應急救援小組已捐贈20頂救災帳篷、 200條棉被等救援物資,出動4台搶險車輛,共有20名工作人員參與震後搶險救災工作。

In December 2023, a 6.2-magnitude earthquake hit Jishishan County, Linxia Hui Autonomous Prefecture, Gansu Province. CR Gas immediately launched an emergency plan, coordinated the post-earthquake hidden danger investigation work, organized Party members and cadres and the CR Gas Pioneer Team to conduct inspections at stations, LNG liquefaction plants, gas pipelines, cross-bridge pipelines, river crossing points and other key locations to ensure the normal operation of various facilities. As of 19th December, the local material procurement and emergency rescue team established by CR Gas had donated 20 disaster relief tents, 200 quilts and other relief materials, dispatched 4 emergency vehicles, and a total of 20 staff participated in the post-earthquake rescue and relief work.



圖:捐贈救援物資 Picture: Donation of relief supplies



圖:燃氣設施安全隱患排查 Picture: Gas facility safety hazard inspection

# 助力鄉村振興

華潤燃氣積極響應鄉村振興戰略,充分發揮 燃氣企業優勢,積極推進燃氣下鄉工程,佈 局農村管道燃氣基礎設施建設,提供清潔能 源供應保障,助力農村能源轉型發展。

#### **Supporting Rural Revitalization**

CR Gas actively responds to the strategy of rural revitalization, gives full play to the advantages of gas companies, proactively promotes the gas to the countryside project and lays out the construction of pipeline gas infrastructure in rural areas to guarantee clean energy supply and contribute to rural energy transformation and development.

# 案例:重慶燃氣萬城線、奉巫線燃氣管道工程項目保障農村能源安全 Case Study: Chongqing Gas Invested in Wancheng Line and Fengwu Line Gas Pipelines Projects to Ensure Rural Energy Security

重慶燃氣充分發揮重慶市天然氣供應保障主力軍作用,勇擔社會責任,積極投入萬城線、奉巫線建設工程,解決民 生需求。預計2024年6月開始準備工程驗收,實現重慶市管道天然氣縣縣通全域覆蓋,將給當地帶來清潔、安全、穩 定、經濟的天然氣能源供應保障,進一步優化全市能源結構,助力「雙碳」目標。安全可靠的管道天然氣供給保障,有 效降低當地群眾用氣成本,進一步提高人民群眾生活品質,為鄉村振興事業提供可靠的清潔能源支撐。

Chongqing Gas gives full play to its role as the main force in ensuring natural gas supply in Chongqing, and bravely assumes social responsibilities to actively invest in the construction projects of the Wancheng Line and Fengwu Line to meet people's livelihood needs. It is expected that the project will be ready for acceptance in June 2024, realizing the full coverage of pipeline natural gas in each county of Chongqing, which will bring clean, safe, stable and economical natural gas energy supply to the local area, further optimize the energy structure of the city, and contribute to the goal of "carbon peak and carbon neutrality". A safe and reliable pipeline natural gas supply guarantee can effectively reduce the gas cost for local people, further improve people's quality of life, and provide reliable clean energy support for rural revitalization.





圖:奉巫線完成管道鋪設 Picture: Pipeline laying completed for Fengwu Line

圖:施工人員安裝燃氣設備 Picture: Construction workers install gas equipment

#### 建設和諧社區

華潤燃氣充分發揮中央企業在保障和服務民 生中的主力軍作用,積極響應綠色發展理 念,推進綠色能源保供工作,以清潔安全綠 色的燃氣供應守護民生溫度,助力維護穩 定、和諧的社會秩序,推動和諧社區建設。

#### **Building Harmonious Community**

CR Gas gives full play to the main role of a central state-owned enterprise in ensuring and serving people's livelihood, actively responds to the concept of green development to promote green energy supply, protect people's livelihood with clean, safe and green gas supply, and help maintain a stable and harmonious social order to promote the construction of harmonious communities.

# 案例:隱患整治保安全,攻堅克難強擔當 Case Study: Remediating Hidden Dangers to Ensure Safety and Taking Responsibilities in Overcoming Difficulties

津燃華潤燃氣有限公司積極踐行「促進綠色發展,共創美好生活」的承諾,啟動全市戶內燃氣設施提升改造工作,截至 2023年12月底,409萬燃氣用戶表、閥、管、灶等戶內燃氣設施全部完成更新改造,改造率達95%,有效保障人民群 眾的生命財產安全。此次隱患改造工程在全國燃氣行業史無前例,創造了解決戶內燃氣安全問題的「天津經驗」,未來 將繼續堅守能源保供,服務百姓民生,扎實實踐「成為大眾信賴和喜愛的世界一流能源服務企業」的企業願景!

Jinran China Resources Gas Co., Ltd. actively fulfills its commitment to "promote green development and cocreate a better life" and launches the upgrading and renovation of indoor gas facilities in the city. As of the end of December 2023, it had upgraded and renovated all of the indoor gas facilities for 4.09 million gas users, including meters, valves, pipelines and stoves, with a renovation rate of 95%, effectively safeguarding the safety of people's lives and property. This hidden danger renovation project is unprecedented in the gas industry across China, creating "Tianjin experience" of solving indoor gas safety problems. In the future, we will continue to ensure energy supply to serve people's livelihood, and solidly practice the corporate vision of "a world-leading energy service enterprise trusted and loved by the public".



圖:施工整改現場 Picture: Construction rectification site



圖:收獲來自社區和居民的錦旗 Picture: Banner from the community and residents

# 深化環境管理 踐行低碳發展

# Deepening Environment Management and Practicing Low-carbon Development

華潤燃氣積極倡導和實施「綠水青山就是金山銀山」的理念,積極響應國家提出的「雙碳」戰略,建立健全環境管理體系,主動 應對氣候風險,把握氣候相關機遇,積極拓展綜合能源業務,攜手利益相關方共同建設綠色、低碳的未來。

CR Gas actively advocates and implements the concept of "limpid water and lush mountains are invaluable assets", proactively responds to China's "carbon peak and carbon neutrality" strategy, establishes a sound environmental management system, responds to climate risks in a proactive manner, grasps climate-related opportunities, and actively expands comprehensive energy business, so as to build a green and low-carbon future with stakeholders.

2023責任績效 2023 Responsibility Perfo

環保總投入 4,512.08 萬港元

Total environmental investment: HK\$45.1208 million

綜合能源消耗折算標煤總量

4.3779<sub>萬噸標準煤</sub> Total overall energy consumption</sub> (converted to standard coal): 43,779 tonnes of standard coal 環保培訓參與人次 221,597人次

Attendances in environmental protection training: 221,597

溫室氣體排放密度

0.0143<sub>噸二氧化碳當量</sub>/ 萬港元營業額 Greenhouse gas emission density: 0.0143 tonnes CO<sub>2</sub>e/ revenue of HK\$'0,000 新建項目執行環境和社會影響 評估的比率

100% Percentage of new projects subject to environmental and social impact assessment: 100%

SDGs













**9** INDUSTRY, INNOVATION AND INFRASTRUCTURE SUSTAINABLE CITIES AND COMMUNITIES

RESPONSIBLE CONSUMPTION







# 深化環境管理,踐行低碳發展 Deepening Environment Management and Practicing Low-carbon Development

# 4.1 環境保護管理

華潤燃氣持續完善環境管理體系,不斷加強 污染防治工作,確保所有業務活動都嚴格遵 循環保標準。同時,我們堅守保護生態環境 和生物多樣性的原則,推進水資源可持續管 理,積極宣貫綠色文化,讓環保理念深入人 心。

# 4.1 ENVIRONMENTAL PROTECTION MANAGEMENT

CR Gas continues to improve its environmental management system and strengthen pollution prevention and control to ensure that all business activities strictly comply with environmental protection standards. At the same time, we adhere to the principle of protecting the ecological environment and biodiversity, promote sustainable management of water resources, actively promote green culture, and make the concept of environmental protection cherished by more people.

#### 健全環境管理體系

本集團秉持綠色運營理念,建立健全環境管 理體系,積極推進環境管理體系認證,重視 突發環境事件的應對工作,不斷提升環保治 理水平。2023年「香港綠色企業大獎」頒獎 典禮在香港舉行,華潤燃氣憑藉在綠色環保 方面的優異突出表現,第五次榮獲「超卓環 保安全健康獎」金獎殊榮。

#### Improving Environment Management System

The Group adheres to the concept of green operation, establishes a sound environmental management system, actively promotes environmental management system certification, attaches great importance to the response to environmental emergencies, and continuously improves environmental governance levels. The award ceremony of "Hong Kong Green Awards 2023" was held in Hong Kong. CR Gas won the "Environmental, Health and Safety Award – Gold" for the fifth time by virtue of its outstanding performance in green environmental protection.



圖:榮獲香港綠色企業大獎「超卓環保安全健康獎」金獎

Picture: Won the Hong Kong Green Awards - Environmental, Health and Safety Award - Gold

#### 環境管理體系推進

我們恪守國家及運營所在地的環境法律法 規,依據ISO 14001環境管理體系等國際標 準,制定並持續更新《華潤燃氣全面做好生 態環境保護工作方案》《節能減排管理制度》 《用水、用電、用油管理標準》等內部規範 制度。

由華潤燃氣EHS委員會統籌協調環境管理 的相關工作,定期召開工作會議,並對環保 工作進行全面部署和評估,確保各項措施得 到有效落實。此外,我們亦將能源節約、生 態保護等環保指標納入年度工作計劃,通過 EHS管理系統記錄分析月度環保數據,定期 跟蹤能源消耗、溫室氣體排放等情況。對於 異常情況,及時查找原因,制定並落實糾偏 措施,以實現環境管理的有效性、全面性。

#### 突發環境事件應對

為全力防範化解突發環境事件,本集團建立 了防災減災領導小組,全面負責企業的自 然災害防範工作,定期召開會議,研究部署 防災減災工作。通過明確應急指揮等各組別 職能歸屬,逐層分解至各成員公司基層崗 位,進而有效落實「總部一大區一區域」各 層級防災減災責任要求。報告期內,華潤燃 氣未發生任何涉及環境污染的突發事件及違 法違規事件。此外,我們全面排查薄弱環節 事故隱患,主要從人防、物防、技防三方面 開展工作。

#### Advancing the Environmental Management System

We abide by the environmental laws and regulations of the countries and regions where we operate, and we have developed and continuously updated a series of internal rules and regulations such as the Work Plan of CR Gas for Comprehensive Environmental Protection (《華潤燃氣全面做好生態環境保護工作方案》), Management Policy for Energy Conservation and Emission Reduction (《節能減排管理制度》) and Management Policies for the Use of Water, Electricity and Oil (《用水、用電、用油管理標準》) according to ISO 14001 environmental management system and other international standards.

The EHS Committee of CR Gas is responsible for coordinating environmental management efforts, holding regular working meetings, and conducting comprehensive deployment and evaluation of environmental protection work to ensure that all measures are effectively implemented. In addition, we also incorporate environmental indicators such as energy conservation and ecological protection into our annual work plan, record and analyze monthly environmental data through the EHS management system and keep track of energy consumption and greenhouse gas emissions on a regular basis. In case of abnormal fluctuations, we will find out the causes in time, and develop and implement corrective measures to achieve effective and comprehensive environmental management.

#### Responding to Environmental Emergency

In order to make every effort to prevent and resolve environmental emergencies, the Group has established a disaster prevention and reduction leading group, which is fully responsible for the Company's natural disaster prevention and holding meetings regularly to study and deploy disaster prevention and reduction work. By clarifying the functions of each group such as the emergency command, and decomposing them layer by layer to the grassroots positions of each group has effectively implemented the disaster prevention and reduction responsibility requirements at each level of "headquarters – major regions – regions". During the reporting period, there were no emergencies involving environmental pollution or violations of laws and regulations within CR Gas. In addition, we comprehensively investigate potential accident risks in vulnerable areas, mainly focusing on three aspects: manpower defense, material defense and technical defense.

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	防災應急工作三「防」 Three "Defenses" for Disaster Prevention and Emergency Work
	加強宣傳教育。借助潤工作公眾號、企業微信、電視、廣播、網絡等,普及防災減災知識,提高全員 災意識和應對能力。
	<ul> <li>Strengthen publicity and education. Popularize disaster prevention and reduction knowledge w the help of Run Work official account, corporate WeChat, TV, radio, Internet, etc. to enhance the disaster prevention awareness and response capabilities of all employees.</li> </ul>
人防	▶ 組織應急演練。2023年,華潤燃氣已累計開展防災應急演練465次,參加人次達3,215人。
Manpower defense	<ul> <li>Organize emergency drills. In 2023, CR Gas carried out 465 disaster prevention emergency drills, with 3,215 attendances.</li> </ul>
	▶ 建立應急救援隊伍。將防災主要職責納入搶險維修隊伍,並聯合政府、社區的專業應急救援隊伍開展 急救援知識和技能培養。
	Establish an emergency rescue team. Incorporate the main responsibilities of disaster preventi into the rescue and maintenance team, and work with professional emergency rescue teams fro the government and communities to develop emergency rescue knowledge and skills.
	➤ 儲備物資。根據警訊儲備必要的應急物資,如食品、水、藥品、帳篷等,以滿足災後初期的基本生活 求。
	Reserve supplies. Reserve necessary emergency supplies, such as food, water, medicine, tent etc., according to warning signals to meet basic living needs in the early post-disaster period.
物防	▶ 熟知政府和社區的避難場所。發生災害後員工能夠及時掌握避難場所信息,確保人身安全。
Material defense	<ul> <li>Get familiar with government and community evacuation sites. In the event of a disaster, employees are able to promptly get information about evacuation sites to ensure personal safe</li> </ul>
	▶ 做好備品備件管理。加強保供各項燃氣設備設施及配件的儲備,做好儲備庫管理。
	Do a good job in the management of spare parts and accessories. Strengthen the reserve of gas equipment, facilities and accessories to ensure the supply, and do a good job of reserve management.
	> 關注監測預警。實時關注官方機構衛星遙感、氣象觀測等手段,對可能發生的災害進行監測預警,為 急響應提供及時準確的信息支持。
	Pay attention to monitoring and early warning. Pay real-time attention to satellite remote sensin meteorological observations and other means of official agencies to monitor and provide early
技防 Technical	warning of possible disasters, providing timely and accurate information support for emergenc response.
defense	▶ 通訊保障。確保通訊暢通,為應急救援提供及時有效的通訊支持。配備防爆衛星電話,保障災後搶險 修及各過程通訊的暢通。
	<ul> <li>Communication guarantee. Ensure smooth communication to provide timely and effective communication support for emergency rescue. Equip explosion-proof satellite phones to ensure smooth communication during post-disaster emergency repairs and in other processes.</li> </ul>

#### 強化污染防治

為全面貫徹落實國家和地方政府的生態環境 保護政策要求,我們將綠色理念融入項目建 設及生產營運全流程,持續加強廢氣、廢棄 物、水資源管理,開展生態保護活動的同時 重視培育綠色文化,讓綠色環保的理念深入 人心。

#### 廢氣管理

本集團遵循《中華人民共和國大氣污染防治 法》《大氣污染物綜合排放標準》等法律法 規,制定廢氣管理的規章制度,明確廢氣排 放標準、管理要求和責任分工,並倡導各成 員公司淘汰老舊設備,改進生產工藝等,減 少廢氣的產生量和排放濃度。我們亦通過設 置圍欄圍墻、合理堆放及運輸建築材料、建 立灑水噴淋系統等措施,減少施工過程中的 揚塵、粉塵及廢氣排放。同時,我們大力推 進「煤改氣」「油改氣」等工程,以清潔高效 的天然氣替代煤炭、燃油等傳統能源進行供 能,以助力下游客戶污染廢氣排放。

#### **Strengthening Pollution Prevention and Control**

In order to fully implement the ecological and environmental protection policy requirements of the national and local governments, we integrate green concept into the entire process of project construction and production and operation, continue to strengthen the management of exhaust gas, waste and water resources, and carry out ecological protection activities while focusing on cultivating green culture to make the concept of green environmental protection cherished by more people.

#### Exhaust Gas Management

In compliance with laws and regulations including the Law of the People's Republic of China on the Prevention and Control of Air Pollution (《中華人民共和國大氣污染防治法》) and the Comprehensive Emission Standards for Air Pollutants (《大氣污染物綜合排放標準》), the Group formulates the rules and regulations for exhaust gas management to specify exhaust gas emission standards, management requirements and division of responsibilities, and advocates that each member company should phase out old equipment and improve production processes to reduce the amount of exhaust gas generated and its effluent concentration. We also reduce dust and exhaust emissions from construction through measures such as setting up fences, reasonably stacking and transporting building materials and establishing a sprinkler system. In addition, we vigorously promote "coal-to-gas" and "oil-to-gas" initiatives to replace coal, oil and other traditional energy sources with clean and efficient natural gas for energy supply to help downstream customers in reducing the exhaust gas emissions.

#### 廢棄物管理

我們秉持廢棄物「減量化、資源化、無害 化」的原則,遵照集團的內部政策對廢棄物 進行嚴格的管理,並設定了廢棄物管理目 標,通過環保審核等多種形式,充分保障環 境管理體系的有效運行。

#### Waste Management

By upholding the principle of "reduction, recycling and harmless treatment of waste", we strictly manage waste in accordance with the Group's internal policies, set targets for waste management, and ensure the effective operation of the environmental management system through environmental audits and other forms.

# 廢棄物管理目標 Targets for Waste Management

- > 有害廢棄物100%交由有資質的第三方公司妥善處置。
- > 100% of hazardous waste were disposed properly by qualified third party companies.
- > 2025年,無害廢棄物處置達標率達到並維持在100%。
- Enable the up-to-standard rate of non-hazardous waste disposal to reach and remain at 100% by 2025.

我們根據廢棄物的性質和危害程度,制定相 應的管理措施。對於危險廢棄物,依據國 家《危險廢棄物貯存污染控制標準》,要求 成員公司重點識別及管控危險廢棄物產生環 節,將清管廢渣、過濾濾液、過濾器濾芯等 危險廢棄物,交由第三方有資質的公司進行 回收或無害化處理。對於無害廢棄物,如生 活垃圾等,則由環保部門統一收集、及時清 運,保證日常生產運營中產生的所有固體廢 棄物均實現綜合利用或安全處置。 We formulate corresponding management measures based on the nature and hazard degree of waste. For hazardous waste, in accordance with the Pollution Control Standard for Hazardous Waste Storage (《危險廢棄物貯存污染控制標準》), we require member companies to focus on identifying and controlling production processes generating hazardous waste. All hazardous wastes such as pigging residue, filter filtrate and filter element are transferred to qualified third-party companies for recycling or harmless treatment, and non-hazardous wastes, such as domestic garbage, are handed over to the environmental sanitation authority for centralized collection and timely transportation, so as to ensure that all solid wastes generated in daily production and operations are comprehensively used or safely disposed of.

	廢棄物管理舉措 Measures for Waste Management
	<ul> <li>加強設備維護,延長使用壽命。</li> <li>Strengthen equipment maintenance to extend the service life.</li> </ul>
減量化 Reduction	<ul> <li>採用清潔工藝,有效減少生產過程中產生的固體廢棄物。</li> <li>Adopt cleaning processes to effectively reduce the solid waste generated during the production process.</li> </ul>
	<ul> <li>         ・推廣使用可回收包裝材料,減少不必要的廢棄物產生。     </li> <li>         Promote the use of recyclable packaging materials to reduce the unnecessary waste generated.     </li> </ul>
資源化 Recycling	<ul> <li>&gt; 鼓勵各成員公司建立廢氣燃氣管道、到期燃氣表回收利用機制,促進廢棄物資源化。</li> <li>&gt; Encourage member companies to establish a mechanism for recycling of waste gas pipelines and expired gas meters to promote the recycling of waste.</li> </ul>
無害化	<ul> <li>使用可降解包裝材料,盡可能減小包裝材料對環境的危害。</li> <li>Use biodegradable packaging materials to minimize the harm of packaging materials to the environment.</li> </ul>
Harmless treatment	<ul> <li>委託具有資質的第三方公司處理有害廢棄物,確保廢棄物不會對環境和人體健康產生負面影響。</li> <li>Entrust qualified third-party companies to handle hazardous waste to ensure that they will not have a negative impact on the environment and human health.</li> </ul>

#### 推進水資源管理

華潤燃氣制定並實施節水管理辦法,設定水 資源管理的目標,並且定期對供水和用水 設備進行檢查維護,通過優化用水系統設 計,避免「跑冒滴漏」現象。我們亦大力推 廣節水器具,如低流量水龍頭、節水型沖便 器等,減少不必要的水資源浪費。同時,我 們通過安裝雨水及生產用水(如消防噴淋) 回收裝置,實現了對雨水、生產用水的再利 用,進一步提升水資源的利用效率。

此外,對於業務運營產生的廢水,我們會設 置配套預處理設施,並依據國家制定的廢水 排放標準,確保廢水處理達標後排入市政污 水管網,避免造成水資源污染。

#### **Promoting Water Resource Management**

CR Gas formulates and implements water-saving management measures, sets water resources management goals, conducts regular inspection and maintenance of water supply and water equipment and optimizes the design of the water system to prevent "leakage and dripping". We also vigorously promote the application of waterefficient appliances, such as low-flow faucets and water-saving toilet flushers, to reduce unnecessary waste of water resources. At the same time, we have realized the reuse of rainwater and production water by installing rainwater and production water (such as fire sprinkler) recycling facilities, further improving the utilization efficiency of water resources.

In addition, the wastewater generated from business operations will be treated up to standard by pre-treatment facilities before being discharged into the municipal sewage network according to the national wastewater discharge standards, so as to avoid water pollution.

#### 水資源管理目標 Target for Water Resource Management

- ▶ 2025年,用水強度(萬元營業收入用水量)較2020年減少15%。
- Achieving a 15% reduction in water consumption intensity (water consumption per RMB10,000 of revenue) by 2025 compared with that of 2020.

#### 加強生態環境保護

本集團堅持生態保護與修復並舉,致力於實 現公司業務發展與自然環境的和諧共生。我 們遵循《中華人民共和國環境保護法》《中華 人民共和國生態環境保護法》等法律法規, 根據內部有關環境保護的規定,要求所有項 目在施工建設前務必完成環境影響和社會影 響評估報告,嚴格落實「三同時」1制度、竣 工環境保護驗收、環境影響後評價制度和環 境保護監督檢查制度,並且嚴格按照環境影 響評價的批復開展相關工作。

同時,我們積極開展生態修復工作,包括植 樹造林、生態保護區垃圾清理等,並通過開 展環保宣傳教育、參與環保公益活動,向員 工和社會公眾傳遞環保知識,為生態環境的 可持續發展做出積極貢獻。

#### 培育綠色低碳文化

為培育綠色文化,增強員工環保意識,本集 團通過組織各種環保主題活動、建設綠色辦 公環境、開展環保科普宣傳,積極倡導並傳 遞低碳環保、綠色生活理念。

#### Improving Ecological Environment Protection

The Group insists on both ecological protection and restoration, and is committed to achieving harmonious coexistence between the Company's business development and the natural environment. In compliance with laws and regulations such as the Environmental Protection Law of the People's Republic of China (《中華人民共和國 環境保護法》) and the Ecological Environment Protection Law of the People's Republic of China (《中華人民共和國生態環境保護法》) and according to internal regulations on environmental protection, all projects are subject to environmental and social impact assessment before construction, and strictly implement the "Three Simultaneities"<sup>1</sup> policy, the environmental protection completion acceptance, the postenvironmental impact assessment policy and environmental protection supervision and inspection policy for construction projects, and carry out relevant work in strict accordance with the approval of the environmental impact assessment.

At the same time, we actively carry out ecological restoration work, including tree planting, garbage cleaning at ecological reserves, etc., and pass on environmental protection knowledge to employees and the public by carrying out environmental protection publicity and education and participating in environmental protection public welfare activities, so as to make positive contribution to the sustainable development of the ecological environment.

#### Fostering Green and Low-carbon Culture

In order to cultivate a green culture and enhance employees' awareness of environmental protection, the Group actively advocates and promotes the concepts of low-carbon environmental protection and green living by organizing various activities under the theme of environmental protection, building a green office environment and carrying out environmental science publicity.

<sup>.</sup> 根據《環境保護法》規定,「三同時」指建設項目中防治污染的設施,應當與主體工程同時設計、同時施工、同時投產使用。

<sup>1</sup> According to the provisions of the Environmental Protection Law (《環境保護法》), "Three Simultaneities" refers that pollution prevention and control facilities in a construction project must be designed, constructed and put into operation simultaneously with the main construction works.

	綠色辦公 Green Office
節能減排 Energy conservation and emission reduction	<ul> <li>採用節能燈具,安裝節水器具。</li> <li>Adopt energy-efficient lamps and install water-efficient appliances.</li> <li>提倡辦公區域節能節水。</li> <li>Promote energy and water conservation in office areas.</li> </ul>
無紙化辦公 Paperless office	<ul> <li>減少紙張使用,降低廢紙對環境造成的污染。</li> <li>Reduce the use of paper to lower the environmental pollution caused by waste paper.</li> <li>鼓勵員工盡可能地採用電子文檔、電子郵件等數字化工具進行辦公,減少不必要的打印和複印。</li> <li>Encourage employees to use electronic documents, emails and other digital tools for office work as much as possible to reduce unnecessary printing and copying.</li> <li>推進線上會議與培訓,降低出差頻率。</li> <li>Promote online meetings and training sessions, and reduce the frequency of business trips.</li> </ul>
資源回收利用 Resource recycling	<ul> <li>定期收集辦公區域垃圾並進行分類處理。</li> <li>Collect office area garbage on a regular basis and make classification for disposal.</li> <li>鼓勵員工在日常生活中減少使用一次性塑料製品,提倡使用可回收的飲用杯、餐具等,減少塑料垃圾的產生。</li> <li>Encourage employees to reduce the use of disposable plastic products in their daily lives, and promote the use of recyclable drinking cups, tableware, etc. to reduce the generation of plastic waste.</li> </ul>
環保意識 Environmental awareness	<ul> <li>定期舉辦環保知識培訓、講座等,涵蓋節能減排等方面,幫助員工將環保理念融入到日常生活和工作中去。</li> <li>Regularly organize training and lectures sessions on environmental protection, covering aspects such as energy conservation and emission reduction, to help employees integrate environmental protection concepts into their daily life and work.</li> <li>在辦公場所張貼綠色小貼士,如調節空調溫度等。</li> <li>Post green tips, such as adjusting the temperature of air conditioners, in the office area.</li> </ul>



圖:2023年全國節能宣傳周海報 Picture: Posters of the 2023 National Energy Saving Publicity Week



圖:綠色小貼士報 Picture: Green tips

# 案例:組織開展全國節能減排周和低碳日活動 Case Study: Organizing and Holding National Energy Saving and Emission Reduction Week and Low-carbon Day Activities

2023年7月,華潤燃氣組織開展全國節能宣傳周和低碳日專題活動。我們以黨支部小組學習例會的形式,向黨員幹部 宣傳習近平書記關於生態環境保護的重要論述。同時,為營造節能低碳文化氛圍,各區域公司通過宣傳條幅、攝影作 品徵集、健步走比賽、知識競賽、舊衣回收活動,以及走村進鎮集中宣傳等途徑,引導員工及更多人提高節能環保意 識,踐行綠色生活方式。

In July 2023, CR Gas organized and held special activities of National Energy Saving Publicity Week and Low-Carbon Day. We carried forward Secretary Xi Jinping's important exposition on ecological and environmental protection to Party members and cadres in the form of regular group study meetings of Party branches. At the same time, in order to create an energy-saving and low-carbon cultural atmosphere, each regional company guided employees and more people to enhance their awareness of energy saving and environmental protection and to practice green lifestyles through publicity banners, photo collections, walking competitions, knowledge competitions, used clothes recycling activities, and intensive publicity in villages and towns.



圖:開展綠色低碳環保小衛士活動 Picture: Carry out green, low-carbon and environmental protection guardian activity



圖:「綠色低碳,節能先行」宣傳 Picture: "Green and Low Carbon, Energy Saving Goes First" publicity

# 4.2 邁向低碳之路

華潤燃氣堅持積極主動地應對氣候變化,通 過創新技術與能源效率改進,提升風險抵禦 能力,抓住低碳轉型機遇,為行業的可持續 發展貢獻力量。

#### 氣候變化風險與機遇

本集團持續關注氣候風險對公司業務的影響 評估,並計劃將氣候風險全面納入企業風 險管理流程,結合全球碳排放政策趨勢等維 度,定期審視已有的氣候風險庫及應對措 施,有序應對氣候變化影響。

# 4.2 A PATH TO LOW CARBON

CR Gas insists on proactively responding to climate change, improving its risk resistance capability through innovative technologies and energy efficiency improvements, seizing opportunities for low-carbon transformation, and contributing to the sustainable development of the industry.

#### **Climate Change Risks and Opportunities**

The Group continues to pay attention to the assessment of the impact of climate risks on the businesses of the Company, and plans to fully integrate climate risks into the risk management process of the Company and regularly review the existing climate risk pool and countermeasures based on dimensions such as the trend of global carbon emission policy, so as to respond to the impact of climate change in an orderly manner.

氣候變化風險及應對 Climate Change Risks and Countermeasures					
氣候變化相關風險 Risks related to climate change	潛在影響 Potential impact	應對措施 Countermeasures			
實體風險 Physical risks 急性風險 Acute risks ▶ ₪風 Typhoon	<ul> <li>破壞運營管網和設備設施,影響供氣穩定性。</li> <li>Destroy the pipelines, equipment and facilities in operation, and affect the stability of gas supply.</li> <li>可能導致供應鏈中斷,帶來業務中斷等問題, 涉及違約、賠償及法律責任。</li> <li>May lead to supply chain disruption, resulting in business interruption and other issues, involving breach of contract and be subject to compensation and legal liability.</li> <li>影響員工安全和生產環境,增加員工健康風險。</li> <li>Affect the safety of employees and production environment, and increase employee health risks.</li> </ul>	<ul> <li>優化管網設計及管材選用,加強設施抗災能力,提高抗風險等級。</li> <li>Improve pipeline design and pipeline material selection, strengthen facilities' disaster resistance, and improve risk resistance levels.</li> <li>實現多樣化供應來源,降低對單一地區的依賴</li> <li>Diversify supply sources to reduce dependence on a single region</li> <li>制定颱風等極端天氣應急預案及恢復計劃,確保員工安全和生產環境保護。</li> <li>Develop emergency plans and recovery plans for extreme weather such as typhoon to ensure employee safety and production environment protection.</li> </ul>			

氣候變化相關風險 Risks related to climate change	潛在影響 Potential impact	應對措施 Countermeasures
實體風險 Physical risks 慢性風險 Chronic risks 海平面上升 Sea level rise	<ul> <li>沿海地區受到淹沒的威脅,影響現有市場格局。</li> <li>Coastal areas are threatened by flooding, which will affect the existing market landscape.</li> <li>設施受淹可能導致生產中斷或資產損失,增加 設施維護和保護成本。</li> <li>Facilities flooding may result in production interruption or asset loss, increasing facility maintenance and protection costs.</li> </ul>	<ul> <li>開展海平面上升風險評估,識別受影響的設施和地區</li> <li>Conduct a sea level rise risk assessment to identify affected facilities and areas</li> <li>制定海平面上升的應對策略,如向高海拔地區轉移發展。</li> <li>Develop strategies to cope with sea level rise, such as shifting development to areas of higher altitudes.</li> </ul>
實體風險 Physical risks 慢性風險 Chronic risks 平均溫度上升 Rising average temperature	<ul> <li>增加熱浪、乾旱、火災等極端天氣事件的頻率 和強度。</li> <li>Increase the frequency and intensity of extreme weather such as heat wave, drought and fire.</li> <li>高溫影響生產效率和勞動力的健康。</li> <li>High temperature affects production efficiency and the health of the workforce.</li> <li>導致自然生態系統崩潰和生物多樣性喪失。</li> <li>Lead to the collapse of natural ecosystems and loss of biodiversity.</li> <li>冬季供氣設施的減少,降低燃氣需求。</li> <li>Decrease in gas supply facilities in winter reduces gas demand.</li> </ul>	<ul> <li>加強供應鏈的氣候適應能力。</li> <li>Strengthen the climate resilience of supply chains.</li> <li>實施應對措施,如設施通風和冷卻 設備。</li> <li>Implement response measures, such as facility ventilation and cooling equipment.</li> <li>開展/支持生態恢復項目,減緩全現 變暖對生態系統的影響。</li> <li>Carry out/support ecological restoration projects to mitigate the impact of global warming on ecosystems.</li> <li>探索多元業務模式,如綜合能源, 以平衡季節性需求變化</li> <li>Explore diversified business models, such as integrated energy, to balance seasonal demand changes</li> </ul>

氣候變化相關風險 Risks related to climate change	潛在影響 Potential impact	應對措施 Countermeasures		
轉型風險 Transition risks 政策與法規風險 Policy and regulatory risk	<ul> <li>環境信息披露方面的監管要求趨嚴,導致合規 成本增加。</li> <li>Regulatory requirements for environmental information disclosure have become stricter, leading to increased compliance costs.</li> <li>碳交易的價格波動也可能造成企業減排成本投 入的增加。</li> <li>Price fluctuations in carbon trading may also result in an increase in the costs of emissions reduction of enterprises.</li> <li>有效管理業務環境表現以確保合規,否則會面 臨訴訟風險。</li> <li>Effectively manage the environmental performance of business to ensure compliance, otherwise litigation risk will arise.</li> </ul>	<ul> <li>密切關注政策動向,積極參與行業 相關政策制定。</li> <li>Pay close attention to policy trends and take active part in the formulation of industry- related policies.</li> <li>投資於清潔技術和能源效率改進以 降低碳排放。</li> <li>Invest in clean technologies and energy efficiency improvements to reduce carbon emissions.</li> <li>與顧問就合規政策、程序進行審 查、諮詢,及時解決潛在訴訟風 險。</li> <li>Review and consult with consultants on compliance policies and procedures to address potential litigation risks in a timely manner.</li> </ul>		
轉型風險 Transition risks ↓ 技術風險 Technical risk	<ul> <li>加大節能減排技術的開發,會增加人力、資金 成本投入。</li> <li>Increasing the development of energy- saving and emission-reduction technologies will increase manpower and capital costs.</li> <li>數字化技術的探索與開發將帶來額外資金和人 力投入成本。</li> <li>The exploration and development of digital technologies will bring additional capital and manpower costs.</li> </ul>	<ul> <li>開展綠色低碳技術研究,與科研機構、高校合作。</li> <li>Carry out research on green and low-carbon technologies and cooperate with scientific research institutions and universities.</li> <li>推動數字化轉型,提高生產管理的智能化水平。</li> <li>Promote digital transformation and improve the intelligence level of production and management.</li> </ul>		

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氣候變化相關風險 Risks related to climate change	潛在影響 Potential impact	應對措施 Countermeasures		
轉型風險 Transition risks ↓ 市場風險 Market risk	<ul> <li>市場及下游客戶對綠色低碳能源解決方案需求 增加。</li> <li>The market and downstream customers have a growing demand for green and low- carbon energy solutions.</li> </ul>	<ul> <li>         推廣包含可再生能源多種清潔能源         融合的供能模式     </li> <li>         Promote an energy supply model         that integrates renewable energy         and multiple clean energy         </li> </ul>		
轉型風險 Transition risks ↓ 商譽風險 Reputational risk	<ul> <li>未能達成減排承諾,或出現重度排放等負面事件,可能導致企業聲譽、品牌形象受損。</li> <li>Failure to meet emission reduction commitments or the occurrence of negative events such as severe emissions may damage the corporate reputation and brand image.</li> </ul>	<ul> <li>完善自身碳排放管理架構,定期檢 視減排進程並對外披露。</li> <li>Improve our own carbon emission management structure, regularly review the emission reduction process and disclose to the public.</li> </ul>		

與此同時,氣候變化亦會為企業帶來新的發 展機遇,我們積極探索新技術、新模式,積 極擁抱低碳轉型帶來的清潔能源發展機遇。 Meanwhile, climate change will also bring new development opportunities for enterprises. We actively explore new technologies and new models, and embrace the opportunities for clean energy development brought by low-carbon transformation.

氣候相關機遇	氣候變化機遇 Climate Change Opportunities 機遇描述
Climate-related opportunities	Description of opportunities
資源效率 Resource efficiency	<ul> <li>借助低能耗設備、研發節能工藝技術等措施,提高業務運營過程中的能源使用效率,將有效降低運營成本,增強企業競爭力。</li> <li>Improving energy efficiency in business operations through measures such as using low- energy equipment, research and development of energy-saving process technologies will effectively reduce operating costs and enhance corporate competitiveness.</li> <li>拓展清潔能源開發與使用、綠電採購等,有助於降低能源成本。</li> <li>Expanding clean energy development and usage, green power procurement, etc. will help reduce energy costs.</li> </ul>
產品和服務 Products and services	<ul> <li>立足城燃業務,積極布局綜合能源服務,探索可再生能源與燃氣的整合模式將有機會提供新的業務增長點。</li> <li>Based on the city gas business to actively deploy comprehensive energy services and explore the integration model of renewable energy and gas will have the opportunity to provide new business growth points.</li> </ul>

## 氣候變化行動

華潤燃氣將「碳達峰、碳中和」目標納入集 團發展規劃,建立雙碳工作小組,制定減排 目標,同時從甲烷排放管理、清潔能源等方 面,降低自身碳排放,並就碳捕獲與封存技 術與外部機構進行深度合作與研發,為國家 實現雙碳目標貢獻力量。

#### **Climate Change Action**

CR Gas has incorporated the "carbon peak and carbon neutrality" goal into the Group's development plans, established a dualcarbon working group, and set emission reduction targets, and has reduced its own carbon emissions from the aspects of methane emission management and clean energy, and has conducted in-depth cooperation and research and development with external institutions on carbon capture and storage technology, with a view to contributing to the achievement of China's goals of carbon peak and carbon neutrality.

#### 減排目標

為加快華潤燃氣綠色低碳轉型和高質量發 展,依據國家十四五規劃及自身發展,本集 團制定了綠色低碳轉型發展的主要目標。

- 到2025年,綠色低碳項目實施和綠色 低碳技術研發、推廣應用取得積極進 展,華潤燃氣萬元營業收入可比價綜 合能耗比2020年下降10.00%,二氧 化碳排放強度比2020年下降10%。
- 到2030年,華潤燃氣全面綠色低碳轉 型取得顯著成效,萬元營業收入可比 價綜合能耗、萬元增加值可比價綜合 能耗、二氧化碳排放強度大幅下降, 碳排放量預計於2035年整體達到峰 值。

除長期目標外,我們亦制定了年度短期減排 目標,持續推動減排行動,將節能減排目標 分解至各級子公司,並對目標達成情況進行 跟蹤,將結果納入年度績效指標,實現對能 源消耗的嚴格管理。

#### **Emission Reduction Targets**

In order to accelerate the green and low-carbon transformation and high-quality development of CR Gas, the Group has formulated the main targets of green and low-carbon transformation and development in accordance with the National 14th Five-Year Plan and its own development.

- By 2025: Make progress in the implementation of low-carbon projects and the development, promotion and application of green technologies to cut the overall energy consumption per RMB10,000 of revenue (at comparable price) by 10.00% compared with that of 2020 and lower the carbon dioxide emission intensity by 10% compared with that of 2020.
- By 2030: Achieve remarkable results in the comprehensive green transformation of CR Gas with a significant decline in overall energy consumption per RMB10,000 of revenue (at comparable price), overall energy consumption per RMB10,000 of value added (at comparable price), carbon dioxide emission intensity; carbon emissions are expected to peak by 2035.

In addition to long-term goals, we have also set annual short-term emission reduction targets, continue to promote emission reduction actions, break down energy conservation and emission reduction targets to subsidiaries at all levels, track the achievement of targets, and incorporate the results into annual performance indicators to achieve strict management on energy consumption.

				2023年目標 Target for 2023	2024年目標 Target for 2024	2025年目標 Target for 2025	2023年完成情況 Achievement for 2023
指標	Indicator	單位	Unit	較2020年下降幅度 Decrease compared with that of 2020			
萬元營業收入可比 <i>價綜</i> 合能耗	Overall energy consumption per 10,000 of revenue (at comparable price)	噸標煤/ 萬港元	tonnes of standard coal/HK\$'0,000	6.00%	8.00%	10.00%	23.73%
二氧化碳排放強度	Carbon dioxide emission intensity	噸/萬港元	tonnes/HK\$'0,000	6.00%	8.00%	10.00%	50.17%

#### 碳排放管理

本集團致力不晚於2035年將碳管理水平提 升至世界一流水準。為此,我們制定了《華 潤燃氣低碳發展考核評價辦法》《華潤燃氣 碳資產統計與報送制度及碳資產管理辦法》 等制度,規範碳排放管理的相關工作。

2023年,我們成立了華潤燃氣碳達峰和碳 中和工作小組,形成以安全管理部總經理為 組長,高級主管為副組長,戰略投資部、綜 合能源部等相關部門人員為配合支持的碳排 放管理機構。該工作小組負責制訂並組織落 地實施華潤燃氣雙碳工作規劃,跟蹤研究 與碳相關的交易、捕集、儲存、減排等事 項,包括組織參與碳相關的管理和技術等活 動。

#### Carbon Emission Management

The Group aims to improve carbon management to the worldclass standard by 2035. To this end, we have developed relevant policies, including the Measures for Performance Evaluation of Lowcarbon Development of CR Gas (《華潤燃氣低碳發展考核評價辦法》), and Carbon Asset Statistics and Reporting Policy and Carbon Asset Management Measures of CR Gas (《華潤燃氣碳資產統計與報送制度 及碳資產管理辦法》), to regulate the work related to carbon emission management.

In 2023, we established a carbon peak and carbon neutrality working group of CR Gas, forming a carbon emissions management agency with the general manager of the Safety Management Department as the team leader, senior executives as the deputy leader, and cooperated and supported by personnel from the Strategic Investment Department, Integrated Energy Department and other relevant departments. This working group is responsible for formulating and organizing the implementation of the dual-carbon work plan of CR Gas, tracking and researching matters related to carbon transaction, capture, storage and emission reduction, including organizing and participating in carbon-related management and technology activities. 未來,我們將從政策規章制度體系、組織管 理機構建設、財務管理體系建設、信息管理 平台建設、支持服務體系建設和監督管理機 制等方面持續完善碳排放管理,進一步梳理 範圍三適配類別,逐步開展制定底層活動資 料收集清單,為聯交所全面合規披露奠定 基礎,建立長效化碳核查和碳資產管理機 制,着力提升碳資產管理能力。 In the future, we will continue to improve carbon emission management from the aspects of policy and regulations system, organization management structure construction, financial management system construction, information management platform construction, support service system construction and supervision and management mechanism, etc., further sort out suitable categories under scope 3, progress with the formulation of an underpinning activity information collection list to lay the groundwork for full compliance of disclosure under the Stock Exchange, and establish long-term carbon verification and carbon assets management mechanism and strive to improve our carbon asset management capabilities.

# 案例:成都燃氣積極探索碳中和業務 Case Study: Chengdu Gas Actively Explores Carbon Neutrality Business

華潤燃氣所屬的成都燃氣積極探索碳中和業務。作為四川環交所「碳中和服務商」獲得2023年度成都市「碳惠天府」機 制建設先進單位稱號,並向第31屆世界大學生夏季運動會會捐贈2萬噸碳減排量,助力成都大運會綠色低碳賽事成功 舉辦。2023年,累積完成473筆碳中和業務,累積銷售32,947.05噸碳減排量。

Chengdu Gas, a subsidiary of CR Gas, actively explores carbon neutrality business. As a "carbon neutrality service provider" of the Sichuan Environmental Exchange, Chengdu Gas was awarded the title of Advanced Unit in the "Carbon Benefits Tianfu" Mechanism Construction of Chengdu in 2023, and donated 20,000 tonnes of carbon emission reductions to the 31st World Summer Universiade to contribute to the success of the green and low-carbon event of Chengdu Universiade. In 2023, Chengdu Gas completed a total of 473 carbon neutrality businesses and sold 32,947.05 tonnes of carbon emission reductions.

#### 甲烷控排

華潤燃氣密切關注甲烷控排的相關標準和前 沿技術,作為中國油氣企業甲烷控排聯盟的 成員單位,我們致力於降低運營過程中的能 源消耗和輸配系統的甲烷逸散,最大限度降 低業務開展過程的碳排放。

#### Methane Emission Control

CR Gas pays close attention to the relevant standards and cuttingedge technologies for methane emission control. As a member of the China Oil and Gas Enterprises Methane Emission Control Alliance, we are committed to reducing energy consumption during operations and methane escape from the transmission and distribution system, minimizing carbon emissions during business operations.

# 甲烷管理目標 Methane Management Target

- > 2025年實現生產過程中的甲烷排放強度降低至0.25%以下。
- > Reduce methane emission intensity in production to below 0.25% by 2025.

為降低業務開展過程中的碳排放,我們從輸 配端、用戶端兩方面對甲烷逸散進行系統管 控。 In order to reduce carbon emissions during business operations, we control methane escape from transmission and distribution facilities and user terminals in a systematical manner.

Methane E	輸配端和用戶端的甲烷逸散管控 scape Control from Transmission and Distribution Facilities and User Terminals
	在LNG、CNG場站設計環節,融入閃蒸汽(BOG)回收、排污回收等工藝設計,採用不停輸技術,實現場站段系統零排放或微排放。
	In the design of LNG and CNG stations, we incorporate BOG recycling, sewage recycling and other processes, and adopt continuous transmission technology to achieve zero or micro emissions of the system in the stations.
소 포기내가 전자 만만	加強調壓設施維保,採用在線洩漏監測等智慧化手段,配備高精度甲烷檢測儀器,提高甲烷逸 散預警能力。
輸配端管控 Control over transmission and distribution facilities	Reinforce the maintenance of pressure regulating facilities, apply intelligent approaches such as online leak monitoring and put in place high-precision methane detection instruments to improve the ability of detecting and warning against methane escape.
	> 對所有運行場站的進出站壓力進行監控,並採用天眼、鐵塔等技術手段預防三方破壞。
	Monitor the incoming and outgoing pressure of all operating stations, and use technical means such as sky eyes and iron towers to prevent third-party damage.
	▶ 採用合適材質,包括不銹鋼、抗UV管材、PE管材等,加快老舊管網改造工作。
	Use appropriate materials, including stainless steel, anti-UV pipes, PE pipes, etc., to speed up the renovation of old pipelines.
	▶ 大力推廣灶具連接專用軟管、報警器、自閉閥等安全設備設施,杜絕用戶端燃氣逸散的發生。
	> Vigorously promote safety equipment and facilities such as special stove hoses, alarms
	and self-closing valves to prevent gas escape from user terminals.
用戶端管控	▶ 提高入戶安檢率,降低戶內洩漏發生情況。
Control over user terminals	<ul> <li>Increase the indoor safety inspection rate to reduce indoor gas leak.</li> </ul>
	採用激光檢測儀對戶外公共管道進行檢測,全力避免用戶端甲烷逸散的可能性。
	Use laser detectors to inspect outdoor public pipelines, in an effort to reduce the possibility of methane escape from user terminals.



#### 能源清潔轉型

華潤燃氣按照「立足城燃、面向終端」的業務總體定位,堅持渠道融合、業務協同、 多品創值,聚焦「園區、建築、交通」3大場 景,採用「分佈式光伏、分佈式能源、交通 充能」3種業務路徑,為用戶提供「綜合能 源產品」及「能源綜合服務」。報告期內,華 潤燃氣新簽約分佈式光伏項目98個,累計 項目數量達到168個,裝機規模達213.7兆 瓦,全年售電2,763.25萬千瓦時,助力下 游用戶實現碳減排達1.61萬噸;新投運充 電站61座,累計投運充電站232座,售電較 去年同期增長14.7%至3.1億度,助力下游 用戶實現碳減排達30.1萬噸。

#### Transition to Clean Energy

In accordance with the overall business positioning of "based on city gas business and oriented to terminals", CR Gas adheres to channel integration, business synergy and multi-product value creation, focuses on the 3 major scenarios of "parks, buildings and transportation", and adopts the 3 business paths of "distributed photovoltaic, distributed energy and transport charging" to provide users with "integrated energy products" and "comprehensive energy services". During the reporting period, CR Gas signed 98 new distributed photovoltaic projects, and the cumulative number of projects reached 168, with an installed capacity reached 213.7MW and the sales of electricity throughout the year of 27.6325 million kWh, enabling the downstream users to achieve a reduction in carbon emissions of 16,100 tonnes; 61 charging stations were newly put into operation, resulting in a total of 232 charging stations being put into operation; and the sales of electricity increased by 14.7% to 310 million kWh as compared with the same period of last year, enabling the downstream users to achieve a reduction in carbon emissions of 301,000 tonnes.

# 案例:江蘇甬金建設分佈式光伏項目 Case Study: Jiangsu Yongjin Constructed Distributed Photovoltaic Project

作為華潤燃氣最大分佈式光伏項目,江蘇甬金分佈式光伏項目於2023年開工建設,已於2024年2月9日並網發電。該 項目由南通華潤燃氣有限公司利用江蘇甬金金屬科技有限公司廠區約17萬平米屋頂,建設20兆瓦分佈式光伏發電系 統,所發電力主要供用戶使用,餘電上網,建成後年售電量2,066萬千瓦時,年減碳量1.7萬噸,具有較好的減排效益 及經濟效益。

As the largest distributed photovoltaic project of CR Gas, Jiangsu Yongjin's distributed photovoltaic project started construction in 2023 and was connected to the grid for power generation on 9th February 2024. This project is carried out by Nantong China Resources Gas Co., Ltd. using approximately 170,000 square meters of the rooftop space at the factory of Jiangsu Yongjin Metal Technology Co., Ltd. (江蘇甬金金屬科技有限公司) to build a 20 MW distributed photovoltaic power generation system, with the power generated mainly for the use of customers and the surplus power put on the grid. After completion, the annual electricity sales will be 20.66 million kWh, with an annual carbon reduction of 17,000 tonnes, which has good emission reduction and economic benefits.



圖:江蘇甬金分佈式光伏電站 Picture: Jiangsu Yongjin's Distributed Photovoltaic Power Station

# 案例:青島能源投資建設膠州灣海底天然氣管線 Case Study: Qingdao Energy Invested and Constructed the Jiaozhou Bay Submarine Natural Gas Pipeline

作為國內涉海距離最長的城市燃氣管線項目,膠州灣海底天然氣管線項目由青島能源華潤燃氣有限公司與中國石化集 團共同投資建設。該項目設計總輸氣能力每年36億方,打破用氣高峰氣荒困局,滿足青島居民未來20年用氣需求。項 目每年可替代煤炭消耗536萬噸,減少碳排放500萬噸,減少二氧化硫排放2.16萬噸,減少粉塵排放4,320噸,對於青 島市實現「十四五」節能減排目標等具有重要意義。

As a city gas pipeline project with the longest sea distance in China, the Jiaozhou Bay submarine natural gas pipeline project is jointly invested and constructed by Qingdao Energy China Resources Gas Co., Ltd. and Sinopec Group. The total designed gas transmission capacity of this project is 3.6 billion cubic meters per year, breaking the dilemma of gas shortage during peak gas consumption and meeting the gas needs of Qingdao residents in the next 20 years. The project can replace 5.36 million tonnes of coal consumption every year, reduce carbon emissions by 5 million tonnes, reduce sulfur dioxide emissions by 21,600 tonnes, and reduce dust emissions by 4,320 tonnes, which is of great significance for Qingdao to achieve the energy conservation and emission reduction goals of the "14th Five-Year Plan".



圖:膠州灣海底天然氣管線 Picture: Jiaozhou Bay Submarine Natural Gas Pipeline

此外,在自身運營層面,各成員企業採取各 類節能減排措施,在辦公、交通、建築等場 景中加大使用可再生能源的比例,有效減少 二氧化碳的排放總量及排放強度,逐步推動 華潤燃氣完成「雙碳」進程各項階段性任務。 In addition, at the operation level, member companies adopt various energy-saving and emission-reduction measures to increase the use of renewable energy in offices, transport, buildings and other scenarios, so as to effectively reduce the total volume and intensity of carbon dioxide emissions, and gradually promote the completion of the various phased tasks in the "carbon peak and carbon neutrality" process by CR Gas.

	加大使用可再生能源的比例 Increase the Use of Renewable Energy
	▶ 應用包括新能源電力、氫能在內的低碳能源。
冶石六语	<ul> <li>Apply low-carbon energy including new energy power and hydrogen energy.</li> </ul>
綠色交通 Green transport	公共領域全面推廣新能源汽車,推進充電樁、換電站、加氫站建設。
Green transport	<ul> <li>A 大领域主面推廣和能标几乎,推進冗电俗,探电站,加重如建成。</li> <li>Promote new energy vehicles in the public sector, and advance the construction of</li> </ul>
	charging piles, battery swap stations and hydrogen refueling stations.
綠色建築	▶ 辦公建築引入綠色電力供應。
Green building	Introduce green power supply in office buildings.

# 案例:重慶環保科技產業園打造「近零碳」園區 Case Study: Chongqing Environmental Protection Technology Industrial Park Builds a "Near-Zero Carbon" Park

重慶環保科技產業園採用天然氣分佈式能源、太陽能可再生能源、智慧能源管理平台實現產業園低碳排放,並結合遠 期高效儲能、綠電交易、重慶「碳惠通」項目自願減排量等,滿足重慶市「近零碳產業園」碳減排要求,實現園區近零排 放。該項目低碳階段每年減少二氧化碳排放710.91噸,近零碳階段預估每年減少二氧化碳排放量1,082.35噸,零碳階 段預估每年減少二氧化碳排放量2,705.88噸,碳減排量最終達到40%。

Chongqing Environmental Protection Technology Industrial Park adopts natural gas distributed energy, solar renewable energy and smart energy management platform to achieve low carbon emissions in the industrial park, and combines long-term efficient energy storage, green electricity trading, and voluntary emission reduction of Chongqing "Carbon Credit Platform" project etc., to meet the carbon emission reduction requirements of "near-zero carbon industrial park" in Chongqing and achieve near-zero emissions in the park. The project reduces carbon dioxide emissions by 710.91 tonnes per year in the low-carbon phase, expected 1,082.35 tonnes per year in the near-zero-carbon phase, and expected 2,705.88 tonnes per year in the zero-carbon phase, resulting in a 40% reduction in carbon emissions.

#### 低碳技術研究

華潤燃氣積極開展低碳技術研究,從能源智 能管理平台開發、新能源業務拓展、高效節 能設備研究、碳捕獲與封存技術等方面與科 研院校和相關企業進行深度合作與研發,致 力於在生產過程中採用低碳技術,減少溫室 氣體排放。

#### Low-carbon Technology Research

CR Gas actively carries out research on low-carbon technologies and conducts in-depth cooperation and R&D with scientific research institutions and related enterprises in aspects such as the development of smart energy management platforms, the expansion of new energy business, research on energy-efficient equipment, and carbon capture and storage technology, and is committed to adopting low-carbon technologies in the production process to reduce greenhouse gas emissions.

- 城市燃氣供應系統掺氫研究:研究既 有城市燃氣供應系統在不改造末端燃 具且保證性能與安全的前提下的掺氫 的比例範圍,覆蓋城市燃氣供應系統 的各個環節,包括管道、接口、洩漏 檢測、安全運行等方面,將形成一套 掺氫後的技術解決方案。
- 天然氣高效利用:針對不同用戶場景的天然氣高效利用解決方案,通過燃氣冷/熱/電聯供機組、燃氣全預混冷凝模塊鍋爐、燃氣熱泵等設備,實現熱能的高效利用。該方法下綜合能源利用效率可提高到80%以上,相較傳統方式節能率達到30%以上。
- 探索天然氣深化利用:緊密跟進液態 金屬催化天然氣裂解制氣和石墨烯技 術創新示範項目,孵化綠色制氣&碳 先進技術。
- 耦合可再生能源:研究應用天然氣+ 可再生能源的多能互補、協同耦合的 能源供應方式,優化多能系統配置及 運營策略,在節能降碳、降本增效的 同時,提高能源保障的安全性。
- 碳捕獲與封存技術研究:聯合外部企業,開展碳捕獲與封存技術的研究應用,持續跟進昆明二氧化碳捕集與利用項目,通過示範項目的實施和經驗交流,不斷提升技術水平。

- Hydrogen doping study for city gas supply system: We study the percentage and applications of hydrogen doping in the existing city gas supply system under the premise of without modifying the terminal gas appliance and ensuring performance and safety and develop a set of post-hydrogen doping technical solutions for all aspects of the city gas supply system, including pipelines, connections, leak detection and safe operation.
- Efficient utilization of natural gas: We achieve the efficient utilization of thermal energy through the gas-fired combined cooling/heating/electricity units, the gas-fired fully premixed condensing module boilers, the gas-fired heat pumps and other equipment with efficient utilization solutions of natural gas for different user scenarios. With this method, the integrated energy utilization efficiency can be improved to more than 80%, which is more than 30% energy efficient as compared with the conventional ways.
- Explore the further utilization of natural gas: We closely follow up on the demonstration projects of gas production by liquid metal-catalyzed natural gas cracking and graphene technology innovation, and incubate green gas production & carbon advanced technology.
- Coupling renewable energy: We investigate the energy supply methods applying the multi-energy complementation and synergistic coupling energy supplying of natural gas + renewable energy, optimize the multi-energy system allocation and operation strategy, and enhance the safety of energy supply while saving energy, reducing carbon, reducing costs and improving efficiency.
- Research on carbon capture and storage technology: We cooperate with external enterprises to carry out research and application of carbon capture and storage technology, continue to follow up on the carbon dioxide capture and utilization project in Kunming, and continuously improve our technical level through the implementation of demonstration projects and exchange of experiences.

# 案例:濰坊分公司加強天然氣摻氫輸配及終端應用研究 Case Study: Weifang Branch Strengthens Research on Hydrogen-doped Natural Gas Transmission and Distribution and Terminal Application

2023年4月20日,濰坊高新華潤燃氣有限公司(以下簡稱「濰坊高新公司」)參與國際關於「十四五」國家重點研發計劃 「氫能技術」重點專項「管道氫氣在城鎮綜合供能領域的關鍵技術研究與規模應用」。濰坊高新公司作為課題三和課題四 的參與單位,主要負責30千米純氫管網示範工程實施、推廣熱電聯供系統、實現2個氫能社區,以及樓棟和小區摻氫 應用示範。

On 20th April 2023, Weifang High-tech China Resources Gas Co., Ltd. (hereinafter referred to as "Weifang High-tech Company") participated in the international "Research and Large-scale Application of Key Technologies of Pipeline Hydrogen in the Field of Urban Comprehensive Energy Supply" of the "14th Five-Year Plan" National Key Research and Development Plan of "Hydrogen Energy Technology" Key Project. As a participating unit of Topic III and Topic IV, Weifang High-tech Company is mainly responsible for the implementation of the 30-kilometer pure hydrogen pipeline demonstration project, the promotion of combined heat and power supply system, the realization of two hydrogen energy communities, and the demonstration of application of hydrogen doping in buildings and communities.

# 案例:昆明區域持續探索二氧化碳捕集與利用 Case Study: Kunming Continues to Explore Carbon Dioxide Capture and Utilization

華潤燃氣昆明區域結合當地資源稟賦,將「零碳工廠」打造與「富碳農業」相結合。一期項目已完成二氧化碳輸配管線及 捕集、儲配設備基礎建設,計劃2024年3月完成主要設備安裝,2024年5月正式投運。一期項目投運後,每年預計捕 集晉寧百威啤酒排放的二氧化碳1,800噸,並已與下游雲天化集團花卉項目簽訂二氧化碳銷售協議,項目預計每年實現 二氧化碳銷售收入70萬元。

By virtue of the local resource advantages, CR Gas Kunming combines the creation of a "zero-carbon factory" with "carbon-rich agriculture". The first phase of the project has completed the infrastructure construction of carbon dioxide transmission and distribution pipelines and capture, storage and distribution equipment. It is planned to complete the installation of major equipment in March 2024 and officially put into operation in May 2024. After the first phase of the project is put into operation, it is expected to capture 1,800 tonnes of carbon dioxide emitted by Jinning Budweiser every year, and it has signed a carbon dioxide sales agreement with the downstream Yuntianhua Group's flower project, which is expected to achieve annual carbon dioxide sales revenue of RMB700,000.

2023年,我們聯合同濟大學等單位成功申 建國家住房城鄉建設部燃氣工程技術創新中 心,啟動建設校企科研平台燃燒技術實驗 室,聚焦重點掺氫、節能和燃氣高效利用領 域,助力國家綠色能源發展。未來,我們將 進一步加強綠色低碳人才培養,加強跨學 科、多領域合作,加速低碳技術的發展與應 用,推動行業向低碳、可持續發展的未來邁 進。 In 2023, we joined forces with Tongji University and other units to successfully apply for the establishment of the Gas Engineering Technology Innovation Center of the Ministry of Housing and Urban-Rural Development of the PRC, and started the construction of a combustion technology laboratory of university-enterprise scientific research platforms, with focus on key areas of hydrogen doping, energy conservation and efficient gas utilization to contribute to the green energy development of the country. In the future, we will further enhance the training of green and low-carbon talents, strengthen interdisciplinary and multi-field cooperation, accelerate the development and application of low-carbon technologies, and promote the industry to move towards a low-carbon and sustainable future.
# 堅持以人為本 注重員工成長 Upholding the People-oriented Principle and Focusing on the Growth of Employees

華潤燃氣始終堅持以人為本的理念,尊重和維護員工權益,以「尊重人的價值、開發人的潛能、升華人的心靈」為宗旨,推進員工多元化與機會平等,彰顯企業人文關懷。

CR Gas always adheres to the concept of being people-oriented, respects and safeguards the rights and interests of employees under the purposes of "respecting people's value, developing people's potential and sublimating people's soul", and promotes employee diversity and equal opportunities, highlighting the humanistic concern of the enterprise.

	2023責任績效 2023 Responsibility Performance	
\$	人均培訓投入 Training investment per person 821.5港元/нк <b>\$</b>	人均受訓時長 Training hours per person 13.2小時/Hour
	員工培訓覆蓋率	
	Total percentage of employees trained	
	100%	· · · · · · · · · · · · · · · · · · ·
\		***************************************
SDGs	3 健康与福祉 5 <sup>性制平等</sup> 8 体面工作和 8 经济增长	10 城少不平等
	3 GOOD HEALTH 3 GOOD HEALTH 5 GENDER 5 EQUALITY 8 DECENT WORK AND 8 DECENT WORK AND 8 DECENT WORK AND 8 DECENT WORK AND	10 REDUCED





堅持以人為本,注重員工成長

Upholding the People-oriented Principle and Focusing on the Growth of Employees

# 5.1 保障員工權益

華潤燃氣高度重視員工權益保護,發佈《績 效管理指引》等內部制度,通過多元化招 聘、員工權益保護、薪酬福利激勵、民主管 理等措施為員工提供安全、包容、開放的工 作環境,打造以人為本的健康職場。

# 5.1 PROTECTING EMPLOYEES' RIGHTS AND INTERESTS

CR Gas attaches great importance to the protection of employees' rights and interests, and has issued internal policies such as the Performance Management Guidelines (《績效管理指引》) to provide employees with a safe, inclusive and open working environment through diversified recruitment, protection of employees' rights and interests, remuneration and benefits incentives, democratic management, and other measures, so as to create a people-oriented and healthy workplace.

### Employment Compliance

合規僱傭

華潤燃氣嚴格遵守《中華人民共和國勞動 法》、《中華人民共和國勞動合同法》,規範 執行勞動用工制度,與員工平等簽訂勞動合 同,2023年勞動合同簽訂率和續訂率均為 100%。在應屆畢業生招聘方面,公司提供 編制和薪酬方面的政策支持,以工資輔以津 貼補貼的形式適當提高薪酬標準,同時積極 響應本地化就業的號召,在各地區子公司和 項目地優先考慮錄用本地人才,助力當地經 濟發展和社會穩定。 CR Gas strictly abides by the Labour Law of the People's Republic of China (《中華人民共和國勞動法》), Labour Contract Law of the People's Republic of China (《中華人民共和國勞動合同法》), regulates and implements employment policy and signs labour contracts with employees on an equal footing, with both labour contract signing and renewal rates reaching 100% in 2023. With regard to the recruitment of fresh graduates, the Company provides policy support in terms of personnel quota and remuneration, and appropriately raises the remuneration standard in terms of salary supplemented by allowances and subsidies. Meanwhile, the Company actively responds to the call for local employment by giving priority to hiring local talents at its subsidiaries and project sites in various regions, thereby contributing to the development of the local economy and social stability.

# 案例:創新校園招聘<sup>,</sup>提高人才質量 Case Study: Innovative Campus Recruitment to Improve Talent Quality

2023年,公司結合集團戰略發展方向,通過線上線下結合的方式開展校園招聘工作,截止校招結束共簽約到崗210 人,其中普通崗203人,管培生7人。

In 2023, the Company combined online and offline campus recruitment in line with the Group's strategic development direction, and by the end of campus recruitment, 210 people had signed up, including 203 general posts and 7 management trainees.

- 創新開展線上開放日,與目標高校開展校企合作,同時根據「GASDREAM」定制勝任力測評,精準識別目標人材;
- Innovatively carried out online OPENDAY and cooperated with target colleges and universities to accurately identify target talents according to "GASDREAM" customized competency assessment;
- > 創新探索數字人空中宣講,設計開發融合素質拓展與企業文化的「體驗式宣講會」;
- Innovatively explored digital human aerial presentation, designed and developed "experiential presentation" that integrates outward bound and corporate culture;
- ▶ 同步開展「三地招聘」、「啟航計劃」香港人才實習計劃擴大招聘範圍;
- Simultaneously carried out the "Three Places Recruitment (三地招聘)" and the "Sailing Plan (啟航計劃)" Hong Kong Talent Internship Project to expand the scope of recruitment;
- ▶ 有機聯動未來之星訓練營新員工培訓項目,打通新員工成長路徑。
- Organically linked with the Future Star training camp project for new employees to pave the way for the growth of new employees.



圖:港籍校招宣講 Picture: Campus Recruitment Presentation for Students from Hong Kong



圖:創新開展線上開放日 Picture: Innovatively carried out online OPENDAY

在禁止童工和強制勞工方面,華潤燃氣嚴格 遵守國際勞工標準和國家法律法規,加強人 力資源部門與法務部門的合作,制定和完善 內部相關政策,對招聘流程、勞動合同簽署 等環節進行更加嚴密的審查和監控,確保不 存在童工和強制勞工的情況,集團於本報告 期內沒有僱用童工的違法違規事件。

# 權益保障

# 反歧視

華潤燃氣堅持公平、公正、公開和平等僱傭 原則,嚴格執行內部反歧視政策,推動性 別平等、年齡包容和殘障人士就業。截至 2023年底,公司殘疾人僱傭人數達97人, 並保障其各項福利待遇。

我們制定詳細的校園招聘流程和評價標 準,明確規定招聘過程中的公示要求,從崗 位發佈、簡歷篩選到面試通知、錄用決定等 環節均需遵循透明原則,確保招聘全環節公 開透明化:完善職場反歧視相關政策,明確 違規行為的處罰機制,確保員工在招聘、培 訓、晉升、薪酬待遇等方面不受性別、年 齡、種族、宗教信仰、身體狀況等因素的影 響;定期對企業內部的人力資源政策和招聘 流程進行全面審查,確保符合國家法律法規 關於反歧視的規定。 Regarding the prohibition of child labour and forced labour, CR Gas strictly complies with international labour standards and national laws and regulations, strengthens cooperation between the human resources department and the legal department, formulates and improves relevant internal policies, and more closely examines and monitors the recruitment process, the signing of employment contracts, etc., to ensure that there are no cases of child labour and forced labour. During the reporting period, there were no cases of child labour violations in the Group.

### **Protecting Rights and Interests**

# Anti-discrimination

CR Gas adheres to the principles of fairness, justice, openness and equal employment, strictly enforces internal anti-discrimination policies and promotes gender equality, age inclusion and employment of people with disabilities. As at the end of 2023, the Company hired 97 disabled employees, and guaranteed their welfare and benefits.

We formulate detailed campus recruitment procedures and evaluation standards, clearly define the requirements for public announcements during the recruitment process, and follow the principle of transparency from job posting to CV screening to interview notification and hiring decisions to ensure that the entire recruitment process is open and transparent; improve policies related to anti-discrimination in the workplace and clarify the penalty mechanism for violations to ensure that employees are not discriminated against in hiring, training, promotion and compensation packages because of gender, age, race, religious beliefs, physical condition and other factors; and regularly conduct a comprehensive review of the Company's internal human resources policies and recruitment processes to ensure compliance with national anti-discrimination laws and regulations.

# 同工同酬

華潤燃氣秉承「內部公平性、外部競爭性、 為崗位付薪、為績效付薪、為能力付薪」的 薪酬理念與原則,以華潤「1246」模式為引 領,持續完善人才管理和薪酬激勵。2023 年,我們進一步優化工資總額決定機制,設 置基礎性收入與獎勵性收入,構建業績導向 的差異化分配體系;對於薪酬水平過低的企 業,單獨制定收入分配規則,縮小高、低收 入群體薪酬水平差距,增進員工福祉。

- 2023年累計推動6家區域公司開展薪 酬套改系列工作,幫助其建立科學的 薪酬體系,由總部親自推動實施,確 保薪酬管理理念落實到位,目前約 95%的成員公司按照華潤薪酬體系付 薪,確保同工同酬。
- 組織開展內部薪酬檢查,着重對不合 理的付薪現象進行查處和規範,2023 年已完成32家區域公司的薪酬檢查。

# 員工溝通

華潤燃氣充分尊重員工意願,完善內部溝通 體系建設,建立多樣化員工訴求信息反饋機 制,提升投訴處理和反饋效率,實現員工訴 求的閉環管理:

- 設立「信、訪、電、網」四位一體的受 理信訪舉報機制,員工可以通過書面 信件、來訪接待、電話熱線以及在線 舉報平台等多種方式,對職場歧視行 為進行匿名或實名舉報,並保證所有 舉報信息將得到及時、保密且公正的 處理;
- 定期開展基層員工座談會、基層班組 蹲點工作,及時了解並解決員工訴 求,堅持發現問題在一線,解決方案 在一線,落實成效在一線,暢通員工 溝通反饋通道;

# Equal Pay for Equal Work

CR Gas adheres to the compensation concepts and principles of "internal fairness, external competitiveness, pay for post, performance and ability", and continues to improve talent management and remuneration incentives under the guidance of the "1246" model. In 2023, we further optimized the mechanism for determining the total wage, established basic income and incentive income, and built a performance-based differentiated distribution system; for enterprises with excessively low wage levels, we formulated separate income distribution rules, narrowed the gap between the wage levels of high-and low-income groups, and promoted the well-being of employees.

- In 2023, the Company pushed the reform of the compensation systems in a total of 6 regional companies for the establishment of a scientific compensation system, which was promoted under the guidance of the headquarters to ensure the effective implementation of the compensation management concepts. Currently, the employees in about 95% of our member companies are paid in accordance with the CR compensation system to ensure equal pay for equal work.
- The Company organized internal compensation audits, focusing on the detection and regulation of unreasonable salary payments, and had completed compensation audits in 32 regional companies in 2023.

### Employee Communication

CR Gas fully respects the wishes of employees, improves the construction of the internal communication system, establishes a diversified information feedback mechanism for employee requests, improves the efficiency of complaint handling and feedback, and realizes the closed-loop management of employee requests:

- The Company has established a four-in-one petition and report handling mechanism to allow employees to report discrimination in the workplace anonymously or by name via letter, personal visit, telephone and online reporting platforms, thus ensuring the timely, confidential and fair handling of all reported information;
- The Company regularly holds grass-roots employee symposiums, sends cadre teams to work at grass-roots to timely understand and solve employee requests, adhering to the principle of identifying problems at the front line, finding solutions at the front line and implementing results at the front line, so as to ensure smooth communication and feedback channels for employees;



定期組織氛圍調研或訪談,診斷組織 中存在的問題,徵求員工建議,研究 制定解決方法。

每年末, 華潤燃氣會採用問卷調查法對所有 下屬公司開展組織氛圍測評, 參與群體覆 蓋中高層管理者和一線員工,將調查結果 反饋給被調查公司並提出相關整改指導意 見。2023年, 參與組織氛圍評價的員工佔 比39%, 平均得分達87.66分, 41%的公司 組織氛圍較上一年得到提升。

# 民主管理

華潤燃氣貫徹落實《中華人民共和國工會 法》等國家法律法規,制定《關於進一步加 強基層工會、職代會建設的通知》《關於開 展職工代表大會制度深化示範工作的實施意 見》內部規章,推進基層職代會制度化規範 化建設,有效保障職工民主權利,同時從制 度上落實勞資集體談判的權利,就勞動報 酬、勞動安全、保險福利、職業技能培訓等 事項開展集體協商並形成集體合同草案,充 分響應職工訴求,維護職工權益。

2023年,華潤燃氣工會組織達319個,建 立職工代表大會制度的企業達298個,職代 會覆蓋率為93%:累計開展職業技能培訓 733次,開展勞動和技能競賽111次;創建 勞模和工匠人才創新工作室3個,累計創建 勞模和工匠人才創新工作室15個。 The Company regularly organizes atmosphere surveys or interviews to diagnose problems in the organization, solicit suggestions from employees, and study and formulate solutions.

At the end of each year, CR Gas conducts organizational atmosphere assessment of all its subsidiaries using questionnaire surveys covering middle and senior managers and frontline employees, and feedbacks the results of the surveys to the surveyed companies and proposes relevant corrective guidance. In 2023, 39% of employees participated in the organizational atmosphere assessment, with an average score of 87.66, and the organizational atmosphere of 41% of the companies had been improved compared with that of the previous year.

### Democratic Management

CR Gas implements the Trade Union Law of the People's Republic of China (《中華人民共和國工會法》) and other national laws and regulations, formulates the internal rules and regulations of the Notice on Further Strengthening the Construction of Grassroots Trade Unions and Employee Councils (《關於進一步加強基層工會、職代會建設的通 知》) and the Implementing Opinions on Deepening the Demonstration of the Employee Congress System (《關於開展職工代表大會制度 深化示範工作的實施意見》), promotes the institutionalization and standardization of the construction of grassroots employee councils, and effectively safeguards the democratic rights of employees. At the same time, CR Gas implements the right to collective bargaining institutionally, conducts collective negotiation on issues such as wages, work safety, insurance and welfare, and vocational training, in order to form a draft for collective contract that fully responds to employee requests and safeguards employees' rights and interests.

In 2023, the number of trade union organizations of CR Gas reached 319, and the number of enterprises that had established the employee congress system reached 298, with the coverage rate of the employee congresses of 93%; CR Gas launched a total of 733 trainings for vocational skills, 111 labour and skills competitions; created 3 innovation studios for model workers and craftsmen talents with a cumulative number of 15.

# 薪酬福利

華潤燃氣嚴格落實國家法律規定和華潤集團 的相關要求,完善基礎福利保障體系,執行 法定節假日帶薪休假與帶薪年休假制度,針 對女性員工強化生育假、哺乳假等特殊假期 政策以及相關的支持服務,為員工購買醫療 保險、意外傷害保險等商業保險,提供職業 健康免費體檢、職業健康培訓等,保障職工 福利。

2023年,集團工會印發《華潤燃氣總部工 會福利及財務管理辦法》,積極落實節日福 利、生日福利、員工體檢、婚喪嫁娶、困 難幫扶等福利及保障。在員工福利採購方 面,我們充分調研員工個性化需求,升級福 利採購平台,增加採購便利度和產品選擇豐 富性,並按照節日節點統一發放員工福利積 分額,進行產品自主兑換。

# 5.2 聚焦人才發展

華潤燃氣積極踐行「以人為本」的企業價值 觀,結合燃氣戰略打造人才培養平台,不斷 優化人才培育及發展體系,全面提升員工職 業技能和職業素養,推動人才發展與企業發 展同步。

# 職業發展體系

華潤燃氣設立學創中心統籌人才培養工 作,構建分層分類的人才培養體系,持續優 化和推動3+1人才(經營管理人才、技能人 才、科技人才、香港人才)培養工作落地, 暢通職業發展通道。

### **Remuneration Package**

CR Gas strictly implements national laws and regulations and relevant requirements of China Resources Group, improves the basic social security protection system, implements the policies of paid holidays and paid annual leave, strengthens the policies of special leave such as maternity leave and breastfeeding leave and related support services for female employees, purchases commercial insurance including medical and accidental injury insurance for its employees, and offers free medical check-ups and occupational health training to protect the welfare of its employees.

In 2023, the Group's labour union issued the Measures for Welfare and Financial Management of the Labour Union of CR Gas Headquarters (《華潤燃氣總部工會福利及財務管理辦法》), and actively implemented the welfare provision and protection of holiday welfare, birthday welfare, employee medical check-ups, weddings and funerals, and assistance in difficulties. In terms of employee welfare procurement, we fully researched the personal needs of employees, upgraded the welfare procurement platform, increased the convenience of procurement and the richness of product choices, and uniformly issued employee welfare credits in holiday or festival for employees to redeem products on their own.

# **5.2 FOCUSING ON TALENT DEVELOPMENT**

CR Gas actively practices the corporate value of being "people-oriented", builds a talent training platform in conjunction with the gas strategy, continuously optimizes the talent cultivation and development system, comprehensively improves employees' vocational skills and professionalism, and promotes the development of talents in tandem with the development of the enterprise.

### **Career Development System**

By establishing a learning and innovation center to coordinate talent training and building a hierarchical and classified talent training system, CR Gas continues to optimize and promote the training of 3+1 talents, including operational and management talents, technical talents, scientific and technological talents, and Hong Kong talents, thereby opening up career development channels.

# 人才培養體系

2023年,我們結合華潤燃氣「1+2+N」戰略 與人力資源人才戰略規劃,以四個重塑為目 標,以價值重塑為核心,圍繞業務、組織和 精神三個方向,持續着力於「人才發展、業 務促進」工作,配套優化「體系建設和資源 開發」,打造學創中心「1+X」大專家工作體 系,將員工培養成為人才發展專家、體系建 設專家、業務促進專家及學習產品專家。

### Talent Training System

In 2023, we combined the "1+2+N" strategy of CR Gas with the strategic planning of human resources and talents, taking the four reshaping as the goal with value reshaping as the core, and focusing on the three directions of business, organization and spirit to continuously work on "talent development and business promotion" and optimize "system construction and resource development", as well as to create the "1+X" big expert work system of the learning and innovation center with an aim to cultivating employees into experts in talent development, system construction, business promotion and product learning.



圖:「1+X」大專家工作體系 Picture: "1+X" big expert work system

# 四大人才培養序列

圍繞3+1人才發展戰略,公司建立並完善管 理(M)、專業(P)、技能(S)、新人(N) MPSN 四大人才培養序列,科學匹配學習資源,推 動員工職業發展與企業發展相統一、職業發 展與薪酬待遇相統一。

# 管理序列:

2023年5月,公司發佈《華潤燃氣管理序列 人才培養方案M2.0》,依託潤學堂平台數智 化整合學習資源,形成線上必修與線下集中 混合聯動的學習模式,打造靈活敏捷多變的 培養體系,同時根據培訓需求調研及經理人 素質項數據分析結果,精準匹配管理序列課 程內容,提升管理能力。

# Four Talent Training Sequences

Centering on the 3+1 talent development strategy, the Company has established and improved its four MPSN (management, professional, skill and new employee) talent training sequences to scientifically match learning resources and align employees' career development with the Company's development and with their remuneration.

### Management sequence:

In May 2023, the Company released the CR Gas Management Sequence Talent Cultivation Program M2.0 《華潤燃氣管理序列人才培養方案 M2.0》), relying on the Run Class platform to integrate learning resources in a digital and intellectual way, forming a mixed and linked learning mode of online mandatory and offline concentration, and creating a flexible, agile and changeable cultivation system. At the same time, based on the results of the research on the training needs and the analysis of the data on the quality items of the management sequence courses to enhance the management capabilities.

# 案例:T+計劃一華潤燃氣培訓管理者賦能提升項目 Case Study: T+Plan – CR Gas Training Manager Empowerment Project

為滿足各層級培訓管理工作,2023年2月,公司開展T+計劃一華潤燃氣培訓管理者賦能提升項目,助力「1+X」人才選拔,累計輸出培訓體系優化建設課題5個,提交並跟進落地43份項目設計方案;結合各類培訓項目等實際場景,聯動 1+X團隊開展多個項目,涉及20餘人次,推動大專家工作體系搭建與運營。

In order to meet the training management needs at all levels, in February 2023, the Company carried out the T+Plan – CR Gas Training Manager Empowerment Project to help "1+X" talent selection, and cumulatively launched 5 training system optimization and construction topics, and submitted and landed 43 project design proposals; combined with various training projects and other practical scenarios, the Company linked with the 1+X team to carry out a number of projects with more than 20 attendances to promote the construction and operation of the big expert work system.



專業序列:

2023年,公司通過「網格化」的管理模式、 搭建「企業微信」數字化平台,開展「燃氣 管家」專項課程開發與推廣項目,打造金牌 「燃氣管家」以洞察和響應客戶需求。目前 已在「潤學堂」學習平台上線專項課程,學 員人數達到8,537人。

2023年8月,公司組織開展人力資源團隊 專業能力提升訓練營,聚焦「組織重塑」主 線,通過系統、多元、科學的課程設計,為 人力資源團隊提供專業理論的外部賦能和內 部實戰經驗分享,有效提升團隊的思維視野 與專業能力,訓練營累計開展四期,涉及 400餘名線上線下學員。

# Professional sequence:

In 2023, through a "grid-based" management model, the establishment of a "WeCom" digital platform, and the "Gas Butler (燃氣管家)" specialized curriculum development and promotion, the Company has built a gold-medal "Gas Butler" that is insightful and responsive to customer needs. At present, the special course has been launched on the "Run Class" learning platform, and the number of trainees has reached 8,537.

In August 2023, the Company organized and carried out the professional capacity enhancement training camp for the HR team. The training camp, which focused on "organizational reshaping", provided the HR team with external empowerment of professional theories and internal sharing of practical experience through a systematic, diversified and scientific course design, effectively enhanced the team's thinking vision and professional capacity. The camp has been held four times, with more than 400 online and offline trainees participated.

圖:「燃氣管家」專項課程開發賦能工作坊

Picture: "Gas Butler" specialized curriculum development and empowerment workshop

2023年第三季度人力资源标杆工作组会议暨人力资源团队专业能力提升训练营(第四期)

圖:人力資源團隊專業能力提升訓練營 Picture: HR team professional capability enhancement training camp

### 技能序列:

2023年,公司新增《華潤燃氣職業技能等級 認定中心運營管理制度(試行版)》,累計推 動12家職業技能等級認定中心取得認定資 質,全面完成五級工至技師等級職業技能等 級認定試點工作,認定達900餘人次,完成 164門職業技能等級認定實操教學視頻資源 開發建設工作。

### Skill sequence:

In 2023, the Company formulated the CR Gas Occupational Skill Level Recognition Center Operation and Management System (Trial Version) (《華潤燃氣職業技能等級認定中心運營管理制度(試行版)》), cumulatively promoted 12 occupational skill level recognition centers to obtain the qualification of recognition, comprehensively completed the pilot work of occupational skill level recognition for level 5 workers to technicians, recognized more than 900 attendances, and completed the development of 164 teaching video resources for occupational skill level recognition.



2023年4月, 華潤燃氣首次組隊參加全國職 業技能大賽, 獲得個人賽1金4銀3銅、團隊 金獎:10月, 在「燃氣杯」第五屆全國燃氣 行業職業技能競賽中榮獲燃氣管網運行工個 人賽一等獎。同時, 我們完成2023年度一 線崗位技能抽查考核工作, 累計覆蓋1,167 名一線員工, 包含正式工、勞務派遣人員和 外包人員, 考核通過率達91.6%。 In April 2023, CR Gas teamed up to participate in the National Vocational Skills Competition for the first time, and won 1 gold, 4 silver and 3 bronze medals in the individual competition and a gold medal for the team; in October, CR Gas won the first prize in the individual competition for gas pipeline network operators in the Fifth National Gas Industry Vocational Skills Competition "Gas Cup". Meanwhile, we completed the spot-check of frontline job skills for the year 2023, covering 1,167 frontline employees in total, including regular employees, labour dispatchers and outsourced employees, with appraisal pass rate reaching 91.6%.



圖:職業技能等級認定中心 Picture: Occupational skill level recognition center

新人序列:2023年,公司持續實施「新人 三年培養計劃」,自主設計開發在線平台, 明確培養主體責任,高效管理新人培訓工 作,同時創新探索實施「研一學一賽一創」 一體化教學模式,通過「產業調研」—「專業 知識學習」—「行動學習大賽」—「主題創品 活動」四大環節,幫助新員工積累知識,思 考價值創造的可能性,引發好奇心和內驅 力,形成經驗學習的閉環。



圖:一線崗位技能抽查考核 Picture: Spot-check of frontline job skills

New employee sequence: In 2023, the Company continued to implement the "three-year training plan for new employees", independently designed and developed an online platform, clarified the main responsibility of training, and efficiently managed the training of new employees. Meanwhile, the Company has innovatively explored the implementation of the "research-learn-competition-creation" integrated teaching mode, which helps new employees to accumulate knowledge and think about the possibility of value creation through the four major segments of "industrial research", "professional knowledge learning", "action learning competition", and "thematic product creation", arousing their curiosity and internal drive, and forming a closed loop of learning from experience. 目前在線平台共有新員工1,111人,崗位師 傅2,025人,帶崗人1,378人,HR453人, 學習記錄7,659條。 At present, the online platform has 1,111 new employees, 2,025 job masters, 1,378 lead workers, 453 HRs, and 7,659 learning records.



圖:新員工三年培養計劃在線平台 Picture: Online platform for the three-year training plan for new employees

# 案例:舉辦未來之星訓練營<sup>,</sup>助力新員工成長 Case Study: Organized the Future Star Training Camp to Help New Employees Grow Up

2023年,華潤燃氣舉辦未來之星訓練營華南六營(燃氣營),創新採用「研一學一賽一創」一體化教學模式,線上依託 元宇宙學習空間「焕燃奇境」聯動學習,線下通過「帶路人計劃」、一線技能達標、產業調研等教學活動,幫助員工快速 熟悉客戶及崗位技能,同時通過在線平台跟進訓練內容,助力新員工融入職場。此次訓練營在華潤集團優秀營地評選 中獲得「金太陽花」獎。

In 2023, CR Gas organized the Camp Six of South China (Gas Camp) (華南六營(燃氣營)) of the Future Stars Training Camp, which innovatively adopted the integrated teaching mode of "research-learn-competition-creation" and helped employees quickly familiarize themselves with customers and job skills through online learning at the meta-universe learning space of "Huanran Wonderland (煥燃奇境)" and offline teaching activities including the "Pathfinder Plan (帶路人計劃)", up-to-standard frontline skills and industrial research. The training camp also helped new employees integrate into the workplace through following up on the training content on the online platform. The training camp won the "Golden Sunflower" award in the selection of excellent camps of CR Group.



圖:未來之星訓練營 Picture: Future Star Training Camp



# 員工培訓機制

2023年,我們新增《華潤燃氣控股有限公司 培訓工作管理辦法》等3項制度,修訂《華潤 燃氣內部培訓師管理辦法》等3項制度,努 力為員工提供多元化培訓課程和優質培訓服 務,形成有燃氣特色的人才培養機制。

# 培訓計劃

我們依照內部培訓制度,嚴格執行培訓管理 工作流程,開展年度培訓需求調研工作,整 合各級分類培訓需求重點,圍繞業務發展和 人員發展需要,制定出包括人才培養、專業 培訓配套支持、費用預算等內容的年度培訓 計劃。2023年,共收集反饋問卷100份, 通過調研收集,計劃開展項目41個。

# **Employee Training Mechanism**

In 2023, we formulated 3 new policies, including the Measures for the Management of Training Work of China Resources Gas Group Limited (《華潤燃氣控股有限公司培訓工作管理辦法》), and revised 3 policies, including the Measures for the Management of Internal Trainers of CR Gas (《華潤燃氣內部培訓師管理辦法》), in an effort to provide employees with diversified training courses and high-quality training services, and to form a talent training mechanism with CR Gas characteristics.

### Training Plan

In accordance with the internal training policy, we strictly implement the training management workflow, carry out annual requirement survey, sort out the focus of categorized training needs at all levels, focus on business development and personnel development needs, and formulate an annual training plan that includes talent training, professional training support, and cost budgets, etc. In 2023, we collected a total of 100 feedback questionnaires, and planned to carry out 41 projects after research.



圖: 2023年培訓需求調研分析及培訓計劃 Picture: 2023 Training Needs Research and Analysis and Training Plan

# 課程開發

2023年,公司修訂《華潤燃氣學創中心課 程開發指引》《華潤燃氣學創中心講師接待 辦法及流程》等制度,結合四大人才培養序 列開發管理類、專業類、技能類、新人類 和通用類五類課程,滿足不同級別員工的 學習需求。公司成立「藍精靈」學習產品營 銷團隊,以「知識、創新、素養及技能」為 核心,賦能電子課程開發製作、學習工具 研發、學習項目視覺推廣、知識沉澱等工 作,實現2023年調用藍精靈115人次,完 成課程開發124門,支持會議、培訓、校 招、未來之星等項目85次,聯動大區藍精 靈開發職業等級認定學習資源170門,開發 賦能課程10門,課程滿意度4.97分。

# **Curriculum Development**

In 2023, the Company revised the Guidelines for Curriculum Development of CR Gas Learning and Innovation Center 《華潤燃氣 學創中心課程開發指引》), Methods and Procedures for Reception of Lecturers in CR Gas Learning and Innovation Center (《華潤燃氣學創 中心講師接待辦法及流程》) and other policies, and combined the four talent training sequences to develop five types of courses, namely, management, professional, skills, new employee and general courses, to satisfy the learning needs of employees of different levels. The Company set up the "Smurf" learning product marketing team, with "knowledge, innovation, quality and skills" as the core, empowering the development and production of e-courses, research and development of learning tools, visual promotion of learning programs, knowledge precipitation and others. In 2023, the team completed the development of 124 courses with 115 team members participated, thus supporting 85 projects such as meetings, trainings, school recruitments, Future Star project, cooperated with its counterparts in major regions to develop 170 learning resources for vocational level recognition, developing 10 empowerment courses, and achieving a course satisfaction rate of 4.97.



圖:「藍精靈」學習產品營銷團隊賦能培訓 Picture: "Smurf" learning product marketing team empowerment training



# 培訓活動

2023年,華潤燃氣結合「1+X」人才培養體 系,充分利用線上線下資源開展不同層級的 培訓活動,如未來之星訓練營、管培生課題 研究、年輕幹部培訓班、專業能力提升訓練 營、燃氣行業大咖訪談、外部市場化人才培 養項目等,實現全年開班項目225個,培訓 覆蓋156,716人次,開展線上項目172個。

# **Training Activities**

In 2023, CR Gas, in conjunction with the "1+X" talent cultivation system, made full use of online and offline resources to conduct training activities at various levels, such as the Future Star Training Camp, project research for management trainees, training courses for young cadres, training camps for professional capacity enhancement, interviews with big names in the gas industry, and external market-oriented talent cultivation projects, etc. Throughout the year, a total of 225 training projects were conducted, with 156,716 attendances and 172 online projects.

# 案例:開展體驗式素拓培訓<sup>,</sup>助力團隊建設 Case Study: Experiential Outward Bound Trainings to Help Team Building

華潤燃氣「易點」素質拓展團隊秉承「專業、開放、藝術」的理念,圍繞黨建、公司戰略發展、對口扶貧等不同主題自主 開發方案,為不同層級匹配個性化體驗式培訓項目,學員範圍覆蓋集團高層經理人、各利潤中心不同層級人才、以及 合作政府單位員工近1,000人。

CR Gas "Yidea" outward bound team adheres to the concept of "professionalism, openness and art", independently develops schemes under different themes, including Party building, company strategic development and poverty alleviation, preparing personalized experiential training schemes for different levels involving senior managers of the Group, talents at different levels from profit centers and nearly 1,000 employees from partnering government units.

2023年3月,我們在惠州小徑灣開展第五期素拓師回爐培訓,選拔培訓學員30人,整體滿意度達4.99分。

In March 2023, we held the 5th retraining for outward bound teachers in Xiaojing Bay, Huizhou, selected 30 trainees, and achieved an overall satisfaction of 4.99.





圖:素質拓展培訓 Picture: Outward bound trainings

# 5.3 守護員工健康

華潤燃氣重視員工關懷與心理疏導,不斷豐 富員工關懷體系,激發員工熱情,打造溫 馨、平等、包容的工作氛圍,持續幫扶困難 員工,對遭遇重大疾病、意外傷害或家庭變 故的員工提供經濟上的幫助,提升員工的獲 得感和幸福感。

2023年,鄭州公司開展了300餘次員工日 常生病住院關懷慰問、大病幫扶慰問、困難 職工慰問、婚喪嫁娶慰問等基礎工作,同 時定期為困難員工提供心理疏導和情緒支 持,幫助員工走出困境,恢復生活和工作的 信心。

### 職業健康管理

我們將員工安全健康作為企業的重點工作之 一,建立「潤心大使」內部心理團隊,為員 工提供個性化的心理健康服務,組織全員開 展年度健康檢查並制定個性化健康改善計 劃,委託專業服務機構定期對生產作業環境 進行嚴格的安全評估與改進,預防、控制和 消除職業健康危害,全力守護員工身心健 康。

2023年,鄭州公司工會投入20餘萬元為全 體會員續保職工互助意外傷害險、職工互助 女職工特殊疾病險,新增「惠工保」互助保 障險,為10餘名員工辦理各項保障險理賠 業務,理賠金額5萬餘元。

# **5.3 PROTECTING EMPLOYEES' HEALTH**

CR Gas values employees care and their psychological guidance, constantly enriching the employee care system, stimulating the enthusiasm of employees, creating a warm, equal and inclusive work atmosphere, continuing to help employees in difficulty, providing financial assistance to employees suffering from serious illnesses, accidents and injuries, or family changes, in order to enhance the sense of accomplishment and happiness of employees.

In 2023, Zhengzhou Company carried out more than 300 activities to offer condolences to employees for their daily illnesses and hospitalizations, serious illnesses, difficulties, weddings and funerals, etc. At the same time, it regularly provided psychological guidance and emotional support to employees in difficulty, helping them to get out of the difficult situation and regain their confidence in life and work.

# **Occupational Health Management**

We consider the safety and health of employees to be one of the most important tasks of the Company, and have established an internal psychological team named "CR Gas Ambassadors" to provide personalized mental health services to employees, organize annual health check-ups for all employees, and formulate personalized health improvement plans. We also engage professional service organizations to conduct regular and rigorous safety assessment and improvement of the production and operating environment to prevent, control, and eliminate occupational health hazards and fully protect the physical and mental health of employees.

In 2023, the labour union of Zhengzhou Company invested more than RMB200,000 for all members to renew the employee mutual aid accidental injury insurance, employee mutual aid special disease insurance for female workers, and added the new "Huigongbao (惠 工保)" mutual protection insurance, and handled the claims for more than 10 employees, with a claim amount of more than RMB50,000.

# 案例:豐富文化生活,守護身心健康 Case Study: Enriching Cultural Life and Guarding Physical and Mental Health

華潤燃氣為員工提供豐富多彩的文化生活,包括職工趣味運動會、節日主題活動以及員工退休歡送會等,鼓勵員工積 極參與體育鍛煉,緩解工作壓力,保持良好的身心狀態,提升員工的歸屬感、滿意度和忠誠度。

CR Gas provides employees with a rich and colorful cultural life, including staff fun games, holiday-themed activities and staff retirement farewell parties, etc. By encouraging employees to actively participate in physical exercise to relieve work pressure and maintain good physical and mental condition, it enhances employees' sense of belonging, satisfaction and loyalty.

2023年,大連公司定期開展排球比賽、足球邀請賽、羽毛球友誼賽等體育活動,鍛煉員工的身體素質,也培養了堅韌 不拔的精神品質和良好的團隊協作意識。通過豐富員工文化生活,不斷提升員工幸福感、安全感。

In 2023, Dalian Company held regular sports activities such as volleyball matches, soccer invitational matches and friendly badminton matches to exercise the physical quality of employees, as well as to cultivate the mental quality of perseverance and a good sense of teamwork. By enriching the cultural life of the employees, it continuously improves their sense of happiness and security.



圖:員工體育活動 Picture: Employee sports activities

# 女性職工關懷

華潤燃氣積極維護和保障女職工權益,完善 女職工福利政策,強化生育假、哺乳假等特 殊假期政策,為女性職工提供個性化福利如 每月發放衛生費、提供健身相關福利、組織 三八節主題活動等;改善勞動安全衛生條 件,開展勞動安全衛生知識培訓,不斷增強 員工的歸屬感、獲得感和幸福感。

# **Care for Female Employees**

CR Gas actively protects and safeguards the rights and interests of female employees, improves the welfare policies for female employees, strengthens the policies on maternity leave, breastfeeding leave and other special leaves, provides female employees with tailored benefits, such as monthly menstrual allowances, fitnessrelated benefits and themed activities on Women's Day. In addition, CR Gas improves the working conditions in terms of safety and health, and conducts training on knowledge about safety and health at work to continuously strengthen the sense of belonging, accomplishment and happiness of employees.

# 案例:完善福利待遇,關注女職工成長 Case Study: Improving Welfare Benefits and Paying Attention to the Growth of Female Employees

2023年,鄭州公司在潤生活職工之家建設女職工休息哺乳室,為哺乳期女職工提供休息、私密、乾淨、舒適、安全的 場所,讓女職工獲得尊重感、幸福感和歸屬感。

In 2023, Zhengzhou Company set up a rest and breastfeeding room for female employees in Run Life staff house to provide a rest, private, clean, comfortable and safe place for breastfeeding female employees, so that female employees can gain a sense of respect, happiness and sense of belonging.



圖: 女職工休息哺乳室 Picture: Breastfeeding room for female employees

我們按照規定為女職工提供休假等待遇及個性化福利,開展女性主題講座、女性職業技能培訓、女性心理輔導等主題 活動,關注女職工身心健康,助力女性職工成長。

In accordance with the regulations, we provide female employees with vacations and other treatment and personalized benefits, and carry out women's theme lectures, women's vocational skills training, women's psychological counseling and other themed activities to pay attention to the physical and mental health of female employees and help them grow.

3月8日,宜賓公司組織開展「華潤巾幗展英姿 逐夢燃情新時代」三八國際婦女節主題活動,向全體女職工獻上美好真 摯的節日祝福。

On 8th March, Yibin Company organized and carried out the themed activity of "CR Women Showing Their Heroic Character, Dreaming for a New Era (華潤巾幗展英姿 逐夢燃情新時代)" on the International Women's Day, to offer all female employees a beautiful and sincere holiday blessing.



圖:三八國際婦女節主題活動 Picture: Themed activity on the International Women's Day

# 攜手夥伴共贏 **賦能行業發展**

# Collaborating with Partners to Achieve Mutual Success and Empower Industry Growth

華潤燃氣充分發揮行業領導力,與各行業夥伴展開緊密合作,共同推動燃氣行業的創新和發展。集團不斷完善供應商管理規 範,建立監督機制,有效防範採購風險。同時,集團積極響應國家區域協調發展戰略,持續拓展城燃業務,積極配合國家天然 氣體制改革,推動燃氣市場區域化整合,為經濟發展和民生保障提供有力支持。

CR Gas gives full play to its industry leadership and cooperates closely with various industry partners to promote innovation and development in the gas industry. The Group continues to improve its supplier management standards and establish monitoring mechanisms to effectively prevent procurement risks. Meanwhile, the Group responds positively to the national strategy of coordinated regional development, continues to expand its city gas business, actively echoes with the national reform of the natural gas system, and promote the regionalization and integration of the gas market, so as to provide strong support for economic development and protection of people's livelihood.

	2023責任績效 2023 Responsibility Performance	· · · · · · · · · · · · · · · · · · ·				 			
	年度新入圍供應商評價考核 207 <sub>家</sub> Newly shortlisted suppliers under review and appraisal during the year: 207	責任採購比例 100% Percentage of responsible procure 100%	mei	nt:					
×			٩	e			*		







# 攜手夥伴共贏,賦能行業發展 Collaborating with Partners to Achieve Mutual Success and Empower Industry Growth

# 6.1 合作共謀未來

華潤燃氣積極與政府、同行、合作夥伴和供 應商緊密合作,致力於攜手構建公平公正的 合作環境,促進行業的穩定和可持續發展。

# 加強戰略合作

2023年,我們通過與合作夥伴的密切協 作,實現關鍵資源的優勢互補,不斷加強在 產業、人才、研發和服務等領域的合作,進 一步提升核心競爭力。

# 綜合能源項目合作

在綜合能源產業方面,華潤燃氣和合作夥伴 在分佈式能源、氫能、燃料電池、二氧化 碳捕集等方面積極合作,通過打造零碳園 區、擴大試點項目等方式,推動各個行業低 碳轉型,實現共同發展。

# **6.1 COOPERATING FOR FUTURE**

CR Gas actively works closely with the government, peers, partners and suppliers, and is committed to joining hands to build a fair and equal cooperative environment to promote the stable and sustainable development of the industry.

# **Strengthening Strategic Collaboration**

In 2023, we realized the complementary advantages of key resources through close collaboration with our partners, and continuously strengthened cooperation in the fields of industry, talent, R&D and services to further enhance our core competitiveness.

# Integrated Energy Project Cooperation

In the integrated energy industry, CR Gas and its partners are actively cooperating in distributed energy, hydrogen energy, fuel cells, carbon dioxide capture, etc., to promote low-carbon transformation in various industries and realize common development by creating zero-carbon parks and expanding pilot projects.



# 案例:積極探索分佈式能源項目 Case Study: Actively Exploring Distributed Energy Projects

華潤燃氣旗下的重慶渝潤能源服務有限公司與重慶京東方光電科技有限公司在重慶水土工業園聯合推進分佈式能源項 目。

Chongqing Yurun Energy Services Co., Ltd, a subsidiary of CR Gas, and Chongqing BOE Electronic Technology Co., Ltd. (重慶京東方光電科技有限公司) jointly promoted a distributed energy project in Chongqing Shuitu Industrial Park (重慶水土工業園).

此項目旨在打造京東方集團首個分佈式能源方案,整體規劃包括45MW燃氣內燃機和溴化鋰餘熱機組,致力於為國內 半導體行業提供可靠的能源保障,並作為替代方案,緩解電力高峰壓力。

This project aims to create BOE Group's first distributed energy solution. The overall plan includes 45MW gasfired internal combustion engines and lithium bromide waste heat units, which is dedicated to providing reliable energy supply for the domestic semiconductor industry and serving as an alternative to ease peak pressure on electricity.

目前,B12項目已經進入點火試運營階段,項目建成後,預計年發電量將達到2.4億kWh,年減碳量可達16萬噸。此項 目將為電子行業的綠色低碳發展提供重要支持,並產生顯著的社會、環保和經濟效益。

Currently, Project B12 has entered the ignition trial operation stage, and it is expected that after the completion of the project, the annual power generation will reach 240 million kWh, and the annual carbon reduction can reach 160,000 tonnes. This project will provide important support for the green and low-carbon development of the electronics industry and generate significant social, environmental and economic benefits.



圖:重慶水土工業園京東方分佈式能源B12項目 Picture: BOE Distributed Energy Project B12 in Chongqing Shuitu Industrial Park



# 數字化轉型合作

華 潤燃氣致力於推動企業加速數字化轉型,成為綜合能源服務商的引領者。跨行業合作不僅實現了資源共通和優勢互補,更促進了綜合能源數智化發展,從而推動了行業的轉型升級,拉動了區域經濟的增長。

### Digital Transformation Cooperation

CR Gas is committed to promoting the accelerated digital transformation of enterprises and becoming a leading provider of integrated energy service. Cross-industry cooperation not only allows for resource sharing and advantage complementing but also promotes the digital and smart development of integrated energy. This, in turn, promotes the transformation and upgrading of the industry and stimulates the growth of the regional economy.

# 案例:華潤燃氣與騰訊雲簽署戰略合作協議 Case Study: CR Gas and Tencent Cloud Signed Strategic Cooperation Agreement

2023年7月, 華潤燃氣與騰訊雲正式達成戰略合作協議, 雙方計劃在合作中探索大數據和先進AI技術在燃氣生產、供應鏈管理的深度應用, 並深耕分佈式計算、連接和客戶運營等領域, 不斷提升燃氣民生服務的效率、質量, 共同推動 行業數字化轉型和高質量發展。

In July 2023, CR Gas and Tencent Cloud formally reached a strategic cooperation agreement, in which the two parties planned to explore the in-depth application of big data and advanced AI technology in gas production, supply chain management, and deeply cultivate the fields of distributed computing, connectivity and customer operation, to continuously improve the efficiency and quality of gas livelihood services, and to jointly promote the industry's digital transformation and high-quality development.

未來,雙方也將合力構建綜合能源服務生態平台,拓展低碳園區、綜合能源、碳普惠等創新業務,推動華潤燃氣加速 向綜合能源服務商轉型。

In the future, the two parties will also work together to build an integrated energy service ecological platform, expand low-carbon parks, integrated energy, carbon benefits and other innovative businesses, and promote the accelerated transformation of CR Gas into an integrated energy service provider.



圖:華潤燃氣與騰訊雲戰略合作協議簽約儀式

Picture: Signing ceremony of strategic cooperation agreement between CR Gas and Tencent Cloud

# 案例:華潤燃氣與華為數字能源簽署戰略合作框架協議 Case Study: CR Gas and Huawei Digital Power Signed Strategic Cooperation Framework Agreement

2023年12月, 華潤燃氣與華為數字能源技術有限公司在深圳簽署戰略合作協議, 雙方基於在綜合能源和新能源汽車 充電基礎設施領域的資源協同和優勢互補, 合作推動新一代電力電子技術、數字信息技術與綜合能源、新能源汽車充 電基礎設施行業的深度融合, 共同推進新型能源體系建設, 打通車網互動、交融為一體的城市高品質充電基礎設施網 絡, 探索園區綜合能源光儲充一體化發展。

In December 2023, CR Gas and Huawei Digital Power Technologies Co., Ltd. signed a strategic cooperation agreement in Shenzhen. Based on resource synergy and complementary advantages in the fields of integrated energy and new energy vehicle charging infrastructure, the two parties cooperated to promote the deep integration of new-generation power electronic technology, digital information technology and integrated energy and new energy vehicle charging infrastructure industries, and jointly promote the construction of a new type of energy system, to open up a high-quality urban charging infrastructure network with vehicle-network interaction and integration, and explore the integrated development of integrated energy photovoltaic storage and charging in parks.



圖:華潤燃氣與華為數字能源戰略合作協議簽約儀式

Picture: Signing ceremony of strategic cooperation agreement between CR Gas and Huawei Digital Power

# 產學研合作

華潤燃氣積極推動產學研合作,攜手高校及 專業機構提升燃氣行業人才的科研能力。集 團在智慧能源管理平台開發、新能源業務拓 展、高效節能設備研究、碳捕集與利用技術 等前沿減排技術方面,大力支持科研人員輸 出前瞻性、創新性研究成果,加強行業人才 隊伍建設,持續為城市燃氣行業相關核心技 術創新注入活力。同時,我們在多個領域深 化合作,為高校人才提供更多實習、實踐和 就業機會,共同開創校企合作的新局面。

# 推動行業發展

華潤燃氣堅信只有行業的不斷發展和進 步,才能更好地滿足客戶的需求,提供更優 質的能源服務。因此,集團致力於與行業內 的各方共同合作,促進產業鏈結合,推動行 業的健康發展和規範化進程,以提升整個行 業的競爭力和可持續發展能力。

在標準制定方面,華潤燃氣作為參編單位參 與了《城鎮燃氣輸配工程施工及驗收標準》 (GB/T51455-2023)《城鎮燃氣系統反恐怖防 範要求》(GA 1810-2022)《城鎮燃氣經營安 全重大隱患判定標準》等有關國家標準規範 編制:承接了住建部《燃氣經營企業從業人 員專業培訓考核管理辦法修訂研究》、應急 部《瓶裝燃氣企業安全風險防控手冊》的編 制工作,為行業安全管理規範化發展貢獻力 量。

# Industry-university-research Collaboration

CR Gas actively promotes industry-university-research collaboration, and cooperates with universities and professional organizations to enhance the scientific research capability of talents in the gas industry. In the development of intelligent energy management platform, new energy business development, energy efficient equipment research, carbon capture and utilization technology and other cutting-edge emission reduction technologies, the Group strongly supports researchers to achieve forward-looking and innovative research results, strengthens the team building of industry talents, and continues to inject vitality into the core technological innovations related to the city gas industry. At the same time, we have deepened cooperation in many fields, provided more internship, practice and employment opportunities for university talents, and jointly created a new situation of university-enterprise cooperation.

# **Promoting Industry Development**

CR Gas firmly believes that only through the continuous development and progress of the industry can we better meet the needs of our customers and provide better energy services. Therefore, the Group is committed to working together with all parties in the industry to promote the integration of the industry chain and facilitate the healthy development and standardization of the industry, so as to enhance the competitiveness and sustainable development of the entire industry.

In terms of standard formulation, CR Gas participated in the preparation of relevant national standards and norms such as Standard for Construction and Acceptance of City Gas Transmission and Distribution Works (《城鎮燃氣輸配工程施工及驗收標準》) (GB/ T51455-2023), Requirements for Counter-terrorism of City Gas Industry (《城鎮燃氣系統反恐怖防範要求》) (GA 1810-2022), and Standards for Determination of Significant Hidden Hazards of Safety in City Gas Operations (《城鎮燃氣經營安全重大隱患判定標準》). CR Gas undertook the compilation of the Study on the Revision of Management Measures for the Professional Training and Assessment of Employees of Gas Enterprises (《燃氣經營企業從業人員專業培訓考核管理辦法修訂研 究》) of the Ministry of Housing and Urban-Rural Development, and the Handbook on Safety Risk Prevention and Control for Bottled Gas Enterprises (《瓶裝燃氣企業安全風險防控手冊》) of the Ministry of Emergency Management, contributing to the standardized development of safety management in the industry.

# 規範供應鏈管理

# 供應商管理制度

2023年,華潤燃氣發佈《華潤燃氣控股有限公司供應商管理辦法(試行)》,明確規範 招採基本原則、採購程序、監督管理等內 容,實現從供應商准入、評估至退出全流程 閉環管理。

# 供應商管理流程

供應商准入:華潤燃氣的供應商准入流程 分為潛在供應商徵集、資格預審、現場考 察、綜合評審、結果公示5個階段。

- 潛在供應商徵集:集團按照《華潤燃<</li>
   氣工程物資集中、聯合採購管理辦
   法》,踐行責任採購,通過守正平台、
   公司網站等發佈供應商徵集公告;
- 資格預審:在資格審核時納入ESG考量因素,設置供應商質量、環境及職業健康體系認證打分項,對持有質量管理體系ISO 9001、環境管理體系ISO 14001、職業健康安全管理體系ISO 45001的供應商給予相應加分,優先開展合作;
- 現場考察:對特定供應商會進行現場 資質考核,查驗供應商的生產設備、
   原材料、產品和服務情況等,並評估
   供應商的生產環境、員工安全管理制
   度及工作環境;
- 綜合評審&結果公示:通過綜合評審
   結果,篩選出優秀的供應商列入各區
   域公司合格供應商名冊進行公示。

# **Regulating Supply Chain Management**

# Suppliers Management Policy

In 2023, CR Gas issued the Supplier Management Measures of China Resources Gas Group Limited (for Trial Implementation) 《華潤燃氣控 股有限公司供應商管理辦法(試行)》), which clearly regulates the basic principles of recruitment and procurement, procurement procedures, supervision and management, etc., and realizes the closed-loop management of the whole process from supplier admission, evaluation to withdrawal.

# Suppliers Management Process

**Supplier Admission**: The supplier admission process of CR Gas is divided into 5 stages: potential supplier solicitation, pre-qualification, on-site inspection, comprehensive evaluation and result announcement.

- Potential supplier solicitation: The Group practices responsible procurement in accordance with the Management Measures for Central and Joint Procurement of Project Materials of CR Gas (《華 潤燃氣工程物資集中、聯合採購管理辦法》), and publishes supplier solicitation announcements through the Shouzheng platform and the Company website;
- Pre-qualification: ESG considerations are incorporated into the qualification audit, and points are set for suppliers' quality, environmental and occupational health system certifications. Suppliers holding quality management system ISO 9001, environmental management system ISO 14001, and occupational health and safety management system ISO 45001 are given corresponding bonus points, and are prioritized for cooperation;
- On-site inspection: On-site qualification assessment will be conducted for specific suppliers to check the suppliers' production equipment, raw materials, products and services, etc., and to assess the suppliers' production environment, employee safety management policy and working environment;
- Comprehensive evaluation & result announcement: Through comprehensive evaluation results, excellent suppliers are screened and included in the qualified supplier list of each regional company for public announcement.

2023年華潤燃氣共對78類工程物資實施集 中聯合採購,按照責任採購標準篩選,共入 圍供應商207家,全部通過質量、環境和職 業健康安全管理體系認證。

**供應商考核評價:**華潤燃氣通過日常評價和 年度評價,定期對供應商進行考核,以監督 評測供應商的產品和服務質量。

- 年度採購項目可根據採購項目性質及
   規模按照季度、半年度或年度定期開
   展評價,每年不少於一次。
- 在完成日常評價的基礎上,每年對供 應商開展一次年度考核評價,年度考 核評價以定期評價、訂單評價結果作 為支撐。
- 考評維度包括信用、質量、交付、服務等。供應商考核評價得分85分以下的供應商,制定相應的處罰或整改措施:供應商考核評價得分60分以下的供應商,列入黑名單供應商管理。

In 2023, CR Gas implemented central and joint procurement for 78 types of project materials, and selected 207 suppliers in total based on responsibility procurement standards, all of whom have passed the certification of quality, environmental and occupational health and safety management systems.

**Supplier Assessment and Evaluation:** CR Gas regularly assesses suppliers through daily and annual evaluations to monitor and evaluate the quality of suppliers' products and services.

- Annual procurement projects can be evaluated regularly according to the nature and scale of the procurement project on a quarterly, semi-annual or annual basis, not less than once a year.
- On the basis of completing the daily evaluation, the annual assessment and evaluation of suppliers is carried out once a year, and the annual assessment and evaluation is supported by the results of regular evaluation and order evaluation.
- Evaluation dimensions include credit, quality, delivery, and service. Suppliers with a score of 85 points or less in the supplier assessment evaluation will be subject to appropriate penalties or corrective measures; suppliers with a score of 60 points or less in the supplier assessment evaluation will be included in the supplier blacklist.

區域供應商數據 Regional Supplier Data						
地區	Region	單位 Unit	數目 Number			
中部大區	Middle area	家 supplier	380			
華西大區	West China	家 supplier	381			
華東大區	East China	家 supplier	729			
北方大區	Northern area	家 supplier	134			
東南大區	Southeast area	家 supplier	600			
華南大區	South China	家 supplier	451			
其他大區	Other areas	家 supplier	64			
供貨商總數	Total number of suppliers	家 supplier	2,739			

# 供應鏈風險管理

### 供應商失信行為管理:

- 華潤燃氣和集團公司分別設定黑名 單,對供應商失信行為持「零容忍」態 度,一旦供應商失信行為觸發聯合懲 戒的標準,會被列入集團黑名單,在 整個集團進行聯合懲戒。
- 各區域公司定期向總部報送黑名單供 應商信息,對認定的失信供應商在集 團內通報,並通過守正平台進行對外 公示。
- 區域公司對《合格供應商名冊》實施動 態管理,對考核評價不合格或存在失 信行為的供應商,在暫停合作期限內 剔除出合格供應商庫。

# 第三方送檢:

 2023年,共對35類集中聯合採購物 資開展第三方送檢,重要物資類別送 檢覆蓋率83%,已取得172份檢測報
 告,合格率100%。

# Supply Chain Risk Management

### Supplier Default Behavior Management:

- CR Gas and the companies of the Group set up blacklists respectively, holding a "zero-tolerance" attitude towards supplier default behavior. Once the supplier's default behavior triggers the standard of joint disciplinary action, it will be included in the Group's blacklist, and will be subject to joint disciplinary action in the entire Group.
- The regional companies regularly report blacklisted supplier information to the headquarters, and notify the Group of the suppliers recognized as defaulting, and make public announcements through the Shouzheng platform.
- The regional companies implement dynamic management of the Qualified Supplier List (《合格供應商名冊》), and suppliers that fail in assessment and evaluation or have default behavior are removed from the qualified supplier pool within the period of suspended cooperation.

# **Third-Party Inspection:**

 In 2023, a total of 35 types of centralized joint procurement materials were subject to third-party inspection, with 83% coverage of major material categories and 172 inspection reports were obtained, with a 100% pass rate.



# 反腐倡廉:

- 華潤燃氣嚴格落實責任採購,始終將 廉潔作為與供應商合作的前提和基礎,要求雙方均嚴格遵守廉潔有關規定,我們致力於打造廉潔供應鏈,於 《華潤燃氣採購管理制度》中明確要求 供應商在入圍過程、採購合作過程中簽訂誠信合規宣言,宣導誠信合規文化:要求參加供應商實地考察的人員 100%簽訂《物資考察陽光宣言》,並將誠信合規條款嵌入集中聯合採購框架協議和採購合同,開通工程物資誠 信跟蹤郵箱,做好日常監督工作,並 檢驗其合規性。

# 應急預案:

- 降低單一來源:為保證供應鏈供貨的 安全和穩定,在供應商入圍階段增加 全國各地的供應商數量,以確保供貨 的多樣性和穩定性。
- 保障物資庫存:要求成員公司保持合 理的物資庫存,構建物資管理系統, 支持成員公司間物資調撥,增強供應 鏈應急能力。

# Anti-corruption and Integrity:

CR Gas carries out responsible procurement stringently and consistently takes integrity as a prerequisite and basis for collaboration with suppliers, requiring both parties to strictly comply with integrity-related regulations. We are committed to building an incorruptible supply chain, and suppliers are explicitly required under the CR Gas Procurement Management Policy (《華潤燃氣採購管理制度》) to sign a declaration of integrity and compliance to advocate a culture based on integrity and compliance during shortlisting and procurement cooperation, and 100% of the staff attending suppliers' onsite inspection are required to sign a Declaration of Investigation of Goods in a Transparent Manner (《物資考察陽光宣言》). Integrity and compliance clauses are incorporated into the central and joint procurement framework agreements and procurement contracts; an integrity tracking mailbox is set up for project materials to improve routine monitoring and verify compliance.

# **Emergency Plans:**

- Reduce single-source: To ensure the security and stability of supply chain offering, increase the number of suppliers from all over the country during the supplier shortlisting stage to ensure the diversity and stability of supply.
- Maintain material inventory: Member companies are required to maintain a reasonable material inventory, build a material management system to support the transfer of materials between member companies, and enhance the supply chain emergency response capability.

# 關鍵績效指標 Key Performance Indicators

- 報告期內,公司按照責任採購標準篩選的現有供應商佔公司供應商總數比例為100%。
- During the reporting period, the proportion of existing suppliers selected by the Company in accordance with the responsible procurement standards to the total number of suppliers of the Company was 100%.
- 報告期內,公司確定的供應鏈環節中具有重大風險與影響的事件數量為0。
- During the reporting period, the Company identified 0 incident with significant risks or impacts in its supply chain links.

# 促進能力提升

華潤燃氣致力於攜手供應鏈合作夥伴共同成 長,重視供應鏈可持續能力的培養。2023 年,我們面向207家供應商開展「物資管 理系統、潤工作」系統使用培訓覆蓋率達 100%,提供系統開發人員答疑解惑,提升 供應商合作效率。

此外,我們定期組織成員公司開展供應商滿 意度調查,收集並反饋供應商改善建議,激 勵供應商持續提升自身產品和服務質量。 2023年,供應商滿意度調查共計回收5,595 份,覆蓋183家成員公司,對供應商服務評 價滿意及以上的比例為98.5%。

# Capacity Improvement

CR Gas is committed to working with its supply chain partners to grow together, and emphasizes the cultivation of sustainable supply chain capabilities. In 2023, in order to improve the efficiency of supplier cooperation, we conducted training for 207 suppliers on the use of the "Material Management System - RunWork (物資管理系統、潤工 作)" system with a coverage rate of 100%, and arranged for system developers to answer questions.

In addition, we regularly organize our member companies to conduct supplier satisfaction surveys to collect and provide feedback on suppliers' improvement suggestions and motivate suppliers to continuously improve the quality of their own products and services. In 2023, a total of 5,595 copies of supplier satisfaction surveys were collected, covering 183 member companies, 98.5% of which rated the service of the suppliers as satisfactory and above.

# 響應區域性發展戰略

華潤燃氣積極響應國家區域性發展政策,在 京津冀區域、長三角區域、成渝雙城經濟 區、粵港澳大灣區等國家重大戰略區域,積 極拓展及布局大型城市燃氣項目,為區域經 濟發展注入動力。2023年,秉承「用重兵、 全方位、大掃盪、只爭朝夕」的投資方針, 集團簽約了11個城市燃氣項目,簽約總投 資額達到14.9億人民幣。

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同時,本集團緊跟國家清潔能源發展戰 略,持續加大研發投入,積極探索綜合服務 業務領域,繼續拓展綜合能源規模,推動區 域化整合。我們參與國家重點研發項目「氫 進萬家」科技示範工程,擴大建設集「分佈 式光伏、充電樁、分佈式儲能」一體的光儲 充系統項目試點,重視和加強人工智能、大 數據、網絡信息安全等前沿技術研究及應 用,促進集團的可持續發展戰略佈局,推動 國家多種能源協同發展。

# **6.2 SERVING FOR NATIONAL STRATEGIES**

# **Responding to Regional Development Strategy**

CR Gas actively responds to China's regional development policy, and actively expands and lays out large-scale city gas projects in Beijing-Tianjin-Hebei region, Yangtze River Delta region, Chengdu-Chongqing Twin Cities Economic Zone, Guangdong-Hong Kong-Macao Greater Bay Area and other major strategic regions of the country, injecting impetus to the regional economic development. In 2023, adhering to the investment strategy aimed at building a strong team, working in an all-round way, carrying out large-scale operation and seizing every minute, the Group contracted 11 city gas projects, with total signed investment amounting to RMB1.49 billion.

Meanwhile, the Group closely followed the national clean energy development strategy, continues to increase investment in research and development, actively explores comprehensive service business areas, continues to expand the scale of integrated energy and promote regional integration. We participated in the national key research and development project "Hydrogen in Ten Thousand Homes" technology demonstration project, expanded the construction of the pilot project of the photovoltaic storage and charging system integrating "distributed photovoltaic, charging piles and distributed energy storage", emphasized and strengthened the research and application of cutting-edge technologies, such as artificial intelligence, big data and network information security, etc., and promoted the Group's strategic layout for sustainable development and the synergistic development of multiple energy sources in the country.

# 案例:化石能源交通場站大轉型,打造光儲充換放一體能源站 Case Study: Transforming Fossil Energy Transportation Stations to Create Integrated Energy Stations for Photovoltaic Storage, Charging, Swapping and Discharging

2023年12月,華潤燃氣在廣東江門白石正式投入運營「光儲充換放」一體站。作為廣東全省第一個集合光、儲、充、 換、放的微電網綜合能源標杆站,項目有機耦合分佈式光伏、儲能、充電、換電、放電為一體,配套快充車位32個、 超充車位4個,可支持36台新能源汽車同時快速充電,充電速度最快可達每2分鍾充電100公里,每天服務車次可達 1,000餘台,年充/換電量400萬kWh,年減碳量130噸。

In December 2023, CR Gas officially put into operation the "photovoltaic storage, charging, swapping and discharging" integrated station in Baishi Village, Jiangmen City, Guangdong Province. As the first microgrid integrated energy benchmark station in Guangdong Province that integrates photovoltaic, storage, charging, swapping and discharging, the project integrates distributed photovoltaic, energy storage, charging, swapping and discharging into a whole, with 32 fast-charging parking spaces and 4 super-charging parking spaces, which can support the simultaneous fast charging of 36 new energy vehicles with a charging speed up to 2 minutes for 100 kilometer, and serve more than 1,000 vehicles per day, with an annual charging/swapping capacity of 4 million kWh, and an annual carbon reduction of 130 tonnes.

同時,充電站配套建設裝機規模105kw的分佈式光伏電站以及92kwh的電化學儲能櫃,形成了微電網,在外部電網斷 電的情況下,可通過光伏、儲能電池或其他車輛對特定車輛或設備進行應急放電。

At the same time, the charging station is equipped with a distributed photovoltaic power plant with an installed capacity of 105 kW and a 92 kWh electrochemical energy storage cabinet, forming a microgrid that can be used for emergency discharge of specific vehicles or equipment through the photovoltaic, energy storage batteries, or other vehicles in the event of a power outage of the external power grid.

白石站通過天然氣加氣站改造,成為江門市第一個從化石能源完全轉型為新能源的交通場站,未來可通過續建分布式 光伏、綠電交易等途徑,打造成為零碳交通能源站。

Baishi station is the first transportation site in Jiangmen City to be fully converted from fossil fuels to new energy through the renovation of the natural gas refueling station. In the future, it can be transformed into a zero-carbon transportation and energy station through the continuous installation of distributed photovoltaic systems and green power trading.



圖:江門白石「光儲充換放」一體站

Picture: The "photovoltaic storage, charging, swapping and discharging" integrated station in Baishi Village, Jiangmen City



# 推動天然氣體制改革

華潤燃氣充分利用自身城燃優勢,積極響應 國家天然氣體制改革,幫助政府加強市場 治理和監管,配合地區燃氣市場區域化整 合,為實現「一城一網」建設的新格局做出 貢獻。同時,進行優質集團化燃氣企業併 購,擴大集團的區域覆蓋率,進一步締造集 群協同效應,進一步實現規模化、集團化經 營,為經濟發展和民生保障提供支持。

實現昆明煤氣整合、廈門華潤增持並組建河 南平台公司。以現有在運營城市燃氣項目為 基礎,向周邊積極拓展經營區域,盤錦精細 化工產業園、阜陽潁州區鄉鎮、撫州東臨新 區、湖南靖州等項目簽約落地,在推動當地 一城一網、燃氣行業整合方面取得了實質性 進展。

# Boosting the Reform in the Natural Gas System

CR Gas makes full use of its advantages in city gas, actively responds to the reform of the national natural gas system, helps the government to strengthen market governance and supervision, and cooperates with the regional integration of the gas market in the region, so as to contribute to the realization of the new pattern of the construction of "One City One Grid". At the same time, CR Gas seeks mergers and acquisitions of high-quality conglomerate gas enterprises to expand the Group's regional coverage, further create cluster synergies, and further realize large-scale and conglomerate operations to provide support for economic development and livelihood protection.

We realized the integration of Kunming Gas, increased shareholding in Xiamen China Resources and established Henan platform company. Based on the existing city gas projects in operation, we have actively expanded the business area to the periphery, securing the signing and implementation of a number of projects, such as those with Panjin Fine Chemical Industry Park, Fuyang Yingzhou District Township, Fuzhou Donglin New District and Hunan Jingzhou, thus we have made substantial progress in promoting the local one-city-one-grid initiative and gas industry integration. 附錄
Appendix

環境績效

# 可持續發展指標<sup>2</sup>

# SUSTAINABILITY INDICATORS<sup>2</sup>

ENVIRONMENTAL PERFORMANCE

指標	Index	單位 Unit	2023	2022	2021				
綜合績效指標 Overall performance indicator									
環保總投入	Total environmental investment	萬港元 HK\$'0,000	4,512.08	4,479.84	4,417.69				
節能減排技術改進投入	Investment in technological upgrade for energy saving and emission reduction	萬港元 HK\$'0,000	4,377.16	4,243.87	4,202.99				
環保培訓參與人次	Participants of environmental protection training	人次 Attendance	221,597	201,625	191,127				
環保培訓總時長	Total hours of environmental protection training	小時 Hour	367,789	354,579	348,967				
環保培訓總投入	Total investment in environmental protection training	萬港元 HK\$'0,000	200.83	182.07	174				
新建項目執行環境和 社會影響評估的比率	Ratio of new construction projects conducting environmental and social impact assessment	百分比 %	100	100	100				
A1.1︰排放物種類及相關排放數據 Types of emissions and respective emissions data									
硫氧化物排放總量	Total sulphur oxides emissions	千克 kg	93.75	89.99	96.06				

<sup>2</sup> 2023年開展ESG指標歸口調整及數據收集統計方法優化工作,對2022年少許數據進行重述。

<sup>2</sup> ESG indicator attribution adjustments and optimization of statistical methods for data collection were made in 2023, with a restatement of a small portion of the 2022 data.
Appendix



- <sup>3</sup> 参考國家發改委委託國家應對氣候變化戰略研究和國際合作中心編製的《工業其他行業企業溫室氣體排放核算方法與指南報告》(試行)和 《中國石油和天然氣生產企業溫室氣體排放核算方法與報告指南》(試行)對華潤燃氣2023年度溫室氣體排放進行核算。
- <sup>3</sup> The greenhouse gas emissions of CR Gas in 2023 were calculated with reference to the Accounting Method and Reporting Guide for Greenhouse Gas Emissions from Industry and Other Sectors (for Trial Implementation) (《工業其他行業企業溫室氣體排放核算 方法與指南報告》(試行)) and the Accounting Method and Reporting Guide for Greenhouse Gas Emissions from Chinese Petroleum and Natural Gas Production Enterprises (for trial implementation) (《中國石油和天然氣生產企業溫室氣體排放核算方法與報告指南》(試 行))developed by the National Climate Change Strategy Research and International Cooperation Center under the engagement of the National Development and Reform Commission.
- 4 溫室氣體範圍一排放量,根據汽油、柴油、天然氣總消耗量進行計算,相關排放因子來自《中國石油和天然氣生產企業溫室氣體排放核算 方法與報告指南》(試行)中「常見化石燃料特性參數缺省值」附錄。
- <sup>4</sup> Scope 1 emissions of greenhouse gases were calculated based on the total consumption of gasoline, diesel and natural gas, and the relevant emission factors were derived from the Appendix "Default Values of Special Parameters of Common Fossil Fuel" of the Accounting Method and Reporting Guide for Greenhouse Gas Emissions from Chinese Petroleum and Natural Gas Production Enterprises (for trial implementation) (《中國石油和天然氣生產企業溫室氣體排放核算方法與報告指南》(試行)).
- 5 範圍二溫室氣體排放主要來源外購電力。相關排放因子參考《關於做好2023 2025年發電行業企業溫室氣體排放報告管理有關工作的通知》。
- <sup>5</sup> Greenhouse gas emissions under scope 2 mainly generated from purchased electricity. Relevant emission factors were based on reference to the Notice on the Management of Enterprise Greenhouse Gas Emissions Reporting by Power Generation Industry for 2023-2025" (《關於做好 2023-2025 年發電行業企業溫室氣體排放報告管理有關工作的通知》).

指標	Index	單位 Unit	2023	2022	2021
A1.4:無害廢棄物總量及密度	Total non-hazardous waste produc	ed and intensity			
無害廢棄物排放總量	Total non-hazardous waste produced	噸 tonnes	172.30	183.12	未披露 Undisclosed
無害廢棄物產生密度	Intensity of non-hazardous waste produced	噸/億港元營收 tonnes/revenue of HK\$'00 million	0.1701	0.1941	未披露 Undisclosed
A2.1︰直接、間接能源總耗量	及密度 Direct/indirect energy consu	mption and intensity			
綜合能源消耗折算標煤總量	Total overall energy consumption (converted to standard coal)	萬噸標準煤 '0,000 tonnes of standard coal	4.3779	4.212	4.3147
綜合能耗折算標煤密度	Overall energy consumption density (converted to standard coal)	萬噸標煤/ 億港元營業額 '0,000 tonnes of standard coal/ revenue of HK\$'00 million	0.0043	0.0045	0.0055
萬港元營業收入綜合能耗 (可比價)	Overall energy consumption per HK\$'0,000 revenue (at comparable price)	噸標準煤/萬港元 tonnes of standard coal/HK\$'0,000	0.0040	0.0036	0.0046
萬港元增加值綜合能耗 (可比價)	Overall energy consumption per HK\$'0,000 value added (at comparable price)	噸標準煤/萬港元 tonnes of standard coal/HK\$'0,000	0.0214	0.0183	0.0167
萬元人民幣增加值 綜合能耗(可比價)	Overall energy consumption per RMB'0,000 value added (at comparable price)	噸標煤/萬元 tonnes of standard coal/RMB'0,000	0.0238	0.0213	0.0201
柴油消耗量	Diesel consumption volume	噸 tonnes	776.50	874.36	852.92
柴油消耗量密度	Diesel consumption density	噸/億港元營業額 tonnes/revenue of HK\$'00 million	0.767	0.927	1.091
汽油消耗量	Gasoline consumption volume	噸 tonnes	3,933.93	3,721.25	3,917.10
汽油消耗量密度	Gasoline consumption density	噸/億港元營業額 tonnes/revenue of HK\$'00 million	3.885	3.945	5.011
天然氣消耗量	Natural gas consumption volume	萬標準立方米 '0,000 standard m³	989.064	988.953	966.323



指標	Index	單位 Unit	2023	2022	2021	
天然氣消耗量密度	Natural gas consumption density	萬標準立方米/ 億港元營業額 '0,000 standard m³/ revenue of HK\$'00 million	0.977	1.048	1.236	
外購電力消耗量	Externally purchased power consumption volume	萬千瓦時 '0,000 kWh	19,121.26	18,298.24	18,952.56	
外購電力消耗密度	Externally purchased power consumption density	萬千瓦時/ 億港元營業額 '0,000 kWh/revenue of HK'00 million	18.881	19.397	24.244	
A2.2:總耗水量及密度 To	tal water consumption and intensity					
水資源耗用量	Water consumption	噸 tonnes	1,492,407	1,531,400	1,483,700	
用水強度	Water consumption intensity	噸/萬港元營業額 tonnes/revenue of HK\$'0,000	0.150	0.160	0.190	
A2.5:製成品所用包裝材料	科的總量 Total packaging material used	for finished products				
燃氣具包裝材料	Packaging materials of gas appliances	噸 tonnes	1,193.28	1,537.30	1,208.03	
社會績效						
指標		單位 Unit	2023	2022	2021	
安全培訓 Safety training						
安全培訓投入	Safety training investment	萬港元 HK\$'0,000	3,850.27	3,320.20	2,804.77	
安全培訓總時長	Total hours of safety training	小時 Hour	772,641	726,935	740,816	
安全培訓參與人次	Participants of safety training	人次 Attendance	372,758	357,763	338,874	
安全培訓覆蓋率	Coverage of safety training	百分比 %	100	100	100	
安全應急演練次數	Number of safety emergency response drills conducted	次 Number of times	4,817	4,508	4,278	
安全生產 Safe production						
安全生產投入	Safe production investment	萬港元 HK\$'0,000	101,403	94,515	70,645	
安全生產事故數	Number of safe production accidents	次 Number of times	0	0	0	

指標	Index	單位 Unit	2023	2022	2021		
B1.1:按性別、僱傭類型、年齡組別及地區劃分的僱員總數 Total workforce by gender, employment type, age group and geographical region							
員工總人數	Total number of employees	人 Person	58,608	56,114	52,354		
按性別劃分的僱員總數 Total workforce by gender							
女性員工人數	Number of female employees	人 Person	19,341	19,864	18,324		
男性員工人數	Number of male employees	人 Person	39,267	36,250	34,030		
按年齡劃分的僱員總數 Total wo	rkforce by age						
<b>20-30</b> 歲員工人數	Number of employees aged 20-30	人 Person	7,468	8,032	8,473		
<b>31-40</b> 歲員工人數	Number of employees aged 31-40	人 Person	22,020	20,766	21,808		
<b>41-50</b> 歲員工人數	Number of employees aged 41-50	人 Person	17,500	16,409	16,392		
>50歲員工人數	Number of employees aged > 50	人 Person	11,620	10,907	5,681		
按受僱職級劃分的僱員總數 <b>Tota</b>	I workforce by employment rank						
管理層員工人數	Number of management staff	人 Person	881	1,042	1,777		
中層員工人數	Number of middle-level staff	人 Person	3,762	3,198	3,581		
基層員工人數	Number of elementary staff	人 Person	53,965	51,874	46,996		
按地區劃分的僱員總數 Total wo	rkforce by geographical region						
中部大區僱員總數	Number of employees from Middle area	人 Person	13,065	12,005	-		
華西大區僱員總數	Number of employees from West China	人 Person	8,770	8,128	_		
華東大區僱員總數	Number of employees from East China	人 Person	12,005	8,549	-		
北方大區僱員總數	Number of employees from Northern area	$\downarrow$ Person	4,140	4,517	-		
東南大區僱員總數	Number of employees from Southeast area	$\downarrow$ Person	6,865	6,199	-		
華南大區僱員總數	Number of employees from South China	人 Person	2,970	3,034	-		
其他大區僱員總數 (包含天津、重燃)	Number of employees from other areas (including Tianjin and Chongqing Gas)	人 Person	10,793	13,682	-		



指標	Index	單位 Unit	2023	2022	2021			
B1.2:按性別、年齡組別及地區畫	割分的僱員流失比率 Employee turnover rate	e by gender, age group a	nd geographic	al region				
員工流失率	Employee turnover rate	百分比 %	1.87	3	3			
按性別劃分的僱員流失比率 Employee turnover rate by gender								
男性員工流失率	Male employee turnover rate	百分比 %	1.74	3	3			
女性員工流失率	Female employee turnover rate	百分比 %	2.13	2	2			
按年齡劃分的僱員流失比率 Empl	loyee turnover rate by age							
<b>20-30</b> 歲員工流失率	Turnover rate of employees aged 20-30	百分比 %	4.89	5	6			
<b>31-40</b> 歲員工流失率	Turnover rate of employees aged 31-40	百分比 %	1.81	2	2			
<b>41-50</b> 歲員工流失率	Turnover rate of employees aged 41-50	百分比 %	1.00	1	2			
>50歲員工流失率	Turnover rate of employees aged > 50	百分比 %	1.35	1	2			
按受僱職級劃分的員工流失比率 <b>E</b>	Employee turnover rate by employment ra	ank						
管理層員工流失率	Turnover rate of management staff	百分比 %	0.45	0.38	1			
中層員工流失率	Turnover rate of middle-level staff	百分比 %	0.45	1	1			
基層員工流失率	Turnover rate of elementary staff	百分比 <b>%</b>	1.99	2	3			
按地區劃分員工流失比率 <b>Employ</b>	vee turnover rate by geographical region							
中部大區流失比率	Turnover rate of employees from Middle area	百分比 <b>%</b>	1.65	3	-			
華西大區流失比率	Turnover rate of employees from West China	百分比 %	1.94	2	-			
華東大區流失比率	Turnover rate of employees from East China	百分比 %	1.82	3	-			
北方大區流失比率	Turnover rate of employees from Northern area	百分比 %	3.43	4	-			
東南大區流失比率	Turnover rate of employees from Southeast area	百分比 %	2.90	3	-			
華南大區流失比率	Turnover rate of employees from South China	百分比 <b>%</b>	1.99	3	-			
其他大區流失比率	Turnover rate of employees from other areas	百分比 <b>%</b>	0.85	4	_			

指標	Index	單位 Unit	2023	2022	2021			
B2.1:過去三年 (包括匯報年度) 每年因工亡故的人數及比率 Number and rate of work-related fatalities occurred in each of the past three years including the reporting year								
員工傷亡人數	Employee fatalities	人 Person	0	0	0			
B2.2:因工傷損失工作日數 Lost days due to work injury								
因工傷損失工作日數	Work days lost due to injury	天 Day	0	0	0			
損失工作日事故率 <b>(LTIFR)</b> 一 員工	Lost time injury frequency rate (LTIFR)- Employee	百分比 %	0	0	0			
損失工作日事故率 <b>(LTIFR)</b> 一 承包商	Lost time injury frequency rate (LTIFR)- Contractor	百分比 %	0	0	0			
B3.1:按性別及僱員類別劃分的	受訓僱員百分比 The percentage of employ	ees trained by gender and	d employee ca	tegory				
按性別劃分的受訓僱員百分比 Th	ne percentage of employees trained by ge	ender						
男	Male	百分比 %	100	59	63			
女	Female	百分比 %	100	59	59			
按受僱職級劃分的受訓僱員百分	$ m \pm$ The percentage of employees trained b	oy employment rank						
管理層	Management staff	百分比 %	100	44	35			
中層員工	Middle-level staff	百分比 %	100	69	63			
基層員工	Elementary staff	百分比 %	100	59	62			
B3.2:按性別及僱員類別劃分, category	每名僱員完成受訓的平均時數 The average ti	raining hours completed	per employee	by gender and	employee			
培訓總時數	Total hours of training	小時 Hour	774,265	524,086	790,471			
人均培訓投入	Training investment per person	港元 HK\$	821.5	817.94	1,315.21			
人均受訓時長	Training hours per person	小時 Hour	13.2	12.8	24.5			
員工培訓覆蓋率	Employee training coverage	百分比 %	100	100	100			
按性別劃分的人均受訓時數 Ave	rage training hours per person by gender	r						
男	Male	小時 Hour	14.33	21.5	24.1			
女	Female	小時 Hour	10.93	17.9	25.4			



指標	Index	單位 Unit	2023	2022	2021			
受僱職級劃分的人均受訓時數 Average training hours per person by employment rank								
管理層	Management staff	小時 Hour	9.13	15.4	47.4			
中層員工	Middle-level staff	小時 Hour	23.5	19.3	25.9			
基層員工	Elementary staff	小時 Hour	12.56	13.7	23.9			
B5.1:按地區劃分的供貨商數目 Number of suppliers by geographical region								
中部大區供貨商數量	Number of suppliers from Middle area	家 Supplier	380	495	-			
華西大區供貨商數量	Number of suppliers from West China	家 Supplier	381	419	_			
華東大區供貨商數量	Number of suppliers from East China	家 Supplier	729	665	-			
北方大區供貨商數量	Number of suppliers from Northern area	家 Supplier	134	232	-			
東南大區供貨商數量	Number of suppliers from Southeast area	家 Supplier	600	476	-			
華南大區供貨商數量	Number of suppliers from South China	家 Supplier	451	428	-			
其他大區供貨商數量	Number of suppliers from other areas	家 Supplier	64	37	-			
供應商總數	Total number of suppliers	家 Supplier	2,739	2,752	2,960			
B6.2:產品及服務投訴 Produc	t and service complaints							
產品合格率(百尊)	Rate of qualified products (percentage)	百分比 <b>%</b>	100	100	100			
客戶滿意度	Customer satisfaction	分 Score	96.4	95.7	95.0			
B8.2: 社區投入 Community in	vestment							
困難員工幫扶投入	Investment in employees in hardships	萬港元 HK\$'0,000	326.14	326.1	273.56			
救助困難員工投入	Investment in employees in difficulty	萬港元 HK\$'0,000	46.4	73.1	35.5			
走訪慰問困難員工家庭投入	Investment in visits and comforts delivered to families of employees in difficulty	萬港元 HK\$'0,000	64.9	57.9	50			
資助困難員工子女入學投入	Investment in the education of children of employees in difficulty	萬港元 HK\$'0,000	2.36	6.98	7.4			
社會捐贈總額	Total social donations	萬港元 HK\$'0,000	370.61	493.71	511			
公益志願服務投入總時長	Total hours devoted to charity and volunteer service	萬小時 0'000 Hours	26.4	25.3	25.4			
員工志願活動人次	Participants of volunteer activities	人次 Attendance	79,037	76,429	98,000			
扶貧專項資金投入	Special funds for poverty alleviation	萬港元 HK\$'0,000	216.70	237.40	446.54			

指標	Index 單位 Unit		2023	2022	2021
綜合績效指標 Overall perform	ance indicator				
安全管理人員持證人數	Number of licensed safety management personnel	人 Person	4,766	4,456	3,513
註冊安全工程師人數	Number of registered safety engineers	人 Person	1,089	1,057	1,003
供應商通過質量、環境和職業 健康安全管理體系認證的比例	Percentage of certified suppliers under the quality, environmental and occupational health and safety management systems	百分比 %	100	100	100
供應商受到經濟、社會或環境 方面處罰的個案數量	Number of suppliers being imposed with economic, social or environmental penalties	個 Number	0	0	0
責任採購比率	Responsible procurement coverage	百分比 <b>%</b>	100	100	100
新增就業人數	Number of newly employed employees	人 Person	3,962	2,551	2,051
女性管理者比例	Ratio of female managers	百分比 <b>%</b>	15.66	24.59	23.19
殘疾人僱傭人數	Number of disabled persons employed	人 Person	97	92	86
少數民族員工人數	Number of ethnic minorities employed	人 Person	1,672	1,601	1,634
接收應屆畢業生人數	Number of fresh graduates employed	人 Person	616	750	485
勞動合同簽訂率	Coverage of labour contracts	百分比 %	100	100	100
社會保險覆蓋率	Coverage rate of social insurance	百分比 %	100	100	100
人均帶薪休假天數	Average paid leave days per person	天 Day	11	11	11
員工平均工資水平	Average salary of employees	萬港元 HK\$'0,000	12.85	10.96	12.95
年度新增職業病和企業累計職 業病	New occupational disease and accumulative occupational disease during the year	例 Case	0	0	0
體檢及健康檔案覆蓋率	Coverage for medical check-ups and health archiving	百分比 %	100	100	100



## 指標索引

## **INDICATOR INDEX**

ESG指引範疇	ESG指引層面		
ESG Guideline	ESG Guideline	關鍵績效指標(KPI)	披露章節
Areas	Aspects	Key Performance Indicators (KPI)	Chapter/Section of Disclosure
	A1排放物 Emissions	一般披露 General Disclosure	四、深化環境管理,踐行低碳發展 4. Deepening Environment Management and Practicing Low-carbon Development
		A1.1排放物種類及相關排放數據 The types of emissions and respective emissions data	可持續發展指標 Sustainability Indicators
		A1.2直接 (範圍1)及能源間接 (範圍2) 溫室氣體排放量 (以噸計算)及 (如適用) 密度 (如以每產量單位、每項設施計算)。 Direct (Scope 1) and energy indirect (Scope 2) green house gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	可持續發展指標 Sustainability Indicators
		A1.3所產生有害廢棄物總量(以噸計算)及(如適用)密度(如以每產量單位、每項設施計算) Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	可持續發展指標 Sustainability Indicators
環境 Environmental		A1.4所產生無害廢棄物總量(以噸計算)及(如適用)密度(如以每產量單位、每項設施計算) Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility)	可持續發展指標 Sustainability Indicators
	A2資源使用 Use of Resources	一般披露 General Disclosure	四、深化環境管理,踐行低碳發展 4. Deepening Environment Management and Practicing Low-carbon Development
		A2.1按類型劃分的直接及/或間接能源(如電、氣或油)總耗量(以千個千瓦時計算)及密度(如以每產量單位、每項設施計算)。 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).	可持續發展指標 Sustainability Indicators
		A2.2總耗水量及密度 (如以每產量單位、每項設施計算) Water consumption in total and intensity (e.g. per unit of production volume, per facility)	可持續發展指標 Sustainability Indicators
		A2.5製成品所用包裝材料的總量(以噸計算)及(如適用)每生產單位佔量 Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced	可持續發展指標 Sustainability Indicators

ESG指引範疇 ESG Guideline	ESG指引層面 ESG Guideline	闄轋嫧效指標(KPI)	披露章節
Areas	Aspects B1僱傭 Employment	Key Performance Indicators (KPI) 一般披露 General Disclosure	Chapter/Section of Disclosure 五、堅持以人為本,注重員工成長 5. Upholding the People-oriented Principle and Focusing on the Growth of Employees
社會		B1.1按性別、僱傭類型 (如全職或兼職)、年齡組別及地區劃分的僱員總數 Total workforce by gender, employment type (e.g. full-time or part-time), age group and geographical region	可持續發展指標 Sustainability Indicators
		B1.2按性別、年齡組別及地區劃分的僱員流失比率 Employee turnover rate by gender, age group and geographical region	可持續發展指標 Sustainability Indicators
	B2健康與安全 Health and Safety	一般披露 General Disclosure	<ul> <li>三、勇擔社會責任,傳遞溫暖愛心</li> <li>3. Undertaking Social Responsibility to</li> <li>Pass on Warmth</li> <li>五、堅持以人為本,注重員工成長</li> <li>5. Upholding the People-oriented</li> <li>Principle and Focusing on the Growth of</li> <li>Employees</li> </ul>
Social		B2.1過去三年(包括匯報年度)每年因工亡故的人數及比率 Number and rate of work-related fatalities occurred in each of the past three years including the reporting year	可持續發展指標 Sustainability Indicators
		B2.2因工傷損失工作日數 Lost days due to work injury	可持續發展指標 Sustainability Indicators
		一般披露 General Disclosure	五、堅持以人為本,注重員工成長 5. Upholding the People-oriented Principle and Focusing on the Growth of Employees
	B3發展與培訓 Development and Training	B3.1按性別及僱員類別(如高級管理層、中級管理層)劃分的受訓僱員百分比 The percentage of employees trained by gender and employee category (e.g. senior management, middle management)	可持續發展指標 Sustainability Indicators
		B3.2按性別及僱員類別劃分,每名僱員完成受訓的平均時數 The average training hours completed per employee by gender and employee category	可持續發展指標 Sustainability Indicators



ESG指引範疇 ESG Guideline Areas	ESG指引層面 ESG Guideline Aspects	關鍵績效指標(KPI) Key Performance Indicators (KPI)	披露章節 Chapter/Section of Disclosure
	B5供應鏈管理 Supply Chain	一般披露 General Disclosure	六、攜手夥伴共赢,賦能行業發展 6. Collaborating with Partners to Achieve Mutual Success and Empower Industry Growth
	Management	B5.1按地區劃分的供貨商數目 Number of suppliers by geographical region	可持續發展指標 Sustainability Indicators
		一般披露 General Disclosure	二、保障產品質量,提供品質服務 2. Guaranteeing Product Quality and Providing Quality Service
		B6.1已售或已運送產品總數中因安全與健康理由而須回收的百分比 Percentage of total products sold or shipped subject to recalls for safety and health reasons	不適用 N/A
	B6產品責任 Product Responsibility	B6.2接獲關於產品及服務的投訴數目以及應對方法 Number of products and service related complaints received and how they are dealt with	二、保障產品質量,提供品質服務 2. Guaranteeing Product Quality and Providing Quality Service
		B6.3描述與維護及保障知識產權有關的慣例 Description of practices relating to observing and protecting intellectual property rights	二、保障產品質量,提供品質服務 2. Guaranteeing Product Quality and Providing Quality Service
		B6.5描述消費者數據保障及隱私政策,以及相關執行及監察方法 Description of consumer data protection and privacy policies, and how they are implemented and monitored	二、保障產品質量,提供品質服務 2. Guaranteeing Product Quality and Providing Quality Service
	B7反貪污	一般披露 General Disclosure	一、堅守合規經營,完善可持續發展管理 1. Adhering to Compliance Operation and Improving Sustainable Development Management
	Anti-Corruption	B7.1於匯報期內對發行人或其僱員提出並已審結的貪污訴訟案件的數目及訴訟結果 Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases	一、堅守合規經營,完善可持續發展管理 1. Adhering to Compliance Operation and Improving Sustainable Development Management
		一般披露 General Disclosure	三、勇擔社會責任,傳遞溫暖愛心 3. Undertaking Social Responsibility to Pass on Warmth
	B8社區投資 Community Investment	B8.2在專注範疇所動用資源 (如金錢或時間) Resources contributed (e.g. money or time) to the focus area	<ul> <li>三、勇擔社會責任,傳遞溫暖愛心</li> <li>3. Undertaking Social Responsibility to Pass on Warmth</li> <li>可持續發展指標</li> <li>Sustainability Indicators</li> </ul>







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