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The Hong Kong and China Gas Company Limited

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香港中華煤氣有限公司
The Hong Kong and China Gas Company Limited
(Stock Code: 3)

VISION

To be a leading clean and smart energy supplier, with a view to creating a sustainable world driven by green energy.

MISSION

To provide our customers with safe, reliable, clean and smart energy along with quality services, while committed to fulfilling our social responsibility, ensuring sustainable business growth, enhancing our shareholders' return on investment, and bringing long-term benefit for our planet, society, and stakeholders.

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About This Report

Reporting Approach

The Hong Kong and China Gas Company Limited (Towngas) and its subsidiaries (the Group, We) are committed to enhancing our Environmental, Social and Governance (ESG) performance and disclosure quality. This ESG Report (this Report) has been prepared in accordance with reporting principles including materiality, quantitative, balance, and consistency, to present the Group's ESG performance of 2024 and provide valuable information to our diverse stakeholders.

Reporting Scope

This Report covers the ESG performance and development strategies of the Group from 1 January 2024 to 31 December 2024 (the year) and is in line with the Group's financial year.

Editorial Guidelines

This Report was prepared in accordance with Appendix C2: Environmental, Social and Governance Reporting Guide (ESG Reporting Guide) under the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (SEHK), and the Global Reporting Initiative (GRI) Universal Standards 2021.

Our disclosures are benchmarked against the following reporting standards or frameworks:

- IFRS® Sustainability Disclosure Standards – IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information and IFRS S2 Climate-related Disclosures published by the International Sustainability Standards Board (ISSB)
- Sustainability Accounting Standards issued by the Sustainability Accounting Standards Board (SASB) for the Gas Utilities & Distributors sectors
- Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures issued by the Task Force on Climate-related Financial Disclosures (TCFD)
- Recommendations of the Taskforce on Nature-related Financial Disclosures issued by the Taskforce on Nature-related Financial Disclosures (TNFD)
- GRI 11: Oil and Gas Sector Disclosure 2021
- China Enterprise Reform and Development Society and CSR Cloud Research Institute（責任雲研究院）Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises (CASS-ESG 6.0)
- ISO 26000 Guidance on Social Responsibility of the International Organisation for Standardisation

Independent Assurance

This year, Towngas has engaged the British Standards Institution (BSI) as a third-party organisation to conduct independent assurance on the content of this Report. For detailed information, please refer to page 217.

Acknowledgements

Throughout the report preparation process, stakeholders from both within and beyond our organisation have generously shared their insights and recommendations regarding Towngas' ESG development through diverse engagement channels, including questionnaire surveys and focus group interviews. We extend our heartfelt appreciation to all stakeholders for their invaluable efforts in joining forces to create a sustainable future.

Report Access and Feedback

The full version of this Report is available on the Towngas website and the website of the SEHK. Your opinions of this Report can be shared with us by completing the online questionnaire or emailing us at esg@towngas.com.

Board Statement

The Towngas Board of Directors (the Board), serving as the highest governance body of Towngas, oversees material ESG issues through annual reviews. Additionally, the Board assess and identify ESG-related risks through the risk management framework, thereby ensuring comprehensive ESG risk management.

During the year, we actively implemented sustainable development initiatives at multiple operational levels, creating shared value for our varied stakeholder groups. Through in-depth stakeholders communication and engagement, the Group identified priority levels for different ESG issues and established consistent monitoring processes. This approach enables our ESG strategies to effectively address today's global challenges.

In the future, while striving for exceptional business performance, we will balance the needs and expectations of all stakeholders and remain committed to fostering a brighter future for the planet, society, and all stakeholders.

Chairmen's Statement

As we reflect on the past year, we find ourselves in a pivotal junction within a rapidly transforming global landscape marked by escalating geopolitical tensions and economic uncertainties. The year 2024 signifies a critical awakening moment in our global climate journey, as we confronted the alarming reality of global average temperatures being 1.6°C above pre-industrial levels – crossing the vital 1.5°C threshold established by the Paris Agreement. This stark reality underscores the urgent necessity for immediate and decisive climate action.

Energy enterprises play an integral role in the daily lives of people across all sectors and communities, serving as essential pillars of economic development. In this context, Towngas has emerged as a leading force for energy transition and sustainable development, leveraging strategic foresight to navigate challenging business environments. With a solid foundation in city-gas operations, we have been diversifying our portfolio ever since expanding onto the Chinese mainland 30 years ago. Now, the Group encompasses water and environmental businesses, as well as growth-oriented ventures, including green energy, extended businesses and distributed photovoltaics. With an unwavering commitment to our mission as a clean and smart energy supplier, we embrace our profound responsibility to foster partnerships across sectors, shaping a sustainable future for our planet and ensuring a thriving world for generations to come.

Harnessing New Energy Opportunities for Green Transport

As Hong Kong's longest-standing public utility company, our pursuit of energy transition remains a top priority, consistently delivering cleaner, lower-carbon energy solutions. Our journey began with the phase-out of coal as a feedstock in the 1960s, before integrating natural gas and biogas in local town gas production, current arriving at significant strategic investments in new energy research. This commitment reflects our deep-rooted culture of energy innovation. Our tangible results include applications for green methanol, hydrogen, and Sustainable Aviation Fuel (SAF), designed for use in sea, land, and air transport. These initiatives not only support China's "30-60" dual carbon goals but also align with the HKSAR Government's action plan towards carbon neutrality in 2050. Throughout the year, delegations from the National Energy Administration visited Towngas twice to gain insights into our development strategies and achievements in green low-carbon transformation, highlighting our contributions to the national energy development agenda.

Towngas has firmly established itself as a frontrunner in the green methanol industry, becoming the first company on the Chinese mainland to secure both International Sustainability & Carbon Certification (ISCC) EU and ISCC PLUS certifications. We successfully delivered green methanol to overseas customers during the year, exemplifying our pioneering role in promoting the cleaner fuel. Additionally, our strategic collaborations with Foran Energy Group Company Limited are paving the way for production bases in Inner Mongolia, the Greater Bay Area, Hainan, and Fujian, among other locations with the ambition of achieving an annual production capacity of one million tonnes.

Recognising hydrogen as a promising low-carbon energy source, we forged a partnership with Veolia this year to develop Hong Kong's inaugural "green hydrogen" project at the South-East New Territories Landfill Extension (SENTX) in Tseung Kwan O. This innovative initiative will utilise biogas to convert waste into energy, with constructions expected to be completed and undergo testing in 2025. Additionally, the introduction of the Strategy of Hydrogen Development in Hong Kong has fostered an enabling environment for local hydrogen advancement. Amidst these favourable conditions, the implementation of various hydrogen pilot projects, including hydrogen-powered electric vehicle charging stations and hydrogen power generation at construction sites, is poised to demonstrate pioneering applications with significant potential for broader technological deployment and replications in future developments.

A notable achievement for our green initiatives has been the recognition of our incubated company, EcoCeres, Inc., for its SAF produced entirely from waste-based biomass. Through a tri-party pilot project, it has successfully sold approximately 3,400 tonnes of SAF to HSBC for use on Cathay Pacific flights departing from the Hong Kong International Airport. This pioneering collaboration not only exemplifies innovative decarbonisation technology but also plays a vital role in advancing the local SAF ecosystem.

Spreading Love for 25 Years Through Groundbreaking Initiatives

Over the years, Towngas has upheld a people-centric and community-focused approach, demonstrating our dedication to caring for the community and promoting public welfare as integral to our corporate social responsibilities. Embodying these principles, 2024 marked the 25th anniversary of the Towngas Volunteer Service Team. Since its establishment in 1999, our volunteering team has contributed over one million service hours, benefitting more than 8.5 million people. Building on this strong foundation of community engagement, we have strategically expanded our beneficiary groups to include elderly individuals with swallowing difficulties, seniors with emigrant children, and ethnic minorities, striving to create shared value with an increasingly diverse range of stakeholders.

Excelling in Climate Governance Through Refined Corporate Governance

Proper corporate governance is the cornerstone of implementing ESG in our daily operations. Reflecting our commitment in climate governance, Towngas was the only enterprise to receive dual honours at the inaugural Climate Governance Awards held by The Hong Kong Institute of Directors. This prestigious recognition validates our effective implementation of forward-looking climate strategies and our relentless pursuit of low-carbon transition through efficient energy management and clean energy development. Further strengthening our governance framework, we appointed Professor Anna Wong Wai-kwan as an Independent Non-Executive Director this year. This strategic appointment aligned with our belief that increasing board diversity will further enhance our ESG governance and performance.

Empowering Low-Carbon Technologies to Accelerate Green Energy Innovation

Transforming low-carbon energy technologies from conception to realisation is inherently a gradual journey that requires robust support, encompassing capital investment and practical trials. This understanding led to our establishment of the TERA-Award Smart Energy Innovation Competition (TERA-Award), which has evolved into an accelerator platform for zero-carbon technologies. It offers a unique blend of real-world application scenarios, financial incentives, and investment prospects. We take pride in witnessing the TERA-Award's expanding influence, having attracted 933 innovative projects from 59 countries and regions across its three editions. Building on this success, the fourth edition is in full swing. We remain steadfast in our commitment to leveraging our position as a green energy enterprise to accelerate emerging technologies, foster collaboration among industry experts, and catalyse new partnerships in low-carbon development, all in service of preserving our planet's natural heritage.

The remarkable strides we achieved during the year were a testament not only to our dedicated efforts but also to the unfaltering support and trust of our diverse stakeholder community. On behalf of the Board of Directors, we express our heartfelt gratitude to our dedicated employees, loyal customers, committed shareholders, valued investors, trusted suppliers, respected industry peers, and the broader community who have joined us on this transformative journey. Looking ahead, we are excited to forge collaborative partnerships across all sectors, infusing our cities with sustainable vitality, advancing national carbon reduction initiatives, and cultivating a lasting legacy of environmental stewardship for generations to come.

Chairman
Dr. the Hon. Lee Ka-kit
Hong Kong, 19 March 2025

Chairman
Dr. Lee Ka-shing

Managing Director's Statement

As we navigate the complexities of 2024, marked by economic recovery challenges and escalating climate risks, I am proud to share that Towngas has not only maintained steady progress but has also embraced these challenges as opportunities to drive business growth. Our unique position within the energy sector enables us to seamlessly integrate ESG principles into our daily operations, transforming uncertainties into pathways for sustainable advancement. In alignment with our strategic long-term vision, we have structured our businesses into two key domains: Utilities Businesses and Growth Businesses. The latter encompasses the Group's key growth engines, spanning renewable energy initiatives, extended businesses, and green energy projects.

Energy enterprises are intricately connected with various industries across society. Our primary objective is to generate lasting value for all our stakeholders, including employees, contractors and suppliers, investors, customers, local communities, NGOs, professional bodies and regulators. By maintaining quality communication, we can better understand stakeholder needs and concerns to craft strategies that propel us towards a more sustainable and collaborative future.

Nurturing a Caring Culture for Employee Well-Being

Employees are essential to our continued progress. The caring culture we cultivate reflects our deep commitment to nurturing a workforce that thrives in a supportive environment, and promoting holistic well-being. In 2024, we celebrated significant achievements, including receiving the Employer of Choice Award for the ninth consecutive year, along with Towngas' first Employee Communication Award and the Workplace Happiness Award. These accolades affirmed our dedication to fostering positive dialogue, implementing diverse staff engagement initiatives, and creating workplace policies that support family life. Additionally, the renewed recognition from the Chief Happiness Officer Association through its "CHO Appreciation Award 2024" highlighted our sustained commitment to enhancing employee satisfaction and contentment.

Leveraging Green Finance to Decarbonise the Value Chain

Our value chain thrives on strong partnerships with contractors and suppliers, as these long-term collaborative relationships are essential for mutual benefit. This year, we launched a pioneering financial initiative in collaboration with HSBC, namely the "Towngas Green Supply Chain Finance Programme". This programme positions us as the first utility in Greater China to launch a sustainability-focused supplier payment solution, paving the way for decarbonisation throughout our value chain. This structure not only facilitates access to preferential financing for qualifying suppliers meeting ESG benchmarks but also enables us to gather further Scope 3 emissions data. Additionally, we provide ESG trainings for our suppliers, fostering a journey of shared success.

Engaging in International Ratings to Respond to Investor Focus

As global investors continue to focus on corporate ESG performance, we are committed to enhancing their understanding of our relevant risk management strategies through active benchmarking against international ESG ratings. Both Towngas and our subsidiary, Towngas Smart Energy Company Limited (Towngas Smart Energy), have been honoured with inclusion in S&P Global's Sustainability Yearbook (China Edition) 2024. Ranking in the top 1% among over 1,700 major enterprises across 60 industries is a remarkable achievement for the second consecutive year, solidifying our position as the only Chinese enterprise in the gas utility sector to attain this recognition.

Fostering Business Innovation to Enhance Customer Experience

This year, we strategically integrated our extended business operations across the Chinese mainland and Hong Kong under Towngas Lifestyle Holding Company Limited. These include smart kitchen solutions, insurance products, home safety services, and community retail operations. By leveraging our extensive experience in Hong Kong, our integrated extended businesses continue to tap into the vast opportunities presented by over 42 million customers on the Chinese mainland with further enhanced service quality and development prospects.

The "TGSE-CHIP", jointly developed by Towngas Lifestyle, StarFive and ChinaFive, has successfully been implemented on the Chinese mainland in various smart gas applications since its launch in November 2022, with cumulative sales exceeding 3.85 million units by the end of 2024. Looking ahead, we plan to extend these technological advancements to our Hong Kong operations, implementing phased upgrades to our smart gas meter components. These enhancements will boost meter reading efficiency, strengthen the security of customer information, and further promote the digital management of the gas infrastructure in Hong Kong.

The rapid growth of renewable energy applications on the Chinese mainland and in Hong Kong has led to a significant demand for associated technologies such as energy storage and smart energy management systems. We are actively seizing this opportunity to promote our Energy as a Service (EaaS) business model, providing one-stop energy management services that integrate photovoltaic systems, energy storage, and power sales for our commercial and industrial clients, helping to reduce costs and carbon emissions.

Promoting People-Centric Culture and Creating Shared Value

Towngas has consistently demonstrated its commitment to advancing public welfare initiatives. In 2024, as we celebrated the silver jubilee of the establishment of the Towngas Volunteer Service Team, we continued to innovate while building on our established foundations. By leveraging our corporate strengths, we connected diverse communities and created shared value. Our flagship "Chef Anchor" programme made a triumphant return, evolving into "Chef Anchor 3.0", which incorporated "DementiAbility™", designed to assist individuals with mild cognitive impairments and provide advanced procedural memory training to help them maintain independent living skills. Since its launch in 2017, the programme has received numerous accolades and recognition. To gain deeper insights into its contributions to the community, we are undertaking a comprehensive "Social Impact Assessment" to quantify outcomes and measure its effectiveness, providing valuable direction and indicators for optimising the "Chef Anchor" programme.

Additionally, the "Towngas Green Flame Energy Scientist Programme" has entered its second year, with the participation of over 40 primary schools across Hong Kong. This academic year, the programme has taken biodiversity as the theme, aiming to deepen students' understanding of new energy while inspiring them to become environmentally conscious citizens.

Forging Alliances Across Government, Industry, Academia, and Research Institutes

We recognise the growing emphasis on green energy applications across various sectors, along with increasing attention about the risks posed by climate change and ecological issues. In support of National Ecology Day, we organised a Biodiversity and New Energies Symposium, inviting over 20 distinguished representatives from the government, businesses, public utilities, NGOs, professional organisations, regulatory bodies, and academia. The Symposium provided a platform for in-depth discussions on the development of the hydrogen industry, the role of new energy in facilitating the green transformation of the transport sector, the enhancement of nature-related corporate financial disclosures, and the need to balance business development with ecological conservation. This Symposium successfully attracted over 5,000 participants, both online and offline, fostering meaningful dialogue and collaboration for the industry's development.

Overcoming Adversity, Sustaining our Strength

Looking to future challenges, I firmly believe in the principle of "Overcoming Adversity, Sustaining our Strength". We will remain steadfast in understanding the evolving landscape around us, and prioritising the needs and aspirations of all our stakeholders. By shouldering our mission and responsibilities as an energy enterprise, and integrating ESG principles into every aspect of our operations, we will drive meaningful progress. Together, we will contribute to a sustainable green energy future that fosters lasting positive change for generations to come.

Managing Director
Mr. Peter Wong Wai-yee
Hong Kong, 19 March 2025

Business Overview

Group Introduction

Founded in 1862, Towngas (Stock Code: 3) is Hong Kong's first public utility. Today, we operate with world-class corporate management and cutting-edge business practices. Over the years, Towngas has transformed from a gas company supplying fuel for street lamps to a leader in the energy industry on Chinese mainland and beyond. We now provide safe and reliable energy solutions to homes and businesses across all sectors of society. Our expansion into Chinese mainland began in 1994, and our business now encompasses city-gas, water and environmental services, renewable energy, including distributed photovoltaics and energy storage, as well as green energy initiatives.

In recent years, the Group has actively pursued green energy advancements and championed sustainable transportation solutions. These initiatives include offering green methanol, hydrogen, and sustainable aviation fuel for marine, land, and air transport, all contributing to China's "dual carbon" goals. To align with the Group's long-term vision, we have strategically categorised our operations this year into two segments, namely the Utilities Businesses and the Growth Businesses. The Growth Businesses include our key drivers for expansion, such as renewable energy business, extended businesses, and green energy businesses.

As at the end of the year, the Group has a total of 970 projects[1] across 29 provincial regions on the Chinese mainland.

For details of our business overview in 2024, please refer to our Annual Report 2024.

Utilities Businesses

Hong Kong Town Gas	Mainland City-Gas	Water/Waste Treatment
Town gas sales **27,159 million MJ** (Hong Kong)	City-gas sales **36,355 million m³** (Chinese mainland)	Water business **1.65 billion tonnes** (Chinese mainland)
Town gas customer accounts **2.04 million** (Hong Kong)	City-gas customer accounts **42.49 million** (Chinese mainland)	Organic waste treated **1.61 million tonnes** (accumulative) (Chinese mainland)

Renewable Energy Business

Smart Energy	
Zero-carbon smart industrial parks **128** (accumulative)	PV – grid-connected **2.3 GW** (accumulative)

Extended Businesses

Sales of Gas Appliances, Kitchen Furnishings and Insurance			
Appliance sales		Online platform	
264,000 units (Hong Kong)	**670,000 units** (Chinese mainland)	**340,000** active members (Hong Kong)	**3.22 million** active members (Chinese mainland)

Gas Resources Business

Stable Supply of Natural Gas

Coordinated gas volume **4.42 billion m³**

Green Energy Businesses

Sustainable Aviation Fuel	Green Methanol
Production volume approx. **180,000 tonnes**	Annual production capacity **100,000 tonnes**

Financial Analysis

Revenue	Capital Expenditure	Manpower Costs
HK$ 55,473 million	**HK$ 6,460 million**	**HK$ 4,030 million**

[1] 2023 year end: 774 projects, inclusive of city-gas projects re-invested by the Group's company.

Green and Sustainable Finance

The Group has consistently embraced its green and sustainable finance, fostering support for low-carbon projects and advancing ESG-related business development.

Since 2017, the Group has accumulated over HK$6 billion in financing for green and sustainable development.

2017

- Towngas established a Green Bond Framework and obtained a Second-Party Opinion Report from an independent external organisation to raise funds amounting to **HK$600 million** and **JPY2 billion**

2021

- Towngas secured ESG loans totalling **HK$2 billion**, linked to various ESG key performance indicators

Greenhouse Gas Emissions Reduction

Renewable Energy Generation

Used Gas Appliances Recycling

Emergency Team's Average Arrival Time

2022

- The Group's subsidiary, Towngas Smart Energy Company Limited (Towngas Smart Energy), developed the Sustainability-Linked Financing Framework and successfully issued a sustainability-linked bond, becoming the **first** energy company in Hong Kong to raise a total of **US$200 million** through such a bond
- Towngas Smart Energy arranged a 7-year green loan of **RMB500 million** for the development of its renewable energy business. The loan has been fully invested in the construction of photovoltaic power generation systems

2023

- Towngas Smart Energy issued Panda Bonds totalling **RMB1.5 billion** on the Chinese mainland (of which **RMB500 million** are sustainability-linked Panda Bonds, the **first** issued by a Hong Kong enterprise on the Chinese mainland)

2024

- Towngas collaborated with HSBC to launch the "Towngas Green Supply Chain Finance Programme", becoming the **first** public utility in Greater China to offer a sustainability-linked supplier payment solution
- Towngas Smart Energy successfully issued the "Zero-Carbon Smart Phase 1 Asset-Backed Securities Programme (Carbon Neutral)" (Quasi-REITs)
  - The **first** "Quasi-REITs" successfully issuance by a Hong Kong-invested company on the Chinese mainland market
  - The market's **first** "Quasi-REITs" product for industrial and commercial distributed photovoltaic and energy storage
  - Initial issuance of **RMB515 million**
- Towngas Smart Energy obtained a **RMB500 million** green loan, which has been fully invested in photovoltaic power generation systems

Special Feature:

Forged in Three Decades, Striding into a New Era

2024 marks the 30th anniversary of the Group's expansion into the Chinese mainland, initiating city-gas operations. Over these thirty years, our growth and expansion have paralleled the remarkable transformation of the Chinese mainland's energy industry. By consistently aligning with national policies, embracing innovation, and supporting the Country's restructuring and transition of energy structure, we have established our reputation as a reliable provider of energy services, powering both industrial progress and the everyday lives of citizens.

10 1st

First Decade (1994-2003):

Seizing Opportunities and Riding the Tide

Embracing the tide of reform and opening up, the Group became one of the first Hong Kong enterprises to venture into the Chinese mainland market. We established our first city-gas project in Panyu, Guangdong province, marking the beginning of a new chapter in our development on the Chinese mainland.

We witnessed the construction of the "West-East Gas Pipeline", a monumental energy artery that ushered in the nation's natural gas era. Seizing this pivotal opportunity, the Group actively engaged in the early development and operation of city-gas pipeline networks across the Chinese mainland.

1994

The Group reached a cooperation agreement with Panyu City Gas Company to establish the first mainland city-gas project under the "Towngas China" brand. Initially, the project served only 4,000 customers, delivering an annual gas supply exceeding 800,000 cubic metres

2000

The Group acquired a 3% equity stake in the Guangdong Liquefied Natural Gas (LNG) Receiving Terminal and Trunkline Project. Building on this foundation, the Group expanded its operations from South China into the East China and North China regions, exploring a nationwide business layout

2001-2002

The Group developed city-gas projects in Suzhou, Yixing, and Taizhou in Jiangsu, as well as Qingdao, Zibo, and Longkou in Shandong

2002

Hong Kong & China Gas Investment Limited was established in Shenzhen, Guangdong, Serving as the Group's strategic base for expanding onto the Chinese mainland. This entity manages various projects across the country in a systematic approach, unifying brand identity, safety standards, and customer service protocols. This initiative has laid a solid foundation for the Group's accelerated business growth on the Chinese mainland

10 2nd

Second Decade (2004-2013):

Deepening Utilities Businesses to Serve Countless Households

In 2009, Chinese mainland officially announced its targets for greenhouse gas emission control, catalysing the rapid development of gas pipeline networks across the nation. The launch of the "Sichuan-to-East China" gas transmission in 2010 marked another significant milestone in transforming the Country's energy landscape. In alignment with the national policy directives, the Group deepened its presence in the utilities businesses and drove industry innovation. Expanding beyond our foundation in city-gas operations, we also diversified into water and gas appliance sectors.

2005

- Started water projects under the "Hua Yan" brand, leveraging synergies between water and city-gas businesses
- Became the first gas group on the Chinese mainland to integrate city-gas supply, gas appliances, and related services, and also launching its own appliance brand "Bauhinia"
- Established Towngas Technology Centre, introducing internationally recognised testing standards and quality management systems for gas appliances. This built the foundation for high-quality product development and quality testing services for residential, commercial, and industrial gas products

2007

Completed the acquisition agreement with Panva Gas Holdings Limited, which was subsequently renamed as "Towngas China Company Limited". This expansion broadened our city-gas business footprint to include regions in Southwest and Northeast China

2011

The Group, in collaboration with Chinasalt Jintan Co. Ltd., jointly established the Towngas (Jintan) Gas Supply Security Centre to enhance gas supply security and improve our supply-storage-sales system

10 3rd

Third Decade (2014-2024):

Diversified Business Development in Thriving Bloom

Chinese mainland's Energy Development Strategy Action Plan (2014-2020) highlighted the strategic significance of natural gas and alternative energy sources. Subsequently, the Country established its "dual carbon" goals in 2020, charting a green path towards high-quality socioeconomic development in the years to come.

Guided by global climate action initiatives and the national "dual carbon" goals, the Group has accelerated its energy transition efforts. While steadfast in our core city-gas operations, we have expanded into the renewable energy business, extended businesses, and gas resources business.

2014

The Group began the construction of the Towngas China Jintan Gas Storage, the first large-scale underground gas storage project on the Chinese mainland, planned, invested, constructed, and operated by a city-gas enterprise with a total of storage capacity exceeding 1.2 billion cubic metres. In 2022, it was awarded the 19th "Tien-yow Jeme Civil Engineering Prize", the highest honour for scientific and technological innovation in civil engineering construction on the Chinese mainland

2015

The Group established the extended businesses brand "Towngas Lifestyle" to develop three core businesses: smart kitchens, insurance, and home safety

2016

The Group began developing renewable energy business on the Chinese mainland, focusing on photovoltaic construction and operation, as well as smart zero-carbon services, to provide customised energy solutions for industrial parks, as well as commercial and industrial customers

2021

The subsidiary "Towngas China Company Limited" was officially renamed "Towngas Smart Energy Company Limited", marking our acceleration in the development of smart energy solutions and our transformation into a leading green energy supplier

2023

- The Group established the gas resources business to coordinate and optimise gas resources business operations
- The first ocean-freight imported LNG arrived at Tianjin Port and was successfully distributed

2024

- Over the past 30 years, the Group has remained dedicated to its mission of actively participating in the development of the Country's natural gas industry and collaborating with the government to promote the use of clean energy

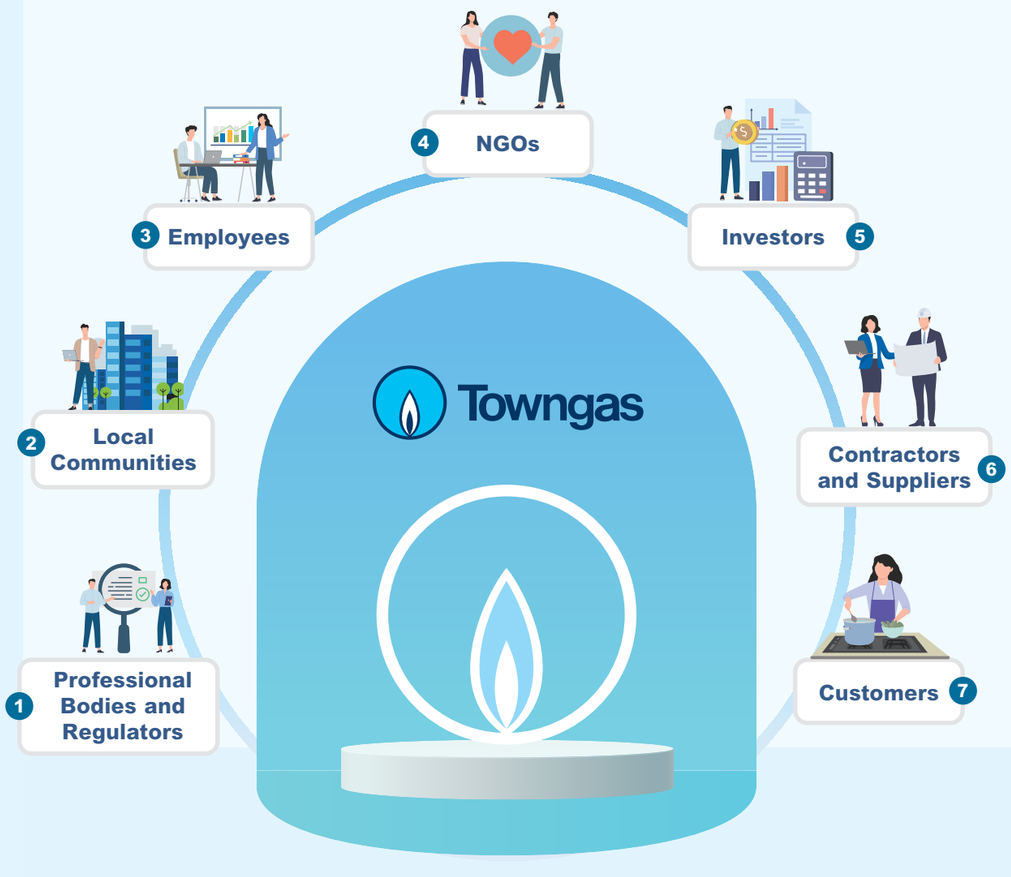
- Since 2021, the Group has been actively developing its renewable energy business. As of the end of 2024, the Group has invested in over 1,000 renewable energy projects across 24 provinces, autonomous regions, and municipalities. The accumulated grid-connected installed capacity of our distributed photovoltaic projects reached 2.3 GW, and we signed contracts for over 400 MWh of industrial and commercial energy electricity storage projects. The full-year net profit from the renewable energy business amounted to HK$479 million, representing a year-on-year growth of five times, with the Group's share of profits totalling HK$322 million.

As we look to the future, the Group will align with national energy policies and "dual carbon" goals as our guiding principles, with "green" as the development theme and "innovation" as the driving force. Our goal is to make a contribution to a smooth energy transition, benefitting not only our nation but also the wider world, while creating value for all stakeholders throughout our journey.

Collaborating with Stakeholders to Create a Sustainable Development Ecosystem

We are dedicated to creating a multi-faceted communication platform (see the "Stakeholders Engagement" section for more details) to initiate in-depth dialogues with various stakeholders and establish win-win partnerships built on mutual trust. Through diverse activities, we aim to effectively leverage the resources and strengths of all parties to collaboratively foster a sustainable development ecosystem.

This year, we joined forces with diverse stakeholders, focusing on both hosting and participating in the following key activities.



1 Professional Bodies and Regulators

Organised international competition and symposium, and maintain close collaboration with regulators, experts and scholars across the industry, academia and research sector

- TERA-Award Smart Energy Innovation Competition
- Biodiversity and New Energies Symposium
- Collaborated with the School of Communication at The Hang Seng University of Hong Kong, for their first ESG Scholarship Programme

2 Local Communities

Organised different community projects to support the disadvantaged and nurture young people through practical actions that address their needs

- Celebrating the 25th anniversary of the Towngas Volunteer Service Team
- "Towngas Green Flame Energy Scientist Programme"

3 Employees

Organised various activities for employees to foster a "warm and harmony" culture within the Group

- Wellness programmes and activities
- Training and development initiatives
- Occupational safety and health measures

4 NGOs

Partnered with NGOs to plan and implement activities for various communities

- "Chef Anchor" programme
- T-Future Pioneers youth exchange programme
- "Unseen Carers: Delicious Culinary Idea-thon"

5 Investors

Collaborated with investors to support low-carbon innovation projects and promote ESG integration in the investment sector

- Respond to international and local ESG ratings
- Biodiversity and New Energies Symposium
- Green and sustainable finance

6 Contractors and Suppliers

Encouraged contractors and suppliers to implement ESG initiatives to jointly create a green and sustainable supply chain

- Towngas Green Supply Chain Finance Programme
- Supply Chain ESG Promotion and Carbon Verification Conference and Carbon Verification Conference

7 Customers

Committed to continuous improvement and innovative research and development to provision of safe and reliable gas supply and services to our customers

- Uninterrupted gas supply
- Smart gas appliances
- Quality customer service

2024 ESG Achievements

Performance Highlights

Resilient Governance
Foundation for Collaborative Development

- Appointed female director to the Board during the year to achieve **board gender diversity**
- **100%** of employees completed anti-corruption training (Hong Kong)
- The Group **did not engage in any material violations**
- Collected nearly **400** questionnaire survey responses

People-Centric
Co-Creating a Sustainable Future

- Number of work-related fatalities (employees and contractors)[2]: **0**
- Major incidents or chemical leakages at chemical plants: **0**
- Average training hours per employee: **60.3 hours**
- Over **40,000** households benefitted from the "Towngas Concession Schemes", amounting to **HK$36 million** (Hong Kong)
- Volunteer service hours exceeded **20,000 hours**, over **640,000 beneficiaries count** (Hong Kong)

Towards Carbon Neutral
Composing a New Chapter in Green Initiatives

- Scope 1 and Scope 2 greenhouse gas (GHG) emissions decreased by **9%** (2020 baseline)
- Cumulatively developed **128** zero-carbon smart industrial parks, grid-connected photovoltaic capacity reached **2.3 GW**
- Sea: Green methanol annual production capacity reached **100,000 tonnes**
- Land: Launched Hong Kong's **first** "green hydrogen" project
- Air: EcoCeres, Inc. has produced approximately **180,000 tonnes** of sustainable aviation fuel (SAF)
- The third edition of TERA-Award Smart Energy Innovation Competition saw participation from **450** technology projects across **59** countries and regions

Stakeholders Partnership
Enhancing Value Chain Resilience

- The **first** utility company in Greater China to launch a sustainability-linked supplier payment solution
- Over **90%**[4] of critical tier 1 suppliers have used the S-Carbon
- Gas supply reliability[3] reached **99.992%** (Hong Kong)

[2] Refers to the number of fatalities as a result of work-related injury.
[3] Unplanned gas supply interruption.
[4] Based on the total procurement value of products and materials (refers to Hong Kong business and city-gas business on the Chinese mainland).

ESG Ratings

MSCI ESG Ratings 2024

MSCI ESG RATINGS — CCC | B | BB | BBB | A | AA | AAA

A

S&P Global ESG Score 2024*

S&P Global

71

* *A constituent of the Dow Jones Sustainability Asia Pacific Index*

ESG Rating Results

Hang Seng Corporate Sustainability Index ESG Rating 2024*

Hang Seng Corporate Sustainability Index Series Member 2024-2025

AA+

* *A constituent of the Hang Seng Corporate Sustainability Index Series*

FTSE4Good Index 2024

FTSE4Good

Inaugural Inclusion in the FTSE4Good Index Series

CDP Climate Change Score 2024

CDP DISCLOSURE INSIGHT ACTION

B

Sustainalytics ESG Risk Ratings 2024

SUSTAINALYTICS

Medium Risk

2024 ESG Achievements

ESG Recognitions

1 *Hang Seng Indexes Company Limited*

2 *The Hong Kong Institute of Directors*

3 *The Hong Kong Institute of Certified Public Accountants*

4 *S&P Global*

5 *The Chinese University of Hong Kong Business School*

6 *Green Council*

7 *Equal Opportunities Commission*

8 *Employees Retraining Board*

1 55 Years in Hang Seng Index Award

2 Climate Governance Awards

- Listed Company – Executive Directors
- Listed Company – Boards

3 Best Corporate Governance and ESG Awards 2024

- ESG Award (Hang Seng Index Category)

4 S&P Global Corporate Sustainability Assessment (CSA) 2024

- Secured spot in Dow Jones Sustainability Asia/Pacific Index for third consecutive year
- "Top 1" S&P Global CSA Scores among Chinese Companies (Gas Utilities)
- Sustainability Yearbook (China Edition) 2024 – Member

5 Business Sustainability Indices

- Global (Asia Pacific) Business Sustainability Index (the second consecutive year, first launched in 2023)
- Greater China Business Sustainability Index (the fourth consecutive year)
- Greater Bay Area Business Sustainability Index (the fifth consecutive year)
- Hong Kong Business Sustainability Index (the sixth consecutive year)

6 UNSDG Achievement Awards Hong Kong 2024

- Sustainable Organisation Award – Bronze
- Individual SDG Award – Goal 7: Affordable and Clean Energy (Fueling the Future: Transition to a Hydrogen Economy)
- Individual SDG Award (SME) – Goal 12: Responsible Consumption and Production (CulinArt 1862)
- Recognised Project Award (Towngas Green Supply Chain Finance Programme)

7 Universal Design Award Scheme 2024/25

- Special Recognition Award
- Gold Award

8 Manpower Developer Award Scheme

- Super MD 2023-2028

2024 ESG Achievements

ESG Recognitions

9 *Chief Happiness Officer Association*

10 *Occupational Safety and Health Council*

14 *Sing Tao News Corporation and The Hong Kong Polytechnic University*

15 *Master Insight and the Research Centre for ESG at Hang Seng University of Hong Kong*

11 *Federation of Hong Kong Industries*

12 *Home and Youth Affairs Bureau and the Agency for Volunteer Service*

13 *Hong Kong International ESG Alliance*

16 *Green Council*

17 *Headline Daily*

9 Chief Happiness Officer Recognition 2024

10 The 23rd Hong Kong Occupational Safety & Health Award

- OSH Report Award (Gold Award)
- OSH Promotion Award (Silver Award)
- Safety Performance Award – All Industries Category
  - The Hong Kong and China Gas Limited – Outstanding Award
  - The Hong Kong and China Gas Company Limited – Gas Production Stream – Outstanding Award
  - The Hong Kong and China Gas Company Limited – Network Stream – Outstanding Award
  - P-Tech Engineering Company Limited – Outstanding Award
  - Towngas Telecommunications Company Limited – Outstanding Award
- Safety Performance Award – Construction Industry Category
  - U-Tech Engineering Company Limited – Outstanding Award

11 Industry Cares Recognition Scheme 2024

- Best Social Impact Award (Enterprise Group)
- Outstanding Caring Award (Enterprise Group)

12 Hong Kong Volunteer Award 2024

- Outstanding Corporate Award

13 Hong Kong International ESG Annual Awards

- Best ESG Pioneer Award

14 Outstanding ESG Enterprises Recognition Scheme 2024

- ESG Annual Achievement Award

15 The Third ESG Award

- ESG Performance-based Award

16 Hong Kong Green Awards 2024

- Corporate Green Governance Award – Corporate Vision
- Environmental, Health and Safety Award (Large Corporation) - Silver

17 Headline No.1 Awards

- No.1 Biodiversity Leading Enterprise Award

Supporting the United Nations Sustainable Development Goals

In response to and in support of the United Nations Sustainable Development Goals (SDGs), the Group has conducted a comprehensive analysis of the potential impact on public and the environment. We have identified four cost related SDGs that deeply resonate with our mission, serving as the cornerstones of our strategic direction. We are dedicated to championing energy evolution, tackling climate challenges, and nurturing sustainable community development.

SDGs	Potential Impacts Generated by the Group	Actions Taken by the Group
Goal 6: Ensure availability and sustainable management of water and sanitation for all	Our production and operational activities consume water resources and generate wastewater.	• Supplying 3.16 million customers with drinking water that meets national standards. • Over 113,000 m^3 of water conserved through reverse osmosis systems at the Tai Po Gas Production Plant.
Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all	The use of fossil fuels for production poses environmental risks. Additionally, energy costs and pricing directly affect affordability.	• Continuously promoted the coal-to-gas conversion and on the Chinese mainland, expanding gas supply coverage. • Signed a long-term natural gas supply contract with an Australian supplier to ensure a stable gas supply for Hong Kong customers and reduce gas costs.
Goal 11: Make cities and human settlements inclusive, safe, resilient and sustainable	Operational processes along the value chain produce both non-hazardous and hazardous waste, and entail certain levels of safety risks.	• Uninterrupted gas supply rate reached 99.992% (Hong Kong). • 0 major incidents or chemical leakages at our chemical plants. • Processed a cumulative total of approximately 1.61 million tonnes of organic waste. • Recovered 1,425 tonnes of metal through the Used Gas Appliance Recycling Programme in 2024. • Collaborated with a technology company to develop Hong Kong's first gas-powered food waste processing machine.
Goal 13: Take urgent action to combat climate change and its impacts	Business operations and the value chain contribute to GHG emissions.	• Strived to achieve carbon neutrality by 2050 or earlier through energy transition and innovation. • Deeply integrated carbon reduction initiatives into business development. o Sea: Developing green methanol to support the zero-carbon emission of shipping industry. o Land: strategic planning of hydrogen energy development, including the development of Hong Kong's first "green hydrogen" project. o Air: Focusing on SAF to reduce GHG emissions generated by the aviation industry. o Incorporated ESG due diligence and internal carbon pricing factors into investment decision-making processes. ESG due diligence covers nine major aspects including environmental responsibility.

Resilient Governance

Foundation for Collaborative Development

Corporate governance standards are increasingly stringent on the Chinese mainland and in Hong Kong, reflecting the growing popularity of sustainability principles. Companies are now evaluated based on transparency, compliance, and social responsibility, making robust governance a cornerstone of long-term competitiveness. Recognising the critical role of effective governance in securing a reliable energy supply while advancing decarbonisation efforts, we have established a clear framework to enhance organisational resilience. By continuously refining our management structures, policy mechanisms, risk management strategies, and other aspects of corporate governance, the Group can navigate complex market dynamics with agility, creating long-term value for all stakeholders.

Key Highlights

Board Diversity

- Our Board of Directors comprises members with diverse backgrounds and and professional experiences in
  - **Finance**
  - **Legal**
  - **Public Policy**
  - **Corporate Governance**
- A female director was appointed to the Board during the year to enhance **board gender diversity**

ESG Governance

- The **Board ESG Committee** provides guidance to the wider Board of Directors on all ESG matters concerning the Group
- Board members participate in regular professional **ESG sharings** to stay updated on the latest market trends

Compliance

- **No significant material violation was found in the group** regarding the following aspects:
  - Business Ethics
  - Health and Safety
  - Employment Practices
  - Customer Management
  - Environment
- **100%** of employees have completed anti-corruption training (Hong Kong)

Stakeholders Engagement

- Collected nearly **400** survey responses through stakeholders engagement
- Communicated the Group's ESG performance to **20** internal and external stakeholders in four focus group discussions

Management Approach

As a responsible enterprise, we consistently uphold high standards of corporate governance. By establishing a robust governance framework and a diversified board of directors, we continuously enhance our governance structure to lay a solid foundation for the Group's sustainable growth.

Governance Structure

The Group operates through a well-established governance structure, with the Board of Directors (the Board) serving as the highest governance body. The Board is fully responsible for formulating business development strategies, reviewing financial issues, and overseeing the Group's overall operations. To strengthen the governance framework and ensure effective oversight, four committees have been set up within the Board:

Board Diversity

As at 31 December 2024, the board of Towngas comprises 11 members, including three Executive Directors, four Non-Executive Directors and four Independent Non-Executive Directors. The Board brings together members with diverse backgrounds and specialised expertise in finance, legal, public policy, and corporate governance – comprehensively enhancing the quality of decision-making across the Board. To further enhance board diversity, the Group this year invited Professor Anna Wong Wai-kwan to join the Board, marking the appointment of the first female Independent Non-Executive Director and members of multiple committees.

Professional Training and Risk Mitigation

To strengthen their strategic insight and foresight regarding ESG issues, Towngas delivers specialised ESG sharings for Board members on a regular basis. Training sessions address areas such as climate change, green finance, and latest regulatory requirements, positioning the Group at the forefront of industry developments while effectively mitigating operational risks in an ever-evolving business landscape. Through these sharings, Towngas enhances board–level expertise to drive corporate sustainability and green transformation. Additionally, the Group has established a refined and efficient ESG governance structure, supported by comprehensive ESG policies that systematically advance various sustainability initiatives and propel our green transformation.

ESG Governance

Our multi-level ESG governance framework operates under Board leadership, establishing a robust management structure through the Board ESG Committee, ESG Steering Committee, and ESG Working Committee. This structure supported by coordination from the Group ESG Department, ensures the effective implementation of relevant initiatives from decision-making to execution. Towngas has linked 5% of the variable compensation for the Managing Director and senior executives to the achievement of ESG targets (such as improving ESG ratings, reducing greenhouse gas emissions, and meeting health and safety performance indicators).

Resilient Governance – Foundation for Collaborative Development

Our ESG governance structure and responsibilities are outlined below:

Board ESG Committee	Composed of Board members and chaired by the Managing Director to ensure effective ESG management and oversight. Provides ESG-related recommendations to the Board.
ESG Steering Committee	Comprises various department heads. Responsible for reviewing and establishing annual ESG targets. On the Chinese mainland, committee members include representatives from major business segments to advance ESG initiatives across project companies, and thereby integrate ESG management throughout our operations.
ESG Working Committee	Comprises approximately 70 employees dedicated to promoting ESG culture at the execution level.
Group ESG Department	Oversees the overall implementation of the Group's ESG strategy, in addition to enhancing internal ESG management and the quality of ESG disclosures on an ongoing basis. Monitors international and domestic ESG trends while addressing stakeholder concerns. Regularly reports all internal and external ESG progress to the Board ESG Committee.
Board Audit and Risk Committee	Conducts a bi-annual review of the overall effectiveness of the Group's internal financial, operational and compliance control systems, risk management process, scope and quality of the management's risk monitoring and control systems, the effectiveness of financial reporting and compliance with the Listing Rules. For more details, please refer to the "Risk Management" section and our Annual Report 2024.

The Board ESG Committee convened one meeting this year to discuss the following agenda items:

Board ESG Committee meeting attendance rate
100%

ESG Rating Performance	Key Performance Indicators for the ESG Steering Committee	Double Materiality Assessment	Climate Action Initiatives	Other Key Matters
• Dow Jones Sustainability Indices • MSCI ESG Ratings • Hang Seng Corporate Sustainability Index Series	• Decarbonisation progress • Inclusion and Diversity • Occupational health and safety management • Cyber security • Corporate governance • Supply chain management	• 2024 materiality assessment results • Identification of material ESG issues	• Implementation of carbon reduction goals • Future action plan • Climate risk assessment results	• ESG-Linked compensation for Senior Executives • Latest ESG and climate disclosure standards

ESG Policy

The Group has developed a series of ESG policies and codes that address environmental stewardship, social responsibility, and governance excellence. These strategic protocols reflect our dedication to corporate citizenship while simultaneously advancing both commercial objectives and societal benefits.

ESG Policy

Environmental
- Climate Change Policy
- Environmental Policy

Social
- Anti-Discrimination Policy
- Code of Conduct
- Code of Practice for Suppliers
- Customer Services Code of Conduct Policy
- Employee Policy
- Health and Safety Policy
- Human Rights Policy
- Social Investment Policy
- Sustainable Purchasing Policy

Governance
- Anti-Fraud Policy
- Board Diversity Policy
- Dividend Policy
- Information Security Policy
- Nomination Policy
- Personal Data Privacy Policy
- Policy and Procedures on Disclosure of Inside Information
- Shareholders Communication Policy
- Risk Management Framework
- Security Policy
- Stakeholder Engagement Policy
- Whistleblowing Policy

Risk Management

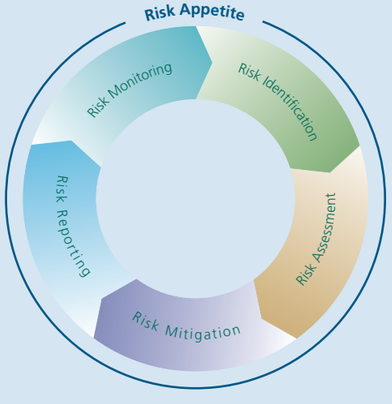
Risk management receives significant attention within the Group, with ESG risks now part of the comprehensive control framework. Enhanced capabilities for identifying and preventing major risks have been developed through the continuous refinement of management structures. This strategic approach enables effective responses to diverse challenges and ensures the Group's stable business progression.

On-site visits to operational sites are regularly arranged for the Board members in addition to regular formal meetings. During the year, Board members, including Independent Non-Executive Directors, inspected city-gas, water and environmental sanitation services, renewable energy, extended businesses and other fields of operations in Suzhou.

Equipping Board members with profound understanding of the Group's development stands as the primary objective of these on-site visits, facilitating the identification of potential risks and offers comprehensive insights into future development strategies.

Risk Management Structure

The Group has in place an Enterprise Risk Management Framework that depicts the system to effectively identify, assess, mitigate, report and monitor key business risks across all business units of the organisation. The system enables the management team to gain a clear view of the significant risks for better strategy setting and project execution which ultimately contribute to enhanced business performance.



The Board

Board Audit and Risk Committee

Executive Risk Management Committee

Risk Management Committee

Business Units

Independent oversight by Group Audit and Risk Management Department

The risk management structure sets out the mechanism by which authority is exercised, decisions are taken and organisation is effectively supervised. The Board Audit and Risk Committee supports the Board in overseeing the overall risk management system and provides assurance to the Board at least annually that the system is operating effectively. The Executive Risk Management Committee, which is composed of all Executive Management Members of the Company, is responsible for the system formulation and its effective implementation to maintain risk exposures within the risk appetite. It is assisted by the Risk Management Committee, which mainly comprises risk owners who are also the key business management team. The Risk Management Committee reviews the major risk exposure, monitors the implementation of risk-mitigating controls. While Group Audit and Risk Management Department conducts independent reviews and reports to the Executive Risk Management Committee as well as the Board Audit and Risk Committee regularly on risk management updates.

Risk Identification and Mitigation

As part of our ongoing risk management efforts, the Group conducts risk assessment at least annually, which include the identification of key risks and mitigation measures to ensure risks are effectively managed. The Board Audit and Risk Committee ensures that a review of the effectiveness of the Group's risk management system has been conducted at least annually. This process involves close monitoring of business environment, assessing and prioritising risks.

In 2024, the key risks (and emerging risks) across all businesses and our value chain are summarised in the table to the next page.

Resilient Governance – Foundation for Collaborative Development

Risk Categories	Potential Impacts	Mitigation Measures	Affected Value Chain*
Market	**Severe market competition:** Slowing demand due to global warming concerns, competition, direct sales and alternative energy sources could affect revenue and market share.	**Diversify sector and market dependency:** Explore new business opportunities and gas applications both in Hong Kong and on the Chinese mainland.	1 2 3
Finance	**Liquidity risk:** Unexpected cash outflow for investment purposes or insufficient cash inflow from operation due to unpredictable changes. **Credit risk:** Customer default in repayment.	**Implement financial liquidity stabilising measures:** Maintain healthy cash flow and sufficient marketable securities, with an adequate amount of credit facilities and ability to close out market positions. **Credit monitoring:** The Group has a credit policy to handle the credit risk of customers. Significant concentration of sales to any individual customer is avoided.	2
Climate Change	**Increased capital expenditure:** Investments in new technologies and infrastructure may be required for reducing GHG emissions and adapting to climate change. **Decline in gas demand:** Increasing awareness and concern about climate change among consumers and investors can influence market dynamics, leading a decline in gas demand.	**Enhance resilience plans for extreme weather events:** Develop and implement comprehensive resilience plans to prepare for and respond to climate change-induced extreme weather, including vulnerability assessments and infrastructure strengthening. **Reduce GHG emissions and set reduction targets with concrete action plans:** Implement measures to reduce emissions and establish long-medium-short term targets aligned with global climate goals. **Invest and diversify businesses for energy transition:** Allocate investments to low-carbon technologies, explore renewable energy sources, and adopt sustainable practices to reduce reliance on fossil fuels and facilitate the transition to a more sustainable energy system.	1 2 3

* 1 – Upstream Supply Chain; 2 – Towngas Operations; 3 – Downstream Customers

Risk Categories	Potential Impacts	Mitigation Measures	Affected Value Chain*
Facilities and Operations	**Gas leakages, supply disruptions, fires/explosions:** Failure of major assets, including the transmission and distribution network, production plants and storage facilities and distributed energy systems, could lead to major gas leaks, supply interruption, fire or explosions which could pose safety hazards to workers, residents and the environment. **Severe damage to Towngas critical infrastructure/facilities:** A physical attack or extreme weather events could damage critical facilities, leading to safety incidents and supply disruptions.	**Undertake active leakage and repair (LDAR) programmes:** Utilise Supervisory Control and Data Acquisition (SCADA) to monitor and control our gas network and all governors, employ gas detectors and smart gas meter to detect leaks and enhance security. **Collaborate with regulatory authorities and industry peers:** Comply with regulations, participate in safety audits, and engage with regulatory authorities and industry peers to improve safety and operational standards. **Develop and strengthen emergency response plans:** Create contingency plans for various scenarios, with clear procedures, communication protocols and coordination with authorities. **Apply for insurance:** Purchase insurance to protect against loss from supply disruptions. **Provide adequate training:** Provide training on handling procedures, equipment operation, emergency response and hazard awareness. Conduct regular practice drills to enhance preparedness.	1 2 3

* 1 – Upstream Supply Chain; 2 – Towngas Operations; 3 – Downstream Customers

Resilient Governance – Foundation for Collaborative Development

Risk Categories	Potential Impacts	Mitigation Measures	Affected Value Chain*
Occupational Health and Safety	**Disruption of operations:** Occupational health and safety issues could cause shutdowns or delays to operation. **Injuries and loss of life:** Serious safety incidents could cause injuries and loss of life.	**Implement comprehensive safety management system with guidelines and measures:** Develop a safety management system and ensure the Group's safety performance conforms to industry best practices. **Conduct regular safety inspections and audits:** Systematically inspect equipment, facilities, work areas and employees (including contractors) to identify hazards and ensure compliance with safety standards through regular inspections and audits. **Carry out comprehensive incident investigations:** Investigate incidents to identify root causes, implement corrective actions, and share lessons learnt to prevent a recurrence in the future. **Encourage active reporting, open communication and experience sharing:** Foster a culture of active reporting, open communication and experience sharing by encouraging employees and contractors to share and report their concerns, establish effective communication channels for safety-related information. **Provide adequate training:** Ensure employees/contractors receive training on hazard identification, equipment use, emergency response, safety protocols and others. Regular refresher training will be provided to keep up their safety awareness.	1 2 3

* 1 – Upstream Supply Chain; 2 – Towngas Operations; 3 – Downstream Customers

Risk Categories	Potential Impacts	Mitigation Measures	Affected Value Chain*
Human Resources	**Manpower crisis:** Key management or mass workforce absenteeism could have a material impact on our operations. **Manpower shortage and retention challenge:** The inability to retain or attract skilled professionals could affect our operations.	**Emergency plans to ensure business continuity:** Establish emergency plans and a mechanism to ensure business continuity in case of a crisis outbreak or spreading of communicable disease. **Manpower succession:** A manpower succession plan is in place to match existing and future human capital needs against business strategy.	2
Legal	**Influence on operations from regulatory changes:** Changes in laws, regulations or rules could affect operations.	**Active and ongoing monitoring of regulatory changes and requirements:** Ongoing monitoring by the Group of regulatory changes and requirements to ensure compliance.	2

* 1 – Upstream Supply Chain; 2 – Towngas Operations; 3 – Downstream Customers

Resilient Governance – Foundation for Collaborative Development

Risk Categories	Potential Impacts	Mitigation Measures	Affected Value Chain*
Information Technology	**Disruption of operations:** Critical system failures or severe cyber-attacks could cause loss of productivity. **Data breach and loss of sensitive information:** Cybersecurity breaches could result in the leakage of customer data and reputation damage. **Financial loss:** Cybersecurity incidents could lead to financial burdens, including remediation costs and potential fines. **Regulatory non-compliance:** Non-compliance with information security regulations could cause penalties and legal consequences.	**Adopt robust protective system:** Deploy firewalls, intrusion detection systems and access controls to safeguard against cyber attacks. **Conduct regular security assessments:** Commission third-party assessments of systems to identify vulnerabilities and improve security standards. **Develop and strengthen contingency plans:** Develop comprehensive contingency plans, establish system and data backup, and conduct drills to ensure business continuity. **Ongoing monitoring on information security regulations:** Stay updated on information security regulations and ensure compliance, particularly on the Chinese mainland and Hong Kong. **Provide adequate training:** Implement programmes to educate employees on cybersecurity and safe information handling practices.	1 2 3

* 1 – Upstream Supply Chain; 2 – Towngas Operations; 3 – Downstream Customers

Risk Categories	Potential Impacts	Mitigation Measures	Affected Value Chain*
Materials	**Feedstock supply interruption:** Significant interruptions in the supply of natural gas or naphtha could impact production capabilities. **Increased fuel costs:** Supply chain disruptions could drive up natural gas prices, impacting the Group and customers. **Nonconforming quality of key materials for gas business:** Significant impact on operations due to nonconforming quality of key materials for gas business. **Impact on downstream industries:** Supply chain disruptions could affect operations (e.g. gas business), leading to reduced supply and increased costs.	**Diversify fuel sources:** Source natural gas and naphtha from multiple regions or countries, purchase liquefied natural gas, unconventional piped natural gas and other gas resources directly from overseas to reduce dependence on a single source. **Increase gas storage capacity:** Expand gas storage capacity with multiple storage facilities (e.g. underground salt caverns in Jiangsu province) for more efficient gas inventory management and reduce supply bottlenecks during high-demand period. **Establish a dedicated team for gas supply chain management:** Coordinate natural gas supply and transmission strategically. **Conduct regular supplier evaluation and quality inspections:** Establish regular checking and evaluation procedures to ensure material quality.	1 2 3

* 1 – Upstream Supply Chain; 2 – Towngas Operations; 3 – Downstream Customers

Risk Categories	Potential Impacts	Mitigation Measures	Affected Value Chain*
Reputation, Ethics and Integrity	**Fraudulent activities:** Internal fraud could lead to serious impact. **Employee misbehaviour and media attacks:** Employee misbehaviour and media attacks could harm our corporate image.	**Implement whistleblowing programme:** Establish formal channels for reporting suspected cases of fraud. **Develop clear ethical standards and policies:** Communicate Towngas ethical standards and Code of Conduct to all stakeholders. **Provide adequate training:** Provide regular trainings to employees.	2

We will further enhance our ability to assess the potential impacts of our decision-making processes and the uncertainties inherent in estimating future events. This enhanced foresight will enable us to proactively prepare for, and navigate a broad spectrum of, potential scenarios and variables, particularly those with uncertain yet materially significant outcomes. In our evaluations, we will continue to carefully consider all potential risks and opportunities.

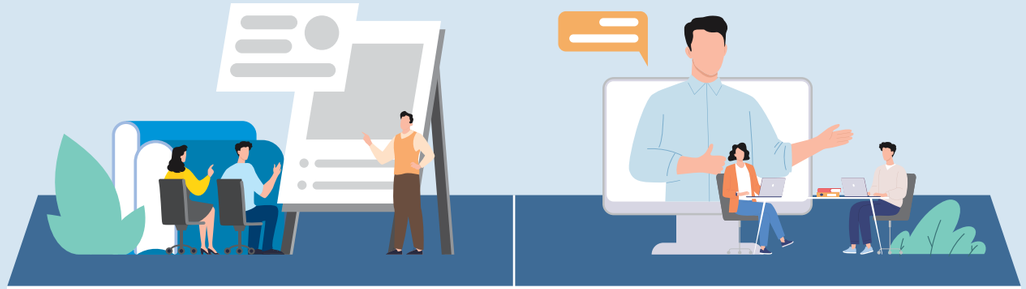
For further information about risk management at Towngas, please refer to our Annual Report 2024.

Business Ethics

The Group is dedicated to upholding business ethics and maintaining integrity and compliance. We foster a culture of corporate integrity through comprehensive internal compliance management.

Anti-Corruption Measures

In strict adherence to the Anti-Corruption Law of the People's Republic of China and the Prevention of Bribery Ordinance, we maintain zero tolerance towards corruption and malpractice in any form. To establish a transparent and honest business environment, we have implemented various training and monitoring measures. In addition to arranging integrity seminars conducted by the Independent Commission Against Corruption for new employees, we require them to complete online code of conduct training. Furthermore, Towngas requires all staff to peruse the Code of Conduct annually and submit declarations of conflicts of interest. The declaration exercise for 2024 was successfully completed in December.



100%
of employees have completed anti-corruption training (Hong Kong)

This year, the Group's total anti-corruption training hours amounted to approximately
25,000 hours

* 1 – Upstream Supply Chain; 2 – Towngas Operations; 3 – Downstream Customers

Whistleblowing Mechanism

To maintain the integrity of our business, we uphold rigorous ethical standards and expect employees and suppliers to adhere to our Code of Conduct and Code of Practice for Suppliers, respectively. We have also established an Anti-Fraud Policy to promote integrity and a Whistleblowing Policy that encourages employees and stakeholders to report suspected cases of misconduct, malpractice or irregularities.

The Group's Code of Conduct clearly defines the protection mechanism for whistleblowers. We are committed to safeguarding the identities of whistleblowers, ensuring they are protected from unfair dismissal, victimisation or unwarranted disciplinary action for marking genuine reports. The Group reserves the right to take appropriate actions against anyone (employees or other stakeholders) who retaliates against or threatens whistleblowers.

Legal Compliance

Legal compliance and business integrity are the foundational principles of the Group. We meticulously adhere to laws and regulations that significantly impact our operations on the Chinese mainland and Hong Kong, covering areas such as business ethics, occupational safety and health, employees' rights, customer service, and environmental protection. While ensuring complete compliance in all business operations, we remain attentive to legislative changes to sustain regulatory conformity. In light of Hong Kong's new regulations in 2024, specifically the enactment of the Construction Industry Security of Payment Ordinance and the introduction of the Protection of Critical Infrastructures (Computer Systems) Bill, the Group has implemented comprehensive preparatory measures and provided training for relevant staff.

During this year, the Group has comprehensively expanded its Mainland Businesses' compliance frameworks. Structural enhancements have included the establishment of a Compliance Management Committee chaired by the Managing Director and comprised Executive Directors and Executive Management members. The Chief Legal Officer has been appointed to serve concurrently as the Chief Compliance Officer for this committee. At the operational level, dedicated legal compliance departments have been established within each business segment, responsible for both facilitating and monitoring adherence to regulatory requirements throughout our Mainland Businesses. Additionally, the Group has strengthened its governance framework through developing compliance policies and guidelines covering various areas, including legal compliance, data management, corporate governance, and executive accountability.

Compliance Training

To further enhance compliance awareness, the Group conducted a series of compliance training sessions for all general managers and other relevant staff members involved in its Mainland Businesses.

Completed **3** sessions of compliance training
Approximately **250** employees participated

Rigorous adherence to relevant legislative and regulatory requirements concerning business ethics, safety and health, employment practices, customer management, and environment, among others, has been maintained through comprehensive governance mechanisms. No material violations were reported during the year.

Area	Compliance Matter	Material Violations
Business Ethics	Anti-corruption Anti-competitive behaviour Labour standards (child labour and forced labour) Money laundering or insider trading	No reported cases No reported cases No reported cases No reported cases
Health and Safety	Occupational health and safety Customer and the public	No reportable[5] cases No reportable[5] cases
Employees Practices	Employment practices[6]	No reportable[5] cases
Customers Management	Customer privacy Product and service information and labelling, and marketing information	No reported cases No reported cases
Environment	–	No reportable[5] cases

Data Privacy and Cyber Security

Personal data privacy and cyber security protections are upheld through the implementation of stringent management protocols and sophisticated technical measures.

Customer Privacy Protection

The Group continuously optimises its privacy management structure. Currently, the Data Privacy Standing Committee consists of eight senior executives from different functional departments and business segments, with the Chief Legal Officer serving as the Data Protection Officer. Subordinating Departmental Data Protection Coordinators have also been appointed to implement various monitoring work.

Data Privacy Standing Committee	**8** senior executives from functional departments and business segments
Data Protection Officer	Chief Legal Officer
Departmental Data Protection Coordinators	**32** representatives from all departments of the Group

[5] These include material violations that resulted in fines greater than HK$1 million or non-monetary sanctions.
[6] Employment practices related to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, anti-discrimination and other benefits and welfare.

In addition, the Group's robust personal data protection framework requires department heads to conduct annual reviews and submit declarations. This rigorous process ensures unwavering adherence to the six data protection principles under the Personal Data (Privacy) Ordinance at all staff levels. To enhance management efficiency, the Group has further optimised the privacy management system.

To enhance management efficiency, the Group has further optimised the privacy management system. Personal data breach notifications, privacy impact assessments, annual compliance declarations under the Personal Data (Privacy) Ordinance, and other privacy management actions are now processed electronically.

At the same time, to address the new challenges brought by artificial intelligence development, Towngas has compiled policies for the development and use of artificial intelligence applicable to Hong Kong. It has also established a risk assessment mechanism and corresponding management measures for artificial intelligence, providing clear guidelines for stakeholders to ensure proper protection of personal data in the development and use of artificial intelligence.

Network and Data Security

Ensuring network and information security stands as one of the pivotal priorities within the Group's operations. To fortify information security, we conduct regular specialised briefings for the Group's senior management on this critical matter. The Group has formulated the Information Security Policy in alignment with the ISO/IEC 27002 Information Security Management Standard, implementing a tiered management system for confidential data. This year, the Group has updated the policy, incorporating four new elements: "Application Programming Interface (API) Management", "Privileged Account Management (PAM)", "Artificial Intelligence Applications", and "Development and Application of Internet of Things (IoT)". These enhancements have further strengthened the security management framework for information and technology assets.

Strengthening Cyber Security Awareness Among Employees

In the fourth quarter, the Cyber Security Committee conducted a desktop drill at Hong Kong Headquarters, focusing on enhancing the response capabilities of various stakeholders during cyber security incidents. Complementing this effort, a series of initiatives were implemented to promote cyber security awareness among employees. These measures, including multiple data security lectures themed "Information Security – Protect Yourself from Hackers", along with large-scale phishing email drills, were designed to bolster employees' understanding of cyber security risks, thereby reducing the likelihood of data breaches and unauthorised access.

Furthermore, Towngas actively participated in drill activities led by the Digital Policy Office of the HKSAR Government to strengthen Towngas' ability to respond to cyber security incidents and ensuring business continuity and stability.

In terms of effective implementation, the Towngas Data Centre operating in Hong Kong has obtained ISO/IEC 27001 certification, indicating that its information security management has reached international standards.

Intellectual Property Protection

Intellectual property protection is crucial to an enterprise's Innovation and development. To safeguard innovative achievements, systematic governance structure and staff training programmes have been implemented. These measures not only reinforce adherence to intellectual property regulations but also foster continuous advancement across the broader industrial landscape.

Intellectual Property Management

We strictly comply with intellectual property-related regulations, including the Patent Law of the People's Republic of China, the Copyright Law of the People's Republic of China, the Trademark Law of the People's Republic of China, the Regulations on Computer Software Protection, the Law of the People's Republic of China on Promoting the Transformation of Scientific and Technological Achievements, and the Enterprise Intellectual Property Compliance Management System-Requirement GB/T29490-2023, and continuously monitor updates to legal provisions to ensure compliant operations. To further improve the intellectual property management system, the Group established an Intellectual Property Working Committee in 2023 and formulated the Group Intellectual Property Management System to comprehensively protect the Group's intellectual property and safeguard the legitimate rights and interests of all stakeholders by establishing a sound management system.

The following are the Group's intellectual property protection measures:

- Early Planning: At the early stages of the projects, considerations for trademark registration and patent applications have already begun, with advance planning for the Intellectual property strategy.
- Process Management: Regularly review the protection of intellectual property during project operations.
- Protecting Collaborators' Intellectual Property: When collaborating with third-party organisations, clearly stipulate the rights and obligations of both parties regarding intellectual property in contracts.
- Information Security: Closely monitor updates to intellectual property-related laws and regulations, and adjust internal management systems in a timely manner.

Intellectual Property Training

The Group places great importance on fostering employees' expertise in intellectual property.. A series of specialised training programmes implemented throughout 2024 have encompassed fundamental intellectual property concepts, management frameworks, and risk mitigation strategies as core components. Emphasis has been placed on high-value patent development and strategic deployment considerations.

Over **650 people** have participated in related training sessions

Total training hours exceeded **1,460 hours**

ESG Engagement

We are committed to fostering a sustainability mindset among stakeholders. By organising ESG training and exchange activities, we have enhanced the understanding of ESG-related issues among internal and external stakeholders.

Internal Engagement

The Group values the development of employees' ESG capabilities. Professional competencies have been enhanced through comprehensive internal training initiatives, while cross-departmental collaboration advances through diverse communication channels. This approach promotes the seamless integration of ESG principles into practice. Additionally, online ESG seminars have been tailored for the specific needs of various business segments to facilitate a better understanding and implementation of Group-wide ESG strategies. Moving forward, the Group will further embed ESG elements into its internal training framework, foster ESG awareness among employees at all levels, and continually strengthen the team's capabilities in sustainable development.

Nearly **1,000 attendance** participated in the Group's online ESG training

External Engagement

The Group actively engages in industry knowledge-sharing activities to bolster stakeholder confidence and foster cross-industry ESG collaborations. By organising and participating in ESG-themed forums and seminars, we share practical experiences in sustainable development. Notable sharing activities this year included:

Organiser	Conference/Seminar Theme	Topic
ReThink Hong Kong 2024	Sustainable Business Forum & Solutions Expo	Steering Hong Kong Towards Sustainable Ports: Strategies for a Greener Future
Centre for Business Sustainability – The Chinese University of Hong Kong Business School	Business Sustainability Conference 2024	Designing Resilient Supply Chains: Innovation, Visibility, and Sustainability
HKU Jockey Club Enterprise Sustainability Global Research Institute	Seminar on "The Future of ESG Reporting: Navigating Global Standards and Regulations"	Impact of Global and EU Sustainability Reporting and Controversies

Towngas Showcase at the 8th China-Eurasia Expo

The 8th China-Eurasia Expo was held in the Xinjiang International Convention and Exhibition Centre at the end of June 2024. Under the theme "New Opportunities of Silk Road, New Vitality for Eurasian Cooperation", the event drew participation from 50 countries, regions, and international organisations, along with exhibitors from more than 1,000 domestic entities.

Marking a significant milestone as Hong Kong's first participating public utility, Towngas showcased its pioneering technologies across multiple areas, including city-gas, water supply, waste management, distributed photovoltaics, hydrogen energy applications, and energy storage, and promoted the TERA-Award, an initiative aimed at catalysing global innovation in zero-carbon technologies. Our booth generated interest from numerous domestic and international stakeholders.

Stakeholders Engagement

Beyond continuously strengthening relationships with stakeholders and creating long-term value for them, we also engage through diverse communication channels to gain a deeper understanding of their needs and expectations. This allow us to identify key issues requiring the Group's focus, and take proactive steps to collaborate with stakeholders in advancing sustainable development.

Double Materiality Assessment Process and Results

Social, economic, and environmental trends are closely monitored, with regular evaluations of material sustainability issues incorporated into the Group's risk management framework. This vigilance empowers us to adapt policies effectively in response to challenges. This year, we engaged with internal and external stakeholders using various approaches, including questionnaire surveys and focus group interviews. Employing a double materiality assessment framework, we analysed how our operations impact economic, environmental, social, and governance factors, as well as how these issues correlate with our financial performance. From this assessment, we identified and prioritised material issues accordingly. The specific steps of the evaluation process materiality were as follows:

Step 1: Identification of Materiality

- Engaged with relevant departments within the Group to identify and categorise stakeholder group
- Reviewed ESG issues previously highlighted by stakeholders
- Referenced international standards and ESG criteria set by rating agencies
- Conducted peer benchmarking
- Compiled a list of 26 ESG issues

Step 2：Stakeholders Engagement

- Collected assessment feedback from various categories of stakeholders through questionnaire surveys and focus group interviews
- Stakeholders evaluated the significance of ESG issues based on two dimensions: "Impact Materiality" and "Financial Materiality"

Step 3: Double Materiality Assessment

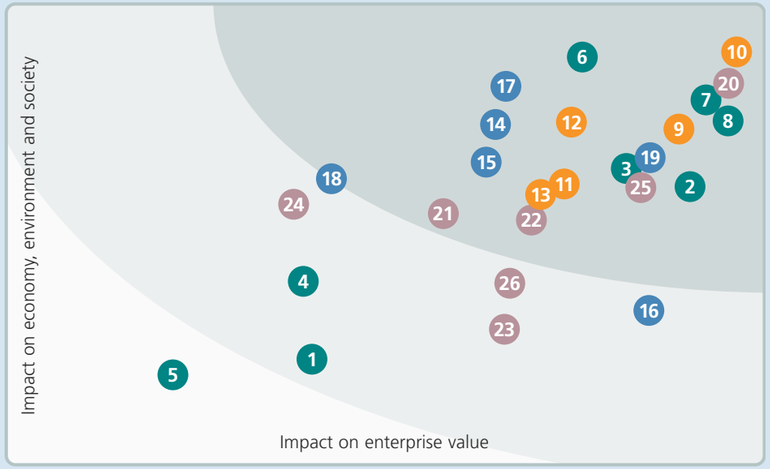
- Compiled, calculated, and statisticised stakeholder assessment results to complete the "Double Materiality Matrix", hence identifying the most material ESG issues
- The Board ESG Committee conducted final discussions to determine the priority of the Group's material ESG issues

Step 4: Response to Material Issues

- Developed a future ESG work plan, addressed stakeholders' concerns, and clearly defined the key focus areas for this year's ESG report disclosures with reference to the results of the Double Materiality Assessment

The "Double Materiality Matrix" displays the relative ranking of 26 material issues based on their impact on enterprise value (X-axis) and their impact on the economy, society, and the environment (Y-axis). Among these, 19 core issues were identified as the most material.

Towngas' "Double Materiality Matrix" 2024



Towards Carbon Neutral Composing a New Chapter in Green Initiatives	Resilient Governance Foundation for Collaborative Development
1 Air Emissions 2 Biodiversity and Resource Use* 3 Energy Efficiency* 4 Waste Management 5 Water and Wastewater 6 Climate Adaptation, Resilience and Transition* 7 Low-Carbon Business Opportunities and Investment* 8 Greenhouse Gas Emissions*	14 Business Integrity and Compliance* 15 Corporate Governance* 16 Data Privacy and Cybersecurity 17 ESG Strategy* 18 Tax* 19 Economic Impact*
Stakeholders Partnership Enhancing Value Chain Resilience	**People-Centric Co-Creating a Sustainable Future**
9 Customer Experience* 10 Supply Security and Reliable Production and Distribution* 11 Innovation* 12 Customer Health and Safety* 13 Responsible Supply Chain Management*	20 Energy Affordability* 21 Asset Integrity and Crisis Management* 22 Employee Engagement and Development* 23 Human Rights Management 24 Inclusion and Diversity 25 Occupational Health and Safety* 26 Community Relations

* Indicates issues with high materiality.

Resilient Governance – Foundation for Collaborative Development

Based on the results of the double materiality assessment, we identified "Supply Security and Reliable Production and Distribution", "Energy Affordability", and "Low-Carbon Business Opportunities and Investment" as three core material issues impacting enterprise value. Through comprehensive engagement with external stakeholders, further confirmation emerged that "Climate Adaptation, Resilience and Transition" and "Asset Integrity and Crisis Management" are their primary areas of focus. In response, we have formulated corresponding strategies to address these priority areas, actively fulfilling stakeholder expectation while advancing our corporate sustainability objectives.

Issues	Our Management Approach
Supply Security and Reliable Production and Distribution	Maintaining a stable and reliable energy supply is a fundamental mission for us. Supply disruptions impact not only customer service and operational revenue but may also impact public safety. Therefore, continuous optimisation of production and distribution systems, along with comprehensive risk management mechanisms, are essential for sustainable business operations across our organisation.
Energy Affordability	We are committed to ensuring equitable and accessible energy, safeguarding vulnerable communities, investing in renewable energy sources, and collaborating with diverse stakeholders to advance innovative solutions. We pledge to balance economic sustainability with social equity throughout the energy transition process.
Low-Carbon Business Opportunities and Investment	The global decarbonisation trend is generating diverse commercial opportunities. The deployment of renewable energy, energy efficiency solutions, circular economy models and green financial products are rapidly expanding. We shall continue to strategically position ourselves in low-carbon sectors, diligently meeting both regulatory requirements and market demands.
Climate Adaptation, Resilience and Transition	The global trend towards low-carbon transition require us to proactively adapt our business model to offer cleaner energy solutions and greener choices for our customers.
Asset Integrity and Crisis Management	Insufficient asset integrity and crisis management can weaken the operational efficiency and market competitiveness of the enterprise. The Group has developed contingency plans for potential risks and conducts regular inspections and maintenance of equipment, continuously monitoring asset conditions to ensure asset safety and operational stability.

Impacts and Impact Scopes of Material Issues

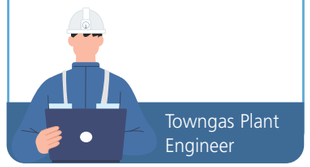
The table below lists the ESG issues for this year and the impact range of different issues on internal and external stakeholders.

No.	Material Issues	Impact Scopes: Employee	Contractors and Suppliers	Customers	Community	Corresponding Chapters
1	Air Emissions	✓	✓	✓	✓	Towards Carbon Neutral – Composing a New Chapter in Green Initiatives
2	Biodiversity and Resource Use*	✓	✓		✓	
3	Energy Efficiency*	✓	✓	✓	✓	
4	Waste Management	✓	✓			
5	Water and Wastewater	✓	✓		✓	
6	Climate Adaptation, Resilience and Transition*	✓	✓	✓	✓	
7	Low-Carbon Business Opportunities and Investment*	✓	✓	✓		
8	Greenhouse Gas Emissions*	✓	✓	✓	✓	
9	Customer Experience*	✓	✓	✓		Stakeholders Partnership – Enhancing Value Chain Resilience
10	Supply Security and Reliable Production and Distribution*	✓	✓	✓	✓	
11	Innovation*	✓	✓	✓	✓	
12	Customer Health and Safety*	✓	✓	✓		
13	Responsible Supply Chain Management*	✓	✓			
14	Business Integrity and Compliance*	✓	✓	✓	✓	Resilient Governance – Foundation for Collaborative Development
15	Corporate Governance*	✓	✓	✓	✓	
16	Data Privacy and Cybersecurity	✓	✓	✓		
17	ESG Strategy*	✓	✓	✓	✓	
18	Tax*	✓	✓	✓	✓	
19	Economic Impact*	✓	✓	✓	✓	
20	Energy Affordability*			✓	✓	People-Centric – Co-Creating a Sustainable Future
21	Asset Integrity and Crisis Management*	✓	✓	✓	✓	
22	Employee Engagement and Development*	✓				
23	Human Rights Management	✓	✓			
24	Inclusion and Diversity	✓	✓			
25	Occupational Safety and Health*	✓	✓			
26	Community Relations	✓			✓	

* Indicates issues with high materiality.

Stakeholder Engagement Results and Our Responses

The table below summarises the feedback from internal and external stakeholders on key material issues and our corresponding actions:

Stakeholder Feedback	Corresponding ESG Issue	Impact	Our Actions
"As a supplier to Towngas, we have always actively participated in ESG training sessions and workshops it offers." Supplier	Responsible Supply Chain Management	**External impact:** ⊕ Promoting social responsibility in the supply chain ⊖ Increasing ESG risks among suppliers **Internal impact:** ⊕ Increasing business stability ⊖ Increasing risk of supply disruptions	Sustainability and compliance throughout the supply chain are ensured through rigorous vendor assessment protocols, stratified management classifications, and regular evaluations of existing suppliers' ESG credentials. (For further details, please refer to the section on "Supply Chain Management")
"We hope that enterprises can go beyond mere compliance requirements, not only implementing ESG at the management level but also integrating sustainability principles into their daily operations. Through the collaboration with Towngas, we are glad to see that the Company has various initiatives and products to promote a warm community." NGO staff	ESG Strategy	**External impact:** ⊕ Enhancing public welfare ⊖ Weakening social trust **Internal impact:** ⊕ Enhancing employee awareness of ESG knowledge ⊖ Failing to effectively implement ESG measures	Provide ESG training for all employees, integrate ESG concepts into corporate culture, help each employee understand the importance of ESG deeply, and encourage active participation in Towngas' sustainability actions. (For further details, please refer to the section on "ESG Engagement")
"Our plant (Tai Po Gas Production Plant) operates in a high-temperature environment. I also witness that the Company implements various initiatives to enhance occupational health and safety."  Towngas Plant Engineer	Occupational Safety and Health	**External impact:** ⊕ Building a positive corporate reputation ⊖ Increasing burden of social safety costs **Internal impact:** ⊕ Improving production efficiency by reducing safety accidents ⊖ Disrupting production operations due to frequent work-related accidents	With the long-term goal of achieving "zero accidents", we regard occupational safety and health as the core of our operations. Through unified safety standards and comprehensive risk management, we protect the safety of employees and contractors while continuously eliminating the risks of work-related injuries. (For further details, please refer to the section on "Occupational Safety and Health")

⊕ indicates positive impacts ⊖ indicates negative impacts

People-Centric

Co-Creating a Sustainable Future

We are dedicated to fostering an inclusive, open, and safe work environment that protects the rights and interests of all stakeholders. Driven by a strong sense of social responsibility, we actively participate in a variety of community initiatives and collaborate with social welfare organisations and non-governmental organisations to collectively build a better society.

Key Highlights

Safety	Employees	Community
• **0** employee and contractor work-related fatalities[2] • **0** major incidents and chemical leakages at chemical plants • Group lost work hours injury rate (number of accidents per million work hours): o Employees: **0.35** o Contractors: **0.22** • Safety training hours: o Hong Kong: **23,019 hours** o Chinese mainland: **866,091 hours** • Conducted nearly **1.17 million** regular safety inspections (Hong Kong) and over **17.57 million** household safety inspections (Mainland City-gas)	• Training and development o Average training hours per employee: **60.3 hours** • Promoting diversity and inclusion o Employment of persons with disabilities: **10** (Hong Kong) o Gender pay ratio (base salary): **1:1** (Hong Kong)	• Over **40,000** households benefitted from the "Towngas Concession Schemes", with total funding over **HK$36 million** (Hong Kong) • Volunteer service hours exceeded **20,000 hours**, benefitting over **640,000 people** (Hong Kong) • Introduced "**Social Impact Assessment**" based on international frameworks, with results to be disclosed in 2025

[2] Refers to the number of fatalities as a result of work-related injury.

Management Approach

The Group upholds the highest standards of regulatory compliance regarding employee rights and workplace health and safety across all operational regions. Our commitment spans the comprehensive labour and safety legislative frameworks of the Chinese mainland and Hong Kong, including but not limited to the Labour Law of the People's Republic of China, the Labour Contract Law of the People's Republic of China, the Production Safety Law of the People's Republic of China, the Employment Ordinance (Cap.57), and the Occupational Safety and Health Ordinance (Cap. 509).

Our commitment to operational excellence is anchored by a robust Health and Safety Policy, which safeguards our employees, contractors, customers, and the public. We also demonstrate our dedication to well-being initiatives through periodic reviews of our Code of Conduct and the harmonisation of our Employee Policy, Anti-Discrimination Policy, Human Rights Policy, and Security Policy. Through our Social Investment Policy, we maintain our focus on creating a sustainable positive impact in the communities we serve.

Jointly Build a Security Defence Line

Through proactive asset maintenance, crisis management, occupational health and safety measures, and community engagement initiatives, we are committed to upholding a strong line of defence for safe development and ensuring the safety of our community.

Asset Integrity and Crisis Management

The Group consistently adheres to outstanding design principles and a results-oriented engineering approach, ensuring that facilities and equipment meet the highest safety standards. Through continuous innovation and improvement, we actively work to anticipate and minimise potential health and safety risks.

We adopt preventive maintenance protocols and leverage cutting-edge detection technologies to continuously monitor equipment conditions in the field of asset integrity management. On the Chinese mainland, the Group has self-developed the Towngas Operation Platform (TOP), which integrates advanced technologies such as the Internet of Things, big data analytics, and artificial intelligence, facilitating intelligent asset management solutions that enhance both operational safety and reliability.

Given that the Tai Po Gas Production Plant's pipeline system has been operating under high temperature and high pressure conditions for 30 years, Towngas began replacing the downstream piping system of the Catalytic Rich Gas Reactor in 2024.

During the year, Towngas implemented the following safety inspection measures to mitigate risks:

Hong Kong Business

- Performed **190,234** trench inspections at **11,165** construction sites
- Surveyed **7,495 km** of gas pipelines
- Conducted **1,169,734** regular safety inspections

Chinese Mainland Business

- Conducted **209** internal Health, Safety and Environment ("HSE") audits for project companies on the Chinese mainland
- Conducted more than **17.57 million** household safety inspections (Mainland City-Gas)

Additionally, the Integrity Management Specification of City Gas Distribution Pipeline, jointly drafted with institutions including the China Association of Special Equipment Inspection, was officially released and implemented. Rooted in advanced asset integrity management principles, this specification integrates reliable detection and management technologies. It aims to enhance the safety standards of gas pipeline management and effectively reduce the probability of incidents occurring.

Significant achievements were made in asset integrity and crisis management during the year:

Hong Kong Business

- Replaced **16.7 km** of ageing metal pipes
- Number of customer-related emergency reports has decreased by **17.5%** compared to 2023

Mainland Utility Businesses

- Replaced **1,091 km** of ageing metal pipes

Crisis management exercises were held in Hong Kong and on the Chinese mainland, aimed at enhancing the overall ability to respond to emergencies.

Proactively Prepare and Remain Vigilant in the Arena of Crisis Management

Fire drills at the Tai Po Gas Production Plant: Strengthening Vigilance and Response Capabilities

During the year, Towngas organised a fire drill at the Tai Po Gas Production Plant to ensure that all concerned parties remain highly vigilant and master proficient emergency response skills. Experts from the Hong Kong Fire Services Department and the Electrical and Mechanical Services Department were invited to participate in this exercise. The drill encompassed various scenarios, including fire emergency response, gas leakage management, and rescue operations.

Enhanced Capability for Extreme Weather Response: Group Crisis Management Exercise 2024

In recent years, extreme weather events have become increasingly frequent due to climate change, posing challenges to the Group's operations and safety management. To enhance our response capabilities, the Group conducted the "Group Crisis Management Exercise 2024", focusing specifically on the distributed photovoltaic projects within our Renewable Energy Business. This exercise simulated the potential impacts of sudden severe convective weather events on these projects. Its primary objective was to comprehensively assess the coordination and collaboration capabilities across different business segments and departments during emergency situations. Additionally, the exercise evaluated the practical effectiveness of our current emergency response procedures, aiming to maximise the synergistic benefits of effective crisis management.

Occupational Health and Safety

The long-term aspiration of achieving "zero accidents" in the workplace stands as a fundamental objective for the Group, with robust safety assurances provided to all employees and contractors through standardised safety protocols.

Health and safety protection for employees, contractors, customers, and the general public represents a core commitment that has been thoroughly integrated into every operational aspect. No work-related fatalities were recorded among employees and contractors in Hong Kong and on the Chinese mainland during the year. The principal categories of occupational injuries included slips, trips, and falls on the same level.

Work-related fatalities[2] **0** (employees and contractors)	The Group's Lost-Time Injury Frequency Rate (Accident per 1,000,000 work hours)	Employees **0.35** (Target for 2025: 0.7) Contractors **0.22**

Occupational Health and Safety Management

Employees across the Group benefit from extensive occupational safety provisions. In Hong Kong, we actively participate in the International Safe Workplace Programme (ISWP) to provide safety and health protection for our staff. On the Chinese mainland, a Safety Responsibility System has been implemented, requiring regular submission of safety-related key performance indicators, including third-party damage and incident rates, to the Group Safety and Environment Committee. Systematic risk assessment and analytical protocols facilitate the identification and subsequent mitigation of latent occupational hazards, thereby ensuring regulatory compliance in all safety performance aspects. The dissemination of the Contractor Safety Handbook to contractors serves to guarantee their familiarity with and adherence to stringent health and safety protocols.

The attainment of ISO 45001 Occupational Health and Safety Management System Certification by Towngas and its 46 project companies stands as a compelling testament to the unwavering commitment and tangible initiatives undertaken by the Group in safeguarding workplace wellbeing.

[2] Refers to the number of fatalities as a result of work-related injury.

1. Chaired by the Managing Director, the committee comprises the Chief Operating Officer of each Business Segment and the person-in-charge of the Group's safety and environment, and is responsible for overseeing health, safety and environment initiatives throughout the Group.
2. The Group has linked the variable compensation of the Managing Director and senior management members to critical ESG factors, thereby strengthening their accountability to stakeholders.

1. Each Business Segment formulates a Safety and Environment Committee to monitor its health, safety and environment performance.
2. To ensure that occupational health, safety and environment-related information is communicated accurately and in a timely manner, employees and contractors at all levels are invited to participate in regular meetings of the Safety and Environment Committee.

Promoting Safety Awareness

We recognise that safety is not only a mission for the Group, but as a culture that requires meticulous nurturing. Through safety education and practical exercises, we aim to enhance our operational safety capabilities, ensuring that occupational safety and health principles are integrated into daily operations.

Tailored safety training programmes are provided to employees across the Group to foster a strong understanding of the Group's safety philosophy of "Without danger, there is safe; without deficiency, there is complete".

During the year, the status of safety training is listed as follows:

Safety Training Hours

Hong Kong	Chinese mainland
23,019 hours	866,091 hours

United Efforts in Strengthening Safety Defences

The Group Hosts Its First Cross-Business-Segment Safety and Environmental Management Workshop

During the year, the Group hosted its first cross-business-segment Safety and Environmental Management Workshop in Suzhou, aimed at reinforcing safety culture and facilitating collaboration. Professionals from the mainland utilities and gas resources business actively contributed to the discussions.

This successful initiative marks a significant milestone as the Group progresses towards the comprehensive integration and enhancement of safety protocols. We remain committed to establishing a robust and efficient safety management framework across all operational divisions.

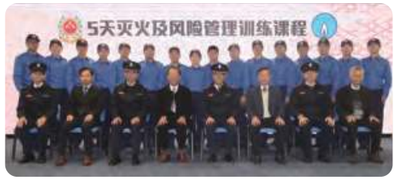
Over **2,000** employees from different business segments participated in the workshop

Collaborative Seminar on Occupational Safety and Health with Contractors to Enhance Overall Safety Awareness

To enhance the focus on gas safety and occupational safety and health among employees and contractors, the Group's Safety and Environmental Management Department hosted the "Contractor Occupational Safety and Health Seminar 2024". The event invited representatives from the Hong Kong Labour Department, the Electrical and Mechanical Services Department, and the Occupational Safety and Health Council, who delivered presentations on various occupational safety and health topics. Experts demonstrated preventive measures for slip, trip, and fall incidents in the workplace. Following the seminar, we introduced the "Contractors' Occupational Safety and Health Online Quiz Competition" to reinforce awareness of occupational safety and health as well as gas safety.

More than **200** executives, colleagues, and contractors attended the event

Fire Safety and Risk Management Training



"The 9th Fire Safety and Risk Management Training Programme", jointly organised by the Group Safety and Environmental Management Department and the Fire and Ambulance Services Academy of the Hong Kong, Fire Services Department, brought together participants from diverse business segments, regional offices, and project companies across the Group. This comprehensive programme included both theoretical instruction and hands-on practical exercises. Participants received physical conditioning along with detailed guidance on the proper use of firefighting apparatus and equipment. The training curriculum also covered the correct procedures for donning protective gear, including firefighting suits and associated safety equipment.

In active support of the 2024 National Work Safety Month, we have implemented a comprehensive programme of safety inspections and training sessions. Through these concerted efforts, we aimed to instill a safety-focused development mindset among our employees.

Embodying the principles of Work Safety Month, fostering a robust culture of safety

Safety Poster Design Competition – Hong Kong Business

Towngas launched a series of innovative and educational initiatives to enhance employee awareness regarding the importance of maintaining clear evacuation routes. These initiatives included a "Safety Knowledge Challenge", an "AI Creative Image Design Competition", and an informative educational video titled "Maintain Unobstructed Escape Routes – Do Not Illegally Obstruct Fire Rated Doors".

Gas Skills Competition Enhances Safety Awareness – Mainland Utilities Business

The first East China Regional Gas Skills Competition and Confined Space Operations Contest was held under the theme of "Ensuring Safety Through Unwavering Commitment". This event went beyond mere operational proficiency assessments, incorporating essential emergency rescue knowledge such as cardiopulmonary resuscitation (CPR) and Automated External Defibrillator (AED) devices.

150 contestants participated

Proactive Risk Identification to Mitigate Potential Hazards – Renewable Energy Business

The Group, closely aligned with the theme "Everyone Talks Safety, Everyone Knows How to Respond – Ensuring Clear Life-Saving Pathways", and guided by the principle of "Ensuring Safety Through Unwavering Commitment", actively carried out a series of safety-focused initiatives. This commitment has manifested through numerous specialised safety initiatives, including safety inspections, emergency drills, fire safety exercises, safety trainings, and safety competitions. These efforts have facilitated thorough hazard identification, enhanced emergency response capabilities, reinforced fire safety awareness and professional competencies, and effectively disseminated crucial safety knowledge throughout the Group.

Promoting Safety Awareness and Knowledge on Gas Usage – Extended Businesses

The acquisition of proper gas usage techniques by residents has been supported through various community outreach efforts, such as informative gas safety leaflet and educational seminars. Hands-on experiences have significantly enhanced safety consciousness within communities, cultivating an atmosphere where "widespread knowledge of gas safety and universal comprehension of emergency protocols" has become the prevailing standard. These methodical endeavours underscore the Group's steadfast dedication to public welfare and its corporate social responsibilities.

Safety Inspections to Reduce Risks – Green Fuels and Chemicals Businesses

The Group actively carries out various safety inspections and departmental self-assessment initiatives on the Chinese mainland to enhance daily risk prevention and control, while enhancing the efficiency and quality of safety management.

Over **3,000** potential safety hazards identified and **100%** rectified

Community Safety Enhancement

Safety awareness promotion and inspection programmes are routinely conducted across communities and schools. These initiatives include the distribution of brochures, demonstrations of gas appliance use, and comprehensive safety briefings.

Enter into the Community: Advancing Gas Safety to Secure Residents' Modern Lifestyles

Towngas, recognising that elderly singletons often forget to turn off their stoves while cooking, has taken the initiative to install its self-developed Smart Controllers in households in need. This controller enables elderly users monitor the status of their cooking appliances via a mobile app, ensuring gas safety.

Mainland utilities of the Group is actively advancing "coal-to-gas" and "bottled LPG-to-pipeline natural gas" conversion projects, bringing cleaner natural gas to more households.

Gas engineering renovation works were completed for **1,457** households.

Enter into the Campus: Inspection Initiatives

To safeguard the use of gas in kindergartens, the Group's project companies periodically carry out comprehensive inspections of gas safety systems in local community kindergartens. If any equipment is identified as falling short of required standards, it is promptly replaced to ensure a secure and reliable environment.

The "Water Quality Testing at Campuses" activities are carried out in collaboration with the Group's water business projects and local public health regulatory authorities. These initiatives involve sampling and testing water from faucet outlets, focusing on key indicators such as turbidity, colour, odour, oxygen consumption, total coliform bacteria, and total bacterial count. This proactive approach helps identify and address potential water quality safety hazards, ensuring that teachers and students have access to safe and high-quality water sources.

Creating a Harmonious Workplace

We strive to provide employees flexible working arrangements, fair recruitment opportunities, and diverse developmental programmes. These comprehensive initiatives reflect the Group's dedication to cultivating a collaborative workplace, establishing an atmosphere characterised by harmony, inclusivity, and dynamic potential for all team members.

Promoting Diversity and Inclusion

We provide a diverse and flexible working environment to meet the varying needs of our employees, ensuring that everyone feels cared for and supported in achieving a balance between work and personal life. We offer suitable lactation spaces and flexible work arrangements for working mothers, and provide accessible facilities for employees with disabilities, fostering a culture of mutual support and inclusive participation.

We firmly believe that the principles of equity and fairness are essential to building an ideal workplace. To achieve diversity and inclusion, the Group adheres to equal recruitment guidelines, employing individuals from different ethnic backgrounds and disabilities, and providing job opportunities for talents across various age groups, thereby eliminating workplace discrimination.

Non-local Employees **68**

Disabled Employees (Hong Kong) **10**

The Group values opinions from employees at all levels and encourages employees to raise grievances promptly when facing discrimination, harassment or other violations, as well as when encountering any dissatisfaction or unfair situations at work.

96%
Employee satisfaction rate[7]

"Post-50 Internship Programme"

Towngas actively provides diverse employment opportunities for people of different age groups to promote the comprehensive development of talent. Since 2019, we have fully supported the innovative initiative of the Employee Retraining Board – the "Post-50 Internship Programme." This programme is specifically designed for individuals aged 50 and above, helping participants to understand current workplace trends, enhance essential work skills, and establish a solid foundation for re-entering the workforce.

A total of **4** "Post-50" interns were recruited this year

Towngas Movie Night

A range of inclusive recreational programmes have been established to support the seamless integration of colleagues with disabilities into the Company. An example is Towngas Movie Night, where full financial support is extended to disabled employees and their families to enjoy movies together, reinforcing our commitment to a culture of inclusivity and diversity.

Over **200** colleagues and their family members participated

[7] Refers to renewable energy business only.

Safeguarding the Physical and Mental Health of Employees

Employee well-being has always been the top priority at Towngas. A variety of wellness initiatives and activities are continuously implemented to ensure comprehensive care and support for all staff members. This commitment aims to create an environment where everyone can experience happiness and care in both their work and personal lives.

Comprehensive Health Check to Safeguard Health and Well-being

As the threat of influenza continues to rise, Towngas launched an influenza vaccination programme to protect the health of employees and their relatives.

Over **200** employees and their relatives participated in the programme

To further enhance employees' understanding of importance of healthy lifestyle, Towngas organised an unique "Health Market" at the North Point Headquarters. This event featured complimentary vision examinations conducted by healthcare professionals and utilised cutting-edge AI technology for comprehensive health screenings. Additionally, a diverse array of health-focused booths and complimentary massage services were available for employees.

Building Physical Fitness and Team Cohesion

Exceptional results were achieved this year by the Towngas Dragon Boat Team through their active participation in local competitions. The team not only secured second place in the "Mixed Race Repechage Race" during the Dragon Boat Festival races held in Tai Po, but also distinguished themselves by claiming championship titles in both the "National Day Cup Invitational Race Final" and the "Industrial Race Final".

Won **7** championships throughout the year

To foster our colleagues' interest in this sport, we specially acquired dragon boat machines and even organised an indoor dragon boat competition. The events included an introductory race, men's and women's individual races, and a departmental race.

Nearly **50** colleagues participated

Group Team Spirit Fuels Steady Business Growth

For 163 years, colleagues across the Group have upheld an unwavering team spirit, working together to foster consistent growth across various businesses.

In September 2024, 70 staff from different business segments of the Group participated in a three-day journey retracing the "The Road of Xuanzang", trekking approximately 6,600 km across the Gobi Desert. With strong willpower and mutual support, the entire team faced the challenges of harsh weather conditions, including scorching sun and chilling rain. United in purpose, they overcame all obstacles, and with no one left behind, successfully completed the challenge.

This journey strengthened cross-business-segment collaboration within the Group and further exemplified the Group's spirit of "triumph over adversity and stand united in solidarity."

In the face of a rapidly evolving global landscape, we believe that by harnessing the wisdom and strength of our team, we can confront challenges together, leveraging our collaborative spirit to drive steady development and strengthen our century-long foundation while overcoming obstacles and creating more opportunities.

70 staff participated

Mr. Yang Jun,
Chief Operation Officer – Extended Businesses

"This cross-business-segment challenge serves as a catalyst to embolden our resolve to "triumph over adversity and stand united in solidarity". Let us embrace this opportunity not as individual pursuits, but as a collective journey of shared growth and resilience."

Mr. Lam Ming-wing,
Chief HR Officer

"Throughout its 163-year journey, Towngas has navigated a path far from smooth, encountering challenges as unpredictable as sudden sandstorms in a desert landscape. Yet, our team has consistently demonstrated remarkable resilience—each obstacle met head-on, each difficulty overcome, leading us to emerge stronger and discover new horizons."

Safeguarding the mental well-being of employees is a vital mission of the Group. Through various initiatives, the Group supports employees in cultivating an optimistic outlook and comprehensively enhancing their psychological health.

Travelling at Ease: A Journey of Spiritual Discovery

Hiking Events Led by the Towngas Hiking Club

Towngas Hiking Club organised three hiking events, guiding participating employees to explore Sai Kung and Lamma Island, allow them to immerse themselves in the wonders of nature.

Three-day Food Journey at Chaoshan

A delightful "three-day high-speed rail trip" was arranged by the Sports & Recreation Club to experience the culinary delights of Chaoshan. Throughout this journey, participants had the opportunity to visit distinctive regional architecture while tasting exquisite local cuisine and enjoying a culturally enriching yet relaxing getaway.

A total of **94** employees, their family members and friends participated

Training and Development

Diverse training and development initiatives serve as key drivers for employee growth, while enhancing work efficiency and stimulating innovation. In line with industry trends and future development needs, the Group continues to increase investment in training resources. By offering a combination of internal and external training courses, on-the-job development opportunities, and support for further education and professional certification examinations, the Group actively promotes continuous learning and advancement among its staff. These strategic initiatives have successfully cultivated a workforce distinguished by exceptional innovative capabilities and a strong competitive edge.

Average training hours per employee
60.3 hours

Average training spending per employee
HK$1,553

Internal Training Programmes

A comprehensive, multi-tiered talent development strategy has been meticulously developed by the Group, incorporating customised training initiatives such as the "Technician Trainee Programme", the "Supervisor Trainee Programme" and the "Group Management Trainee Programme". These programmes are specifically designed to meet employees' career development needs. Additionally, specialised courses focusing on industry trends and environmental stewardship are regularly offered. There is also an increased emphasis on developing essential "soft skills", including communication strategies and effective workplace practices, to enhance operational excellence. Collectively, these initiatives aim to nurture a workforce characterised by a broad range of skills and expertise.

Diversified Training Programmes to Enhance Employee Competence

Towngas has been strategically developing its new energy business through the Towngas Training Institute. As part of this effort, ESG and hydrogen energy modules were incorporated into the "Technician Trainee Programme" to provide new employees with a solid technical foundation.

"Group Managerial Staff Development Programme" and "Managerial Staff Training Programme"

The Group launches the "Group Managerial Staff Development Programme" and the "Managerial Staff Training Programme" to create a talent pipeline, supporting the Group's long-term development.

Middle managers within the Group are given the chance to participate in significant project research through the "Group Managerial Staff Development Programme". This initiative not only aids in their professional growth but also ensures that the Group maintains a reliable pool of candidates for senior management roles.

In 2024, the promotion rate for Hong Kong employees who completed the aforementioned programme reached 40%. The second phase of this programme is expected to be launched in the second half of 2025.

The "Managerial Staff Training Programme" emphasises nurturing employees who have potential for promotion to managerial positions. By implementing structured training sessions, participants gain a thorough understanding of essential competencies in staff and project management. This comprehensive preparation equips them to excel in entry-level management positions moving forward.

External Training Programmes

In an ever-changing industry landscape, the Group deeply recognises that employees must continuously enhance their adaptability to the external environment in order to address future business challenges. We consistently collaborate with various external partners, integrating diverse perspectives and deep insights from both within and outside the industry, to support employees in learning new skills and bridging knowledge gaps.

Broadening Industry Perspectives Through External Training Programmes

To ensure smoother business communication and help colleagues perform better in negotiations, Towngas launched its first commercial negotiation workshop tailored for senior executives. Experts from The University of Hong Kong Business School have been invited to explain how to leverage effective communication skills to enhance negotiation outcomes.

More than **50** management staff participated in the workshop

New Energy-Focused Vocational Training for Expanding Talent Pool for the Industry

In collaboration with the Vocational Training Council (VTC), Towngas has pioneered Hong Kong's first Professional Diploma in Gas Engineering. This programme aims to revitalise the industry and promote knowledge of gas engineering. It attracts fresh talents from diverse backgrounds, including frontline gas technicians, engineers, administrative professionals, and management from engineering firms. Towngas has established a dedicated scholarship programme to commend students who demonstrate exceptional academic merit and outstanding performance.

29 individuals graduated this year

Nurturing the Young Generation

In addition to training our own employees, we are also committed to providing the younger generation with diverse training pathways and comprehensive development opportunities, helping them cultivate an interest in the industry while enhancing their professional skills.

"T-Future Pioneers Youth Exchange Programme"

The inaugural "T-Future Pioneers Youth Exchange Programme" – jointly-organised by Towngas and the Hong Kong China Education Fund – took place in Xi'an. We designed a series of "dual carbon"-themed courses, aiming to enhance young people's understanding of carbon reduction through learning and exchange.

30 Hong Kong youths participated

Inaugural ESG Scholarship Programme Launched by Towngas and the HSUHK School of Communication

The "ESG Scholarship Programme" represents the inaugural collaborative initiative between Towngas and the Hang Seng University of Hong Kong School of Communication, aimed at deepening students' understanding of ESG concepts. Among the outstanding entries, "Save Local Bees Conservation Programme" highlights the critical importance of safeguarding local biodiversity through targeted efforts to preserve native bee populations. Another exceptional submission features a documentary-style video that explores the environmental benefits of eco-friendly funeral practices. Through this scholarship programme, we aim to inspire students to engage proactively with ESG issues and incorporate these values seamlessly into their future careers in journalism and communication.

Each team received a scholarship of **HK$10,000** and a total of **17** students benefitted

Future Career Development Direction Guided by the "Career in a Nutshell" Programme

Towngas launches the "Career in a Nutshell" programme. The workplace experience programme features sharing sessions on new energies, STEM (Science, Technology, Engineering, and Mathematics) workshops and business management training, equipping students with essential skills for further studies and career development. Additionally, the Youngas Club provides graduates with internship opportunities and employment information.

89 secondary school students took part in the programme

Encouraging Employee Innovation

The Group provides employees with ample resources and platforms, empowering them to challenge conventions and unlock new potential for business growth.

Providing Resources to Encourage Innovation

Since 2016, Towngas has initiated the "Innovation Funding" programme to drive continuous development through employee-submitted forward-looking ideas. This initiative expanded into the Chinese mainland in 2019.

An accumulated Innovation Funding of **HK$2 million** has been allocated to **36** projects

Glorious Achievements Ignite the Flame of Innovation

The safety of operations in confined spaces has always been a core concern within the industry. Towngas has self-developed an "Internal Conditioning Robot for Steel Pipe" to effectively replace manual labour, significantly reducing the risks associated with confined space operations. This innovation also earned the Silver Award in the Open Category of the inaugural "OSH Innovation & Technology Award" by the Occupational Safety and Health Council. Equipped with a high-definition camera and a remote-control system, the robot is capable of performing repair tasks in inner wall of steel pipes with precision and maintains excellent operational performance even in harsh environments.

At the inaugural Hong Kong Business Innovation and Invention Exhibition organised by Towngas, an automatic spraying machine co-developed by the Gas Production – Maintenance and Development Department and the Chinese University of Hong Kong was showcased. This technology helps eliminate the need for scaffolding and reduce risks associated with working at heights, with potential applications in other operational areas in the future. Currently, the automatic spraying machine applies i2Cool's "electricity-free cooling technology" paint to the surface of naphtha storage tanks at the Tai Po Gas Production Plant, effectively lowering their exterior temperature. For more information about "electricity-free cooling technology", please refer to "Case Study: TERA-Award Smart Energy Innovation Competition".

Superior Quality Service Programme

In an effort to promote an innovation culture within the Group and enhance its service quality and productivity, the "Superior Quality Service (SQS) programme" encourages employees to proactively conceive new ideas and identify opportunities for improving work processes from their daily duties. This year, the "Quality Festival" opening ceremony centred around the theme of the Olympic Games, inspiring employees to draw from the athletic spirit of determination and resilience in pursuing excellence, and to apply these qualities in work, contributing to the Group's continuous innovation.

The Quality Festival organised a series of visits and thematic seminars, including tours to the E&M InnoZone of the Electrical and Mechanical Services Department, Hong Kong's first Future Manufacturing Hall and the AI Applications Hall at the Hong Kong Productivity Council, the Hong Kong Sports Institute, as well as the Hong Kong International Aviation Academy. There were also sharing sessions on Innovation Funding projects. These activities allowed participants to learn about various innovative technologies and their applications, ranging from the Internet of Things and automation technology to artificial intelligence, sports technology, smart micro-factory operations, and flight simulators.

In addition, the Quality Day has been elevated to the Group level this year, becoming the "Group Quality Day." Teams from each business segment vividly showcased their innovative solutions through drama performances, aiming to enhance communication and idea exchange, learn from best practices, and promote a culture of quality service.

Over **800** online and offline participants

Over the past 32 years, we have completed more than 2,100 SQS projects, with over 30% of Hong Kong employees being members of the Superior Quality Service programme. In addition to improving customer satisfaction, this has also saved the company approximately HK$700 million.

Building a Caring Community

Committed to fostering meaningful connections within the communities we serve, we have launched a series of impactful community investment initiatives designed to bring positive change to our operational regions. Our efforts include cherished programmes such as "Soup to Warm the Heart", "Rice Dumplings for the Community", and the "Gentle Breeze Movement". From senior citizens to young children, we actively collaborate with like-minded associations and institutions to advance vital community programmes. Our partnerships address pressing social needs while fostering a caring community for all.

To strengthen community engagement and foster inclusive dialogue across society, we actively participate in public consultations, offering constructive recommendations and collaborating with the government to implement a range of public policies. Committed to our corporate social responsibilities, the Group upholds a stance of impartiality and neutrality, refraining from financial contributions to political activities, parties, lobbying entities, or advocacy groups, ensuring that our focus remains on fulfilling our societal obligations.

Locations Covered	Employees Participating in Volunteer Services	Volunteer Service Hours	Number of Beneficiaries
Hong Kong	757	20,254	644,770
Chinese mainland	14,322	212,090	74,316

Charitable Donations **HK$5.3 million**

Towngas Aligns with International Standards and Promotes Social Impact Assessment for Community Projects

In line with the increasing importance placed on social impact assessments by global businesses, Towngas has taken proactive steps to align with international standards, thereby strengthening its corporate social responsibility (CSR) initiatives aimed at enhancing community service effectiveness. To support these efforts, we have collaborated with specialised partners to design a tailored social impact assessment framework applicable to various volunteer services. This framework will be utilised across multiple projects, with specific achievements and progress to be highlighted in upcoming reports.

Caring for the Vulnerable Groups

Towngas understands the importance of corporate social responsibility. We firmly believe that a Company's value is not only reflected in its ability to generate economic profits, but also in its commitment to promoting social equity and inclusive development, thereby contributing to the creation of a harmonious society.

"Unseen Carers: Delicious Culinary Idea-thon"

Towngas partnered with the Hong Kong Blind Union to host a special cooking contest titled "Unseen Carers: Delicious Culinary Idea-thon".

21 visually impaired contestants teamed up with Towngas' volunteers

Ensuring the Well-being of the Elderly

The Group cares for the elderly in the community and takes practical actions to safeguard their well-being. In addition to offering discounts on tariff and free appliances maintenance service, we conduct annual safety inspection of gas appliances and installations to ensure the safety of the elderly at home. Furthermore, we organise a wide range of activities to provide more humanistic care in their lives, allowing them to feel the warmth and respect of the community. Towngas Volunteer Service Team has also relaunched the "Soup to Warm the Heart" initiative this year.

A total of **56,700 pots** of soup have been shared with elderly people across Hong Kong throughout the year

More than **9,300** walking stick umbrellas have been distributed

In response to the increasingly severe aging population, we have launched the Walking Stick Umbrella, which combines the functions of a walking stick and an umbrella to enhance the convenience of travel for the elderly.

Caring in the Community: Happy Moments with the Elderly

Towngas partnered with the Hong Kong Housing Society to host the "Celebrating Mid-Autumn with Your Neighbours" event at Kwun Lung Lau in Kennedy Town, promoting a healthy eating philosophy.

Brought festive joy and care to **500** elderly participants

During this year's Dragon Boat Festival, the Towngas Volunteer Service Team collaborated with Hong Kong Christian Service to organise the "Dumplings with Love" event, accompanying "elders with emigrant family" to experience the festival joy.

Over **50** elderly participants took part in this event

Nurturing Future Generations for a Sustainable Future

The Group is actively involved in the development of children and young people, recognising the importance of their healthy development for the community progression. We plan and participate in various activities to enhance the well-being of children, assist schools in improving their teaching environments, and foster an interest in green energy among young people.

"Gentle Breeze Movement": Delivering Warmth to Teachers and Students in Schools

Towngas Smart Energy has initiated the "Gentle Breeze Movement" since 2013, dedicating itself to advancing the development of rural schools through dedicated funding to support the initiative.

- Programme coverage extends across **16** provinces, autonomous regions, and municipalities
- Sponsored **52** rural schools
- Cumulative donations reached **HK$5.65 million**
- Approximately **20,000** beneficiaries

"Towngas Green Day": Inspiring the Future

Towngas successfully hosted two "Towngas Green Day" events in partnership with the HKSAR Government's "Strive and Rise Programme". Students had the opportunity to explore facilities including the Grid Control Centre, Smart Warehouse, Hall of Innovation, and Hall of Future Energy, located in the Group's Hong Kong Headquarters. Interactive experiences, such as quizzes and VR demonstrations, were arranged to offer them deeper insights into business operations and environmental knowledge. We aim to inspire students' interest in the energy industry and sustainable development through these engaging activities.

Building a Brilliant Future for Children

The Towngas Volunteer Service Team organised a creative block-building workshop, collaborating with students to build DIY miniblocks of the Duddell Street Gas Lamps. Towngas also initiated a charity sale of miniblocks. All proceeds, after costs, were donated in full to the Heep Hong Society.

19 children and **22** Towngas Volunteer Service Team members participated

Case Study

Celebrating the 25th anniversary of the Towngas Volunteer Service Team

Since the early 1970s, employees of Towngas have voluntarily organised various charitable activities. As the vision to formalise volunteer work, the "Towngas Volunteer Service Team" was officially established in 1999. Through diverse and creative services, this initiative sought to enhance corporate image, empower employees to achieve personal growth, and bring greater care and warmth to society.

To further expand the scope of volunteering services, Towngas launched the Towngas Customer Volunteer Team in 2005, inviting customers and retired staff to join in giving back to the community. Initially, Towngas piloted this programme with clients in Kwun Tong and Tseung Kwan O districts, recruiting volunteers via mail. The response was overwhelming, with nearly 200 client replies received during the first recruitment phase.

Today, volunteering extends far beyond traditional one-way financial sponsorship or material donations. We now place greater emphasis on collaborating with beneficiaries through various partnership programmes, embodying the spirit of "empowering others while empowering ourselves". Our unwavering commitment and contributions have earned widespread recognition and acclaim within society. Among our notable achievements are twelve consecutive years of receiving the Champion of Highest Service Hour Award (Private Organisations – Best Customers Participation) from the Social Welfare Department, being honoured with "The 8th Hong Kong Volunteer Award Corporate Award" by the Agency for Volunteer Service, and the "Outstanding Corporation Award" at the "Hong Kong Volunteer Award (HKV-Award)" for two consecutive years, jointly organised by the Home and Youth Affairs Bureau and the Agency for Volunteer Service.

Employees Participating in Volunteer Services:	1,000+
Volunteer Service Hours:	1 million+
Number of beneficiaries:	8.5 million+
Number of Rice Dumplings for the Community:	4.7 million
Number of Mooncakes for the Community:	3.6 million
Number of Soup to Warm the Heart:	780,000

Milestones

1999

Upon its establishment, the "Towngas Volunteer Service Team" promptly launched its first signature initiative, the "Soup to Warm the Heart". Over the years, volunteers have visited all 18 districts of Hong Kong, delivering long-boiled soup to elderly and deprived community, spreading warmth throughout the community.

Additionally, we offer free ID photo taking services for the elderly. Currently, we not only take significant graduation moments for low-income families but also take family portraits for autistic individuals and students with disabilities, helping them preserve cherished memories.

2000

The first "Rice Dumplings for the Community" event was organised, inviting more than 500 colleagues and 100 students to join hands in wrapping more than 10,000 rice dumplings, setting the first Guinness World Record.

2001

Seamlessly integrated community engagement with our business operations by pioneering the first "Mooncakes for the Community", this initiative focused on sharing these meaningful mooncakes with seniors, ethnic minority groups, and disadvantaged communities. Currently, Towngas' mooncakes serve as unique community symbols, encapsulating warmth and affection.

People-Centric – Co-Creating a Sustainable Future

2005

The "Towngas Customer Volunteer Team" marked an important step in engaging both clients and retirees in volunteer efforts aimed at benefitting society. To date, over 200 participants who have joined the ranks of the "Towngas Customer Volunteer Team".

2006

The Towngas Volunteer Service Team expanded its diversified services by setting up the "Towngas Haircutting Team", which not only provides free haircutting services to the elderly, but also delivers heartfelt care.

2007

The "Rice Dumplings for the Community" initiative set another Guinness World Record with a total of 34,056 rice dumplings wrapped, demonstrating the strength of community bonds as well as our relentless enthusiasm for public welfare.

2009

The Towngas Volunteer Service Team marked "10 Years of Service" alongside the annual celebration of Senior Citizens' Day. Over 200 senior citizens attended the event, where volunteers distributed long-boiled soup and gift packs to the seniors. By then, the Towngas Volunteer Service Team has contributed more than 200,000 hours of volunteer service to the community.

2013

Since 2013, the "Farming for Charity" initiative has engaged volunteers in weekly activities at a farm. The freshly harvested organic produce is subsequently donated to charitable organisations. To date, this endeavour has successfully distributed over 36,000 catty of produce, benefitting more than 70,000 individuals.

2017

In collaboration with the Hong Kong Sheng Kung Hui Welfare Council, the "Chef Anchor" programme - an innovative initiative that transforms cooking into cognitive training for individuals with mild cognitive impairment was launched. By breaking down complex cooking procedures into procedural memory exercises, the programme helps slow cognitive decline while boosting participants' confidence and long-term independent living skills. The ongoing programme introduces new elements annually to enhance its effectiveness.

2019

To celebrate the 20th anniversary of the Towngas Volunteer Service Team, an exhibition themed "Bringing Warmth to Hong Kong Homes" was organised. The venue was transformed into a welcoming home, showcasing key community care initiatives such as Soup to Warm the Heart, Rice Dumplings for the Community, Mooncakes for the Community, and Haircuts for the Elderly.

2020

Since the outbreak of pandemic, Towngas launched the "Love on Delivery" programme to distribute 30,000 fresh food packs to 1,000 families. The initiative effectively supported their daily necessities and helped reduce the burden of food expenses.

2023

With post-pandemic recovery, we resumed the "Rice Dumplings for the Community" event, marking its first implementation in a hybrid format that seamlessly integrated online and offline participation. Spanning both Hong Kong and the Chinese mainland, this initiative engaged over 400 participants who successfully undertook the challenge. This collective effort achieved a new Guinness World Record with the title of "The most people making rice dumplings simultaneously online and in a single venue".

To encourage students to learn about environmental protection and new energy topics from an early age, Towngas has launched the "Towngas Green Flame Energy Scientist Programme". Employees with professional qualifications assume the role of volunteer and visit schools to deliver knowledge on future energy, climate change, as well as technology and innovation. This helps students develop green lifestyle habits from a young age while enhancing their understanding of future energy development.

2024

A celebration event themed "Igniting Brilliance in Every Corner with Its Caring Power" was organised to commemorate the 25th anniversary of the "Towngas Volunteer Service Team". During the event, Group management and volunteers transformed into various roles, such as restaurant waiters, receptionists, and managers at a nostalgic dim sum restaurant to serve 200 elderly individuals and their carers. Soft meals were specially prepared for elderly individuals with swallowing difficulties, ensured that all attendees could equally enjoy the pleasure of "dining together with their companions".

Case Study

Towngas Joins Hands with Various Sectors to Promote a Loving Society

Caring for the elderly and the youth is not only a moral obligation but also a crucial aspect of corporate social responsibility. Recognising the direct impact of their well-being on sustainable societal development, our ESG strategy is dedicated to enhancing the quality of life for the elderly through diverse programmes and resource allocation. Simultaneously, we strive to create superior educational environment and development opportunities for the youth. By implementing these initiatives, we not only promote social harmony and stability but also establish a robust social foundation that supports the long-term growth and success of the Group.

Caring for the Elderly, Building a Brighter Future

Towngas Collaborates with Various Organisations to Launch the "Chef Anchor" Programme

The "Chef Anchor" programme seeks to slow the progression of cognitive decline in individuals with mild cognitive impairment through cooking activities, allowing them to experience the joy of flame cooking. This initiative represents the first programme in Hong Kong specifically tailored for individuals with mild cognitive impairment and has successfully launched its 3.0 version this year.

"Chef Anchor" Programme in 2017

In collaboration with the Hong Kong Sheng Kung Hui Welfare Council, Towngas introduced the innovative "Chef Anchor" programme. This programme transforms cooking into a form of cognitive training through specially designed sessions led by occupational therapists and Towngas culinary experts. A survey indicates that approximately 90% of elderly participants with mild cognitive impairment demonstrated noticeable enhancements in self-confidence, culinary proficiency, and cognitive ability following the initial phase.

Invited **19** elderly participants

"Chef Anchor 2.0" Programme in 2021

The "Chef Anchor 2.0" initiative introduced an innovative approach by engaging carers, individuals with cognitive impairments, and volunteers from Towngas in culinary sessions. This collaborative effort fosters an environment where seniors can confidently participate in therapeutic cooking activities, thereby rebuilding their self-esteem and cognitive abilities. Building upon its established partnership with the Hong Kong Sheng Kung Hui Welfare Council, "Chef Anchor 2.0" has expanded its collaboration with The Chinese University of Hong Kong Jockey Club Institute of Ageing. By analysing data from participant assessments and survey feedback, they collectively aim to devise more effective caregiving strategies tailored to this specific population.

- **60 pairs** of elderly participants and their carers were invited to the programme
- More than **50%** of the participants felt an increased sense of self-recognition

"Chef Anchor 3.0" Programme in 2024

Invited **180** elderly participants and their carers to the programme

Building on previous successes, the "Chef Anchor 3.0" initiative continues to innovate by maintaining existing cooking groups while additionally incorporating four "pre-gathering sessions". Conducted by experts from the Hong Kong Sheng Kung Hui Welfare Council, these sessions applied the "DementiAbility Methods™" to help slow down memory decline symptoms. Moreover, specialists, including Chinese medicine practitioners, dietitians, and speech therapists have been invited to provide insights into understanding and managing cognitive impairments.

Towngas Green Flame Energy Scientist Programme: Fostering ESG Spirit in the Next Generation

Launched in 2023, the "Towngas Green Flame Energy Scientist Programme" seeks to enhance the understanding of the next generation regarding sustainable development principles and the energy industry, thereby aligning with the youth development policy of the HKSAR Government. We regularly recruit potential colleagues who are passionate about community youth activities to join the Green Flame Education Group. Through a series of professional training sessions, group members will enhance their soft skills and deepen their understanding of relevant topics, thereby strengthening their communication and interaction with the younger generation. With these initiatives, Towngas aims to build a solid foundation for the all-round growth and sustainable future of the younger generation.

The Green Flame Education Group currently consists of **35** employees from different backgrounds

Action Objectives

- Deepening Students' Understanding of the Energy Industry
- Harnessing Students' STEM Potential
- Grasping the Fundamentals of Green Energy and ESG
- Encouraging Students to Adopt Green Living Habits at an Early Age

Action Plan (Academic Year 2023-2024)

1

On-Campus Talks
Talks on energy engineering and environmental topics

Visited more than **20** schools, with over **3,000** student participants

2

Complimentary Teaching Kits
Offering energy knowledge teaching kit

Over **120** sets of "Energypedia" learning cards and the "Energy Warrior" board game have been distributed

3

Campus Ambassador
Bringing students together to promote environmental protection

Appointed **100** students as "Green Flame Campus Ambassadors"

4

Off-Campus Visits
Arranging site visits to enrich students' learning experience

Invited **50** teachers and students to visit Towngas Headquarters and the Tai Po Gas Production Plant

5

School Sponsorship Scheme
Supporting environmental activities organised by schools

11 primary schools participated in the School Sponsorship Scheme for organising energy and environmental education activities

Towards Carbon Neutral

Composing a New Chapter in Green Initiatives

The 29th United Nations Climate Change Conference (COP29) in 2024 highlighted the urgent need to address climate change and the critical importance of promoting low-carbon transformations across industries. In line with this commitment, the Group is dedicated to forging close partnerships with our stakeholders to collectively mitigate climate impact. In our business operations, we are actively developing low-carbon new energy solutions and advancing green transportation initiatives. This includes the production of green methanol, hydrogen, and sustainable aviation fuel (SAF) for sea, land, and air transport, all contributing to the achievement of dual carbon goals.

On the Chinese mainland, we are developing zero-carbon smart industrial parks equipped with photovoltaic and energy storage systems for our commercial and industrial clients. These initiatives are supported by our efforts to optimise internal energy and ESG management systems, reinforcing our commitment to achieve carbon neutrality by 2050 or sooner. Additionally, we have organised international competitions to identify and promote the world's most advanced low-carbon energy solutions.

Key Highlights

Climate Change

- Total Scope 1 and Scope 2 GHG emissions decreased by **9%** (2020 baseline)
- **84** investment projects have been analysed using an internal carbon pricing mechanism
- Over the past two years, **HK$1.9 billion** has been invested in equipment/pipeline upgrades to help mitigate climate change risks (Hong Kong)

Renewable Energy

- Deployed a cumulative of **128** zero-carbon smart industrial parks, with a cumulative grid-connected photovoltaic capacity of **2.3 GW**
- Achieved an annual production capacity of **100,000 tonnes** of green methanol
- Kick-started Hong Kong's **first** "green hydrogen" project
- EcoCeres, Inc. has produced approximately **180,000 tonnes** of SAF

Energy Saving and Efficiency Improvement

- **100%** of residential gas cookers and water heaters achieved a Grade 2 or higher in Mandatory Energy Efficiency Labelling Scheme (MEELS) (Hong Kong)
- The electricity consumption of the North Point Headquarters building saved over **130,000 kWh** of electricity compared to last year, with total electricity use down **15.7%** with 2015 baseline (Hong Kong)

Waste Recycling

- Recycled **1,425 tonnes** of metal through the Used Gas Appliance Recycling Programme (Hong Kong)
- Launched the gas-powered food waste processing machine, capable of reducing food waste volume by over **90%** (Hong Kong)

Low-Carbon Technology

- The third TERA-Award Smart Energy Innovation Competition attracted **450** zero-carbon technology entrepreneurial projects from **59** countries and regions

Management Approach

The Group strictly follows environmental and climate regulatory frameworks, while aligning with the national "30-60" carbon neutrality goals and the Hong Kong SAR Government's 2050 carbon neutrality commitment. Throughout our operations, we are committed to minimising environmental and climate-related risks. To this end, the Group fully comply with regulatory requirements including but not limited to the Environmental Protection Law of the People's Republic of China, the Air Pollution Control Ordinance, the Waste Disposal Ordinance, the Environmental Impact Assessment Ordinance, and the Water Pollution Control Ordinance. We closely monitor the latest developments in national and regional environmental protection policies, allowing for timely adjustments to our operational strategies to ensure that our business development adheres to regulatory requirements.

Environmental Management Policies

The Group has established a comprehensive set of environmental management policies:

Environmental Policy

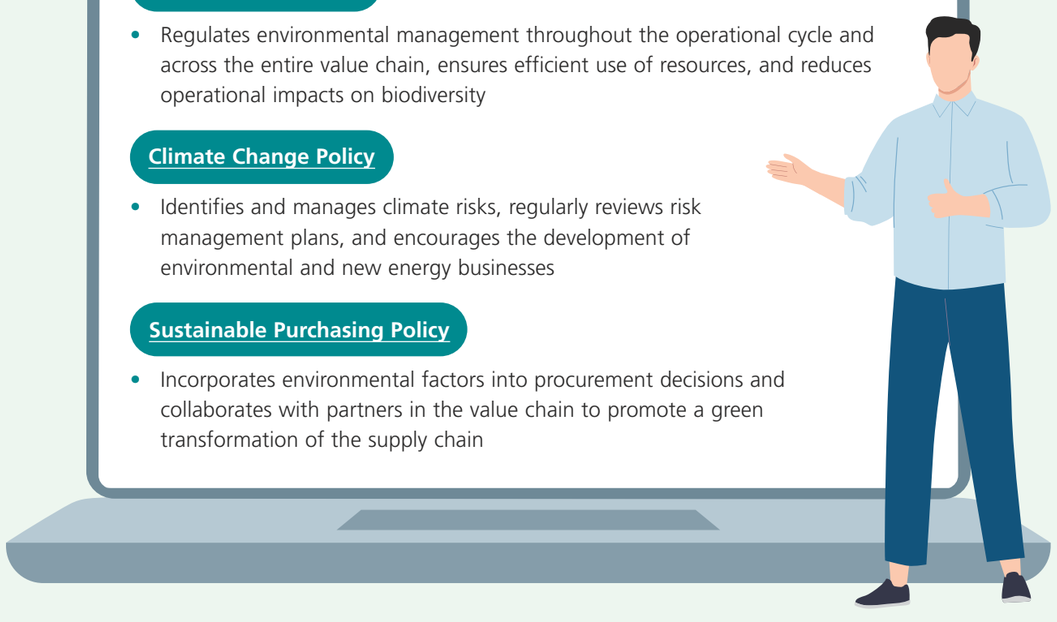
- Regulates environmental management throughout the operational cycle and across the entire value chain, ensures efficient use of resources, and reduces operational impacts on biodiversity

Climate Change Policy

- Identifies and manages climate risks, regularly reviews risk management plans, and encourages the development of environmental and new energy businesses

Sustainable Purchasing Policy

- Incorporates environmental factors into procurement decisions and collaborates with partners in the value chain to promote a green transformation of the supply chain



Environmental Management Structure

A multi-tiered management system has been established by the Group to ensure the effective execution of environmental management measures through comprehensive oversight from the management down to functional departments. In our daily operations, we enforce strict environmental monitoring and reporting mechanisms, along with regular audits of environmental performance for the ongoing enhancement of the ESG management system. Furthermore, we remain in close contact with stakeholders and actively seek their suggestions for improvement. As at the end of 2024, Towngas and 44 of its project companies have obtained ISO14001 environmental management system certifications.

Board of Directors	Provides comprehensive oversight over ESG-related issues
Board ESG Committee	Established at the board level; responsible for the comprehensive oversight of the formulation and implementation of environmental and climate strategies
ESG Steering Committee	Comprised of heads from different departments; responsible for formulating and coordinating the promotion and execution of environment and ESG-related initiatives
ESG Working Committee	Comprised of colleagues from different departments; responsible for implementing the ESG performance indicators set by the ESG Steering Committee

Environmental Risk Management

Internationally recognised risk assessment methodologies are employed by the Group to systematically identify and evaluate environmental and climate-related physical and transition risks, thereby formulating corresponding mitigation measures and contingency plans. Our effective management of environmental risks is ensured through periodic environmental impact assessments and the development of environmental incident emergency response mechanisms. In practice, the specific measures include:

- Adopt clean energy to replace traditional fuels
- Upgrade environmental basic infrastructure
- Apply innovative energy-saving technologies
- Develop low-carbon solutions
- Implement smart energy management systems

For more information about management approach and environmental policies, please visit the Towngas website.

Climate Change Management

The Group's climate change disclosure strategy has consistently been guided by the Task Force on Climate-related Financial Disclosures (TCFD) Recommendations, conforming to the TCFD's four pillars (governance, strategy, risk management, and metrics and targets), as well as the disclosure requirements of the IFRS S2 (Climate-Related Disclosures). Additionally, to fulfil the new climate requirements implemented by the Hong Kong Stock Exchange (HKEX) effective from 1 January 2025, all large-cap issuers are required to disclose climate-related financial information. The Group has analysed these requirements and reflected them in this year's financial statement.

Climate Governance

The Group manages risks and opportunities arising from climate change through a rigorous governance structure. The "Climate-Related and Nature-Related Directive Guide" (the Guide), published in 2022, has deepened our understanding of climate risks and opportunities relevant to our operations.

For more details, please refer to the Governance Structure section in this report and the Management Approach section of this chapter.

Climate Scenario Analysis

We analysed various scenarios to thoroughly identify climate-related physical and transition risks, and assess their potential impacts on the Group's operations. Recognising the essential need to enhance climate resilience and adaptability, we have crafted a comprehensive set of strategies on climate action and carbon reduction. This involves actively seeking out and implementing innovative technologies, developing low-carbon products and services, and facilitating a transition to low-carbon operations. Our commitment lies in transforming climate-related risks into opportunities, contributing to sustainability and carbon neutrality goals while ensuring that our business remains competitive and resilient in the face of climate challenges.

For more details, please refer to the Carbon Reduction Initiatives section of this chapter.

Climate Risk Management

A comprehensive climate risk assessment mechanism has been developed by the Group, integrating climate-related risks into our overall corporate risk management framework. We adopt internationally recognised analysis models to holistically consider various physical and transition risk scenarios. Through stress testing, we are able to formulate resilient and adaptable business strategies under different climate scenarios, thereby enhancing the Group's sustainability capability.

For more details, please refer to the Guide and the following sections of this chapter.

Identifying, Assessing, and Managing Climate-related Risks

To evaluate the potential impacts of climate change on our assets, businesses and value chain, we conduct comprehensive climate risk assessments using various climate models and scenarios analyses. This helps us account for a wide range of potential impacts and uncertainties and prepare for future climate-related risks. To ensure comprehensive strategic planning and informed decision making for the future, we regularly review and update our assessments, strategies and scenario analysis to address emerging climate-related risks and opportunities in different time horizons. We also maintain open communication with stakeholders and explore strategies for strengthening our resilience against transition and physical climate-related risks. For more details, please refer to the Guide and sections below.

Physical Risks

Physical risks associated with climate change impacts can be broadly classified as acute (e.g., floods, droughts) and chronic (e.g., sea-level rise, temperature increases). In order to evaluate the impacts of physical risks present in our assets, three Representative Concentration Pathways (RCP) scenarios (RCP 2.6、RCP 4.5、RCP 8.5) were used. These scenarios ranged from limiting the global average temperature of 1.5°C to align with The Paris Agreement (RCP 2.6) to managing the challenges of a drastic increase in average temperature of 4°C (RCP 8.5).

In 2021, we conducted a deep physical risk assessment for our Tai Po Gas Production Plant and an asset level assessment of 100 major assets on the Chinese mainland. To extend the assessment coverage across the Chinese mainland, we included new projects and conducted physical risk assessments of over 300 assets in 2023-2024. Focusing on chronic risks, we used a climate model to identify climate-sensitive/vulnerable assets, i.e. assets most exposed to extreme impacts such as extreme temperature, rainfall and water stress.

In 2024, we continued to visit assets on the mainland China to conduct physical risk assessments, aiming to gain a deeper understanding of their vulnerabilities and resilience to major disasters, and to ensure that effective systems are in place to withstand various climate stresses. To strengthen the management of climate-related physical risks, we have developed a climate change risk assessment checklist for gas facilities. For facilities with higher risk levels, we will conduct further analysis and assessment. We also held ESG and climate change trainings for managerial employees to show them climate impact projections for the assets, as well as to equip them with the knowledge required to tackle climate hazards in the future.

Risk	Time Horizon[8]	Potential Financial Implications	Mitigation Plan/Response
Acute Heavy rainfall and increased frequency and intensity of river floods	Medium to Long-Term	▲ Costs and ▼ revenue from asset damage ▲ Resilience measures upgrade expenses ▲ Insurance costs and claims	• Review plan for adapting our infrastructure to climate change • Strengthen crisis management plans
Chronic Increased temperatures	Long-Term	▼ Revenue from gas-related services ▲ Operating costs due to energy use	• Diversify businesses to transform into a multi-energy provider

[8] Short-term runs to 2025, aligned with our near-term targets that cover carbon reduction, energy efficiency, etc.; medium-term runs to 2035, aligned with the Group's plan to replace fossil fuels in phases by introducing and using zero-carbon fuels in our HK operations; long-term runs to 2050, aligned with the Hong Kong's Climate Action Plan 2050 to achieve carbon neutrality before 2050.

Transition Risks and Opportunities

In 2020, we analysed various assumptions under four self-developed scenarios based on the International Energy Agency's (IEA) World Energy Outlook 2019, which consider technological advancements and policy implementations. This enabled us to identify potential transition risks that could impact the Group under different time horizons. To ensure our analysis aligns with the latest trends, we updated these scenarios using the Network for Greening the Financial System (NGFS) scenarios and developed the Net Zero 2050 Scenario to align with the goal of limiting a global temperature rise to 1.5°C. We then prioritised top transition risks under the Net Zero 2050 Scenario and Below 2°C Scenario specifically for gas-related businesses.

Risk	Time Horizon[8]	Potential Financial Implications	Mitigation Plan/Response
Policy and Legal Mandates on/regulation of products and services	Short to Medium-Term	▼ Revenue from gas-related services ▲ Compliance and insurance costs ▲ Income from low-carbon offerings	• Align with government policies for low-carbon development • Reduce GHG emissions via low-carbon energy and efficiency improvements
Technology Technological improvements or innovations to support the transition to a lower carbon economy	Medium to Long-Term	▲ Investment in new technologies ▲ R&D spending ▼ Operational costs due to energy efficiency improvements	• Reduce operational GHG emissions • Support R&D with proprietary technologies

[8] Short-term runs to 2025, aligned with our near-term targets that cover carbon reduction, energy efficiency, etc.; medium-term runs to 2035, aligned with the Group's plan to replace fossil fuels in phases by introducing and using zero-carbon fuels in our HK operations; long-term runs to 2050, aligned with the Hong Kong's Climate Action Plan 2050 to achieve carbon neutrality before 2050.

Towards Carbon Neutral – Composing a New Chapter in Green Initiatives

Risk	Time Horizon[8]	Potential Financial Implications	Mitigation Plan/Response
Market Shifting consumer behavior	Medium to Long-Term	▼ Revenue from gas-related services ▲ Operating costs due to raw material price changes ▲ Income from low-carbon products	• Diversify businesses to transform into a multi-energy provider
Reputation Shareholders are likely to divest from fossil fuels and invest in low-carbon businesses	Long-Term	• Change in capital availability ▲ Communication costs	• Enhance open disclosure for increased capital availability

[8] Short-term runs to 2025, aligned with our near-term targets that cover carbon reduction, energy efficiency, etc.; medium-term runs to 2035, aligned with the Group's plan to replace fossil fuels in phases by introducing and using zero-carbon fuels in our HK operations; long-term runs to 2050, aligned with the Hong Kong's Climate Action Plan 2050 to achieve carbon neutrality before 2050.

Financial Impact Assessment

Beyond identifying and analysing the kinds of climate change impact, we have thoroughly quantified its financial implications, helping us develop targeted response measures to actively address the climate crisis.

Pathway	Risk		Scenario Pathway	Impact Type	Financial Impact (HK$ million) <500	500-1,500	>1,500
4 ℃ Scenario	**Physical**	Acute	RCP 8.5	Expenditure		✓	
		Chronic		EBITDA[9]	✓		
1.5 ℃ Scenario	**Transition**	Policy and Legal	Net Zero 2050	EBITDA[9]			✓
		Market		EBITDA[9]			✓
		Technology		Expenditure	✓		
		Reputation		Expenditure	✓		

Enhancing the Resilience of Response Measures to Withstand Extreme Weather Challenges

In recent years, the increasing frequency of extreme weather events, including super typhoons and heavy rainfall, has imposed stricter demands on our response measures and systems.

Over the past two years, HKCG has invested approximately **HK$1.9 billion** in:
- Updating machinery and equipment in plants
- Enhancing pipeline operation and maintenance management

Following a comprehensive risk evaluation, we identified that the Tai Po Gas Production Plant was susceptible to flooding and typhoons. To address these risks, we installed flood gates and water pumps at strategic locations within the plant. These pieces of equipment are designed to activate quickly during floods to safeguard facility and ensure operational continuity. Moreover, our flood early warning system provides real-time monitoring of water levels and weather patterns, enabling timely alerts.

[9] For city-gas, water and related businesses in Hong Kong and on the Chinese mainland.

Targets and Metrics

As part of our commitment to achieving carbon neutrality by 2050 or sooner, we have established a series of environmental and climate metrics, the attainment progress of which are closely monitored and regularly evaluated. We are continually enhancing and expanding the scope of indicators and targets that we track to ensure that our t efforts not only support our development goals but also comply with industry best practices. Simultaneously, we have introduced an internal carbon pricing mechanism, allowing us to internalise the external costs of GHG emissions, climate risks, and opportunities.

In line with further global energy transition, the Science Based Targets Initiative (SBTi) is developing carbon reduction standards for the oil and gas sector to establish a science-based framework for carbon reduction targets. While the SBTi has not yet commence accepting target validation submissions from companies, we have proactively initiated preparations to establish our Science-Based Targets (SBTs). Through proactive tracking of regulatory changes and emerging frameworks, we maintain agility to meet future compliance requirements.

Currently, we have set our 2025 targets.

Targets	Measure	2024 Performance
Reduce Group operational GHG emissions by **10%** (2020 baseline)	• Increased ratio of biogas and natural gas use in town gas production • Utilised bio-fuel to replace fossil fuel • Phased out carbon intensive assets/operations	↓ **9%**
Reduce **10 million tonnes** of GHG emissions in the environment per year	Developed coal-to-gas, photovoltaic power generation, and energy efficiency improvement projects	Over **8 million tCO_2e**

Carbon Footprint

Scope 1 and Scope 2 GHG Emissions

Scope 1[10]	Scope 2[11]	Total GHG Emissions
1,628,000 tCO_2e	518,000 tCO_2e	2,146,000 tCO_2e

This year, the Group's total Scope 1 and Scope 2 GHG emissions decreased by **3.1%** compared to 2023.

Hong Kong Town Gas GHG Emissions Data

Gas Production	Total:	Gas Consumption (customer-side)
0.04 kg CO_2e/kWh = 0.548 kg CO_2e/unit of town gas	0.23 kg CO_2e/kWh = 3.101 kg CO_2e/unit of town gas	0.19 kg CO_2e/kWh = 2.553 kg CO_2e/unit of town gas
1% of total GHG emissions in Hong Kong		**4%** of total GHG emissions in Hong Kong

[10] Scope 1 encompasses direct GHG emissions generated from company-owned or controlled sources.
[11] Scope 2 accounts for indirect GHG emissions associated with purchased energy.

Scope 3 GHG Emissions

We have initiated a comprehensive enhancement of our GHG emission accounting system since 2023. This effort involves expanding the statistical boundary of Scope 3 emissions data beyond the gas sector to encompass all business segments. Through this systematic improvement, we have streamlined and refined our methodologies for calculating GHG emissions across the entire value chain, thereby incorporating a broader range of emission sources into our assessments. As a result, we have established a more robust and precise framework for evaluating our carbon footprint.

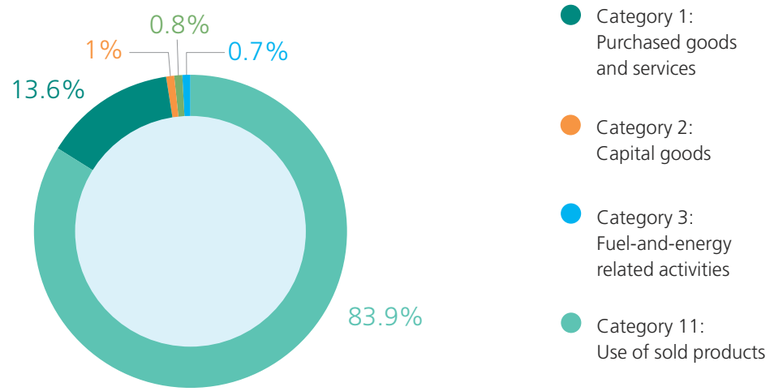
Scope 3

The total emissions were **24,635,000 tCO_2e**

The main emission source is Category 11 - Use of Sold Products, which accounts for over **80%** of the total value chain emissions

	Scope 3 Emissions (tCO_2e)
Category 1: Purchased goods and services	3,339,000
Category 2: Capital goods	259,000
Category 3：Fuel-and-energy related activities	170,000
Category 11：Use of sold products	20,669,000
Other categories[12]	198,000

2024 Scope 3 GHG Emissions Data



[12] Including Category 4 – Upstream Transportation and Distribution, Category 5 – Waste Generated in Operations, Category 6 – Business Travel, Category 7 – Employee Commuting, Category 9 – Downstream Transportation and Distribution, and Category 12 – End-of-Life Treatment of Sold Products.

Internal Carbon Pricing

Since 2020, the Group has introduced internal carbon pricing as a critical element in our climate transition risk scenario analysis, as a means to reinforce business sustainability. The measure helps us transform the external costs associated with environmental responsibilities (such as the negative impacts caused by GHG emissions), business development (such as new project acquisitions), and sustainable development opportunities (such as green product development) into internal considerations. This enables us to integrate climate goals with business strategies more effectively, promote low-carbon innovation and investment, and achieve greater environmental benefits. According to a CDP report[13], as of 2020, 853 corporations around the world has established internal carbon pricing systems, an increase of 22% compared to 2019, indicating that internal carbon pricing has become an indispensable tool for companies to promote net-zero emissions.

Growing stakeholder expectations have prompted the Group to strengthen its business planning. The integration of ESG due diligence and internal carbon pricing into our investment decisions in 2023 mandates thorough pre-investment ESG assessments, in which we analyse potential advantages and disadvantages comprehensively to capture low-carbon development and investment opportunities while meeting stakeholder expectations. Our carbon pricing methodology incorporates monthly updates from China's Carbon Emission Allowance (CEA) prices in the national emissions trading scheme, and employs both shadow and implicit carbon pricing to estimate lifecycle emissions or reductions and forecast unit carbon prices.

Currently, all eligible new city-gas and distributed photovoltaic projects that meet specific criteria must undergo ESG evaluation and internal carbon pricing analysis. We use the results of these evaluations, along with other project information, for investment approval.

City Gas Projects

Implicit Carbon Emission Cost ($) = Sum of the following throughout the entire project life cycle:

Annual Gas Sales Volume (million m³)	X	Emission Factor (CO_2e/million m³)	X	Projected Carbon Price for that year ($/$CO_2e$)

Distributed Photovoltaic Projects

Implicit Carbon Reduction Benefit ($) = Sum of the following throughout the entire project life cycle:

Annual Green Power Generation (kWh)	X	Emission Reduction Factor (CO_2e/kWh)	X	Projected Carbon Price for that year ($/$CO_2e$)

As at this year:

84 investment projects have been analysed using an internal carbon pricing mechanism

[13] Putting a Price on Carbon: The State of Internal Carbon Pricing by Corporates Globally.

Low-Carbon Financing Business

The Group continues to expand the low-carbon financing business scope, primarily investing in green projects such as energy efficiency improvements, the construction and operation of renewable energy facilities, as well as the utilisation of solid waste and biomass. This year, the Group has summarised the revenue and investment comparisions between its low-carbon business and city-gas business on the Chinese mainland in accordance with the "Chinese Taxonomy"[14]:

2024	Proportion
Revenue	6%
Investment	100%

Carbon Reduction Initiatives

For effective carbon reduction and management, we have strengthened our new energy businesses by launching green methanol, hydrogen, and SAF applicable to sea, land, and air transport. The Group has also established a carbon reduction working group for Chinese mainland business segments to formulate response strategies, as well as implement and monitor the progress of carbon reduction initiatives within our business operations.

Mainland Businesses

Carbon Reduction Working Group Initiatives

Renewable Energy Business

Actively engaged in various renewable energy projects, with a cumulative photovoltaic capacity of 2.3 GW connected to the grid

Green Fuels and Chemicals Business

The methanol plant in the Inner Mongolia Autonomous Region is reducing its reliance on conventional fuels by phasing in biomass waste and waste tires as fossil fuel alternatives.

Gas Resources Business

Established liquefied natural gas storage facilities, including the coalbed methane liquefaction project in Shanxi and gas emergency peak-shaving storage base project in Sichuan

Mainland Utilities

Mainland City-Gas Business

- Expanded the application of biomass natural gas and explore the feasibility of blending it with hydrogen
- Continue to adopt innovative technologies for more comprehensive monitoring and control of methane emissions

Water and Environmental Businesses

- Installed a photovoltaic system at its wastewater treatment plant in Suzhou, which generates over 5 million kWh of electricity annually, making it the largest "Photovoltaic + Wastewater Treatment" project in Suzhou

[14] The "Chinese Taxonomy" refers to the Green Bond Endorsed Project Catalogue (2021 Edition) jointly issued by the People's Bank of China, the National Development and Reform Commission, and the China Securities Regulatory Commission. This catalogue defines eligible green project categories and specifies their technical standards.

Through these measures, which echo the HKSAR Government's initiatives to promote the new energy transport industry in the Policy Address, the Group responds to the growing global demand for low-carbon energy. We promote not only our own sustainable growth, but also provide greener solutions for our customers, thereby collectively addressing the challenges of climate change.

Reducing Corporate Emissions

- **1967** Heavy oil replaced coal as a feedstock in town gas production
- **1973** Introduced less-emitting naphtha as a feedstock in town gas production
- **1999** The first biogas application project launched
- **2006** Introduced natural gas as a feedstock in town gas production in Hong Kong, further reducing GHG emissions at the source

•1967 •1973 •1999 •2006 •2021 •2022 •2023 •2024

- **2021** EcoCeres, Inc., incubated by the Group, started to supply hydro-treated vegetable oil (HVO)
- **2022** EcoCeres, Inc., incubated by the Group, started to produce SAF, reducing GHG emissions in the aviation industry
- **2023** The Tai Po Gas Production Plant set up Hong Kong's first hydrogen extraction system from the gas network;

  Transformed our traditional methanol production plant in Inner Mongolia, which has since successfully produced green methanol for use in the shipping industry
- **2024** Partnered with Veolia to develop Hong Kong's first green hydrogen production project

Fuel mix for town gas production are:

Natural gas (About **60%**)
+
Naphtha (About **38%**)
+
Biogas (About **2%**)

Reducing Customer-side Emissions

To reduce our carbon footprint, we eliminated high-polluting coal starting in the 1960s and replaced it with cleaner fuels, including naphtha, natural gas and biogas. This year, the carbon reduction from our use of biogas in Hong Kong is approximately 39,000 tCO_2e.

Energy savings* at the Tai Po Gas Production Plant in 2024	Utilisation of natural gas (2006–2024)
Naphtha saved: **403,000 GJ**	Cumulative carbon reduction exceeds **1.64 million tCO_2e** (equivalent to the CO_2 absorption of over 70 million trees in one year)
Town gas saved: **25,000 GJ**	Cumulative money savings to customers is around **HK$23.2 billion**

* As compared with the data of a reference year before implementing the respective environmental initiative.

Sea: Green Methanol

Methanol is a versatile chemical which can be transformed into natural gas, as well as used to manufacture plastics, pharmaceuticals, and other products. Green methanol, produced from biomass instead of conventional petroleum refining processes, is a clean and environmentally friendly energy source that emits no harmful pollutants when combusted.

Green Methanol Production Projects

Using Scrap Tires to Produce Green Methanol

Towngas has taken the lead in seizing green methanol development opportunities by retrofitting existing methanol production plants and committing to meeting international market demand for sustainable biofuels and chemical products. Our methanol production plant in the Inner Mongolia Autonomous Region uses independently developed technology to convert biomass and municipal waste into green methanol. The project has obtained ISCC EU and ISCC PLUS certifications from the International Sustainability and Carbon Certification. Towngas is the first enterprise on the Chinese mainland to obtain the ISCC certifications and achieve mass production of green methanol, with products fully complying with Europe's strict requirements for sustainable biofuels and chemical products.

This year, Towngas signed a strategic cooperation agreement with Shenergy (Group) Company Limited, to jointly promote green energy businesses in Shanghai, Hong Kong, and other domestic and overseas markets.

The annual production capacity is expected to increase to **150,000 tonnes** by the end of 2025

Building Green Methanol Production Projects and Chemical Supply Platforms

Towngas signed a Framework Agreement for Cooperation with Foran Energy Group Company Limited. The two parties preliminarily planned to finance through various methods for building green methanol production bases in multiple locations across the country, including Inner Mongolia, the Greater Bay Area, Hainan, Fujian, and other regions.

The total amount of planned investment	Total green fuel capacity
RMB10 billion	**1,000,000 tonnes/year**

Land: Hydrogen

With over 160 years of experience in operating town gas and processing hydrogen, Towngas possesses unique advantages in developing hydrogen application solutions. The synthetic town gas we produce contains approximately 50% hydrogen, which can be directly extracted from our extensive underground gas pipeline network spanning more than 3,700 kilometres across Hong Kong.

The purity of hydrogen extracted from our gas network reaches **99.97%**

Towngas Collaborates with Veolia Hong Kong to Develop the First Green Hydrogen Production Project

In June 2024, Towngas signed a Memorandum of Understanding with Veolia Hong Kong to jointly develop the city's first green hydrogen production project using biogas at South East New Territories Landfill Extension in Tseung Kwan O. The project, slated for commissioning in 2025, will employ steam methane reforming technology to advance waste-to-energy solutions.

The expected daily production capacity is around **330 kg** of hydrogen

Capable of powering **7 to 8** hydrogen buses for full-day operation

Air: Sustainable Aviation Fuel (SAF)

SAF, produced from various biomass feedstocks such as waste plant oils and agricultural and forestry waste, is recognised as a low-carbon alternative to traditional jet fuel. Compared to conventional fossil fuels, SAF can reduce GHG emissions by more than 80%, effectively lowering the carbon burden of the aviation industry and helping the global market meet GHG reduction targets and requirements.

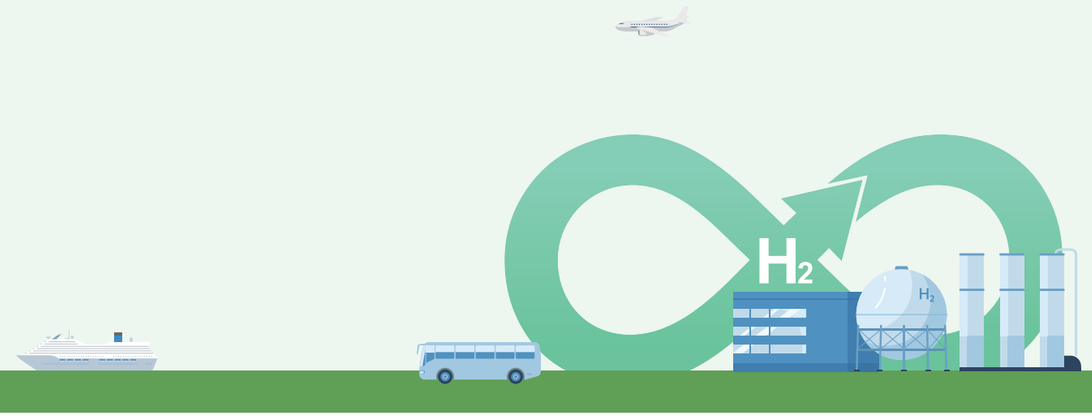
We focus on converting waste-based biomass into various renewable fuels and products, including SAF, cellulosic ethanol, and hydrotreated vegetable oil (HVO). This effort aligns with the commitment made by the Hong Kong SAR Government in the 2024 Policy Address to promote the local development of SAF and to consolidate Hong Kong's position as a leading international sustainable aviation hub.

Tri-Party Pilot Project Promotes SAF Development in Hong Kong

EcoCeres, Inc. incubated by Towngas, has established a tri-party pilot cooperation with HSBC and Cathay Pacific to promote Hong Kong's development as a regional SAF hub and to reduce flights' GHG emissions in the long-term. Under this plan, a one-time agreement has been signed by HSBC to purchase approximately 3,400 tonnes of SAF produced by EcoCeres, Inc. for Cathay Pacific's use.

100% of the project's SAF produced from waste-based biomass feedstock

SAF produces approximately **90%** less GHG emissions compared to conventional jet fuels



Gas Leakage Management

Reducing GHG emissions and managing gas leakage are core missions of Towngas. As environmental regulations grow increasingly stringent, we proactively implement effective emission reduction strategies and technological innovations to minimise our carbon footprint. Concurrently, we continuously enhance our management systems to prevent gas leaks and ensure full compliance with emission standards.

To address the serious risks posed by pipeline leakage, we have conducted an in-depth study on pipeline leakage with the City University of Hong Kong.

The research also revealed that the leakage primarily occur due to third-party damage, pipeline commissioning/decommissioning and permeation.

The pipeline leakage rate is approximately **0.045-0.13%**

Methane Emission Reduction and Pipeline Leakage Management Measures

Before this year's pipeline replacement project, Towngas utilised pressure-regulating equipment to redirect residual gas from the upstream isolated pipeline to downstream pipelines, effectively minimising gas emissions during construction.

In addition, Towngas has installed 200 sets of solar-powered intelligent regulator systems into governor kiosks to monitor gas leakage, pressure anomalies, and temperature fluctuations. These systems provide real-time alerts in case of emergencies, enabling swift on-site response by our colleagues.

In terms of pipeline leakage management, we accelerated replacement of severely corroded galvanised risers with corrosion-resistant steel. Through our ongoing riser repair programme, Towngas implements rust removal and waterproofing treatments to extend service life and prevent leakage.

Over **50%** of riser replacement projects have been completed

Promoting Low-Carbon Development with Stakeholders

We are keen to support customers in adopting clean energy solutions and low-carbon technologies. Meanwhile, we actively build partnerships with local and global organisations to develop low-carbon technology initiatives and drive technological innovation. Through these collaborations, we not only fulfil the Group's environmental responsibilities but also contribute to advancing sustainability for society.

Multi-Party Collaboration to Advance Emission Reduction Initiatives

Shandong Hong Kong and China Gas Collaborates with Everbright Environment to Advance Biogas Purification Project

The biogas purification biomethane project between Shandong Hong Kong and China Gas and Everbright (Jinan) Environment New Energy Co., Ltd., is now operational. Using biogas anaerobic fermentation purification technology, "leachate", a by-product from waste incineration, is converted into biomass natural gas and fed into Jinan's city-gas network.

Grid-connected volume is approximately **3 million m^3/year**

Suzhou Hong Kong and China Gas Begins the Construction of Zero-Carbon Demonstration Centre

Suzhou Hong Kong and China Gas has officially commenced construction of "Shengpu Integrated Energy Zero-Carbon Demonstration Centre", slated for completion by the end of 2025. Upon operation, this facility will mark Suzhou's first carbon-neutral natural gas storage station, integrating multiple energy technologies including pressure differential power generation, onsite photovoltaic systems, energy storage solutions and cold energy utilisation, to achieve full decarbonisation.

Annual production of green electricity reaches **1.5 million kWh**

Low-Carbon Energy Solutions and Services

The Group not only supports customers through advanced low-carbon energy solutions, but also help them significantly reduce GHG emissions through in-depth cooperation. We install photovoltaic and energy storage systems, and build zero-carbon smart industrial parks for customers. Simultaneously, we assist traditional gas-dependent enterprises in applying advanced technologies such as the Internet of Things, industrial big data, and intelligent algorithms to design smart decision-making platforms. These efforts aim to create integrated energy solutions and services (Gas+) for our customers, providing all-round support for low-carbon energy supply and intelligent energy conservation.

Deploying Zero-Carbon Smart Industrial Parks

The Group has actively pursued investments in smart energy projects for zero-carbon smart industrial parks. By the end of 2024, 128 zero-carbon smart industrial parks have been established across 24 provinces, autonomous regions and municipalities, with a cumulative of 2.3 GW of photovoltaic capacity connected to the grid.

Towngas Energy Launched the EaaS Project for Guangzhou IPE Group

Towngas Energy's customised EaaS (Energy-as-a-Service) integrated energy project for Guangzhou IPE Group officially commenced operations this year. Centred on an innovative "photovoltaic systems + energy storage + power sales" model, the project establishes a comprehensive energy service ecosystem by integrating distributed photovoltaic power generation, smart energy storage systems, and flexible power sales solutions.

Annual Power Saving
6 million kWh

"Gas+" Energy Management Service

The "Gas+" business is actively advanced by the Group, focusing on providing comprehensive energy service solutions for customers in key sectors. We take full advantage of advanced technologies and streamlined management methods to offer a one-stop solution for low-carbon, and efficient light-asset energy services, while helping customers achieve their energy-saving and carbon reduction goals. During the retrofit process, we have introduced smart control systems that enable remote and independent operations in various areas. This not only improves flexibility but also effectively reduces energy consumption, bringing significant economic and environmental benefits to our customers.

Taizhou Hospital of Traditional Chinese Medicine Project – Achieving Energy Conservation and Emission Reduction Through Energy Cost Trusteeship Services

Towngas Smart Energy provides a comprehensive energy cost trusteeship service for Taizhou Hospital of Traditional Chinese Medicine, renovating and upgrading the hospital's existing energy systems, including cooling and heating systems, domestic hot water systems, steam supply systems, lighting energy conservation, and smart command platforms. After the retrofit, remote monitoring and management are made possible by intelligent control systems, allowing each area in the hospital to operate independently. This significantly reduces energy consumption levels and helps achieve energy conservation and emission reduction targets.

Annual carbon reduction is approximately **949 tonnes**

System electricity saving rate is approximately **6.1%**

System gas saving rate is approximately **34.1%**

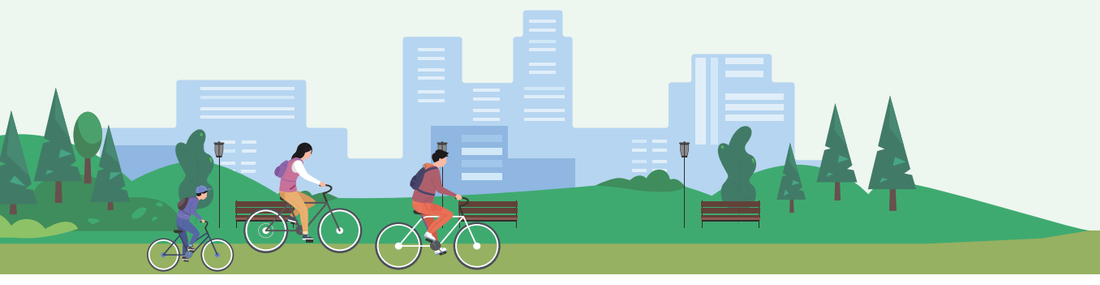
System water saving rate is approximately **0.8%**

Collaborative Carbon Neutrality Partnerships

Confronting environmental issues requires a united effort. For this reason, we participate in industry conferences and establish strategic collaborations with both local and international partners. Our dedication to promoting technological innovation helps tackle climate change and preserves the environment. Through cross-disciplinary cooperation and exchange, we hope to pool resources to create a sustainable future.

Climate-related Partnerships

TCFD Supporter	As a TCFD Supporter, we are committed to disclosing climate-related risks based on the TCFD recommendations
Carbon Neutrality Partnership	Supports the Hong Kong SAR Government's goal of achieving carbon neutrality in or before 2050 and takes the lead in deepening and accelerating low-carbon transition
Climate Governance Initiative (CGI) Hong Kong Chapter	Towngas Smart Energy, as one of the eight founding partners of the Hong Kong chapter, is committed to mobilising corporate boards of directors to address climate change in their business operations, promoting clean energy and environmental protection
Business Environment Council (BEC) Net-Zero Carbon Charter	As a signatory, Towngas commits to setting carbon reduction targets and taking action. We also participate in public consultations and advisory groups organised by the BEC to promote the transition to a net-zero economy



GHG Emission Reduction-Related Partnerships

China Oil and Gas Methane Alliance	Towngas Smart Energy will help achieve the goal of "reducing the average methane intensity in natural gas production to below 0.25% by 2025"
Chinese City-Gas Enterprise Methane Emission Control Proposal	We commit to developing and promoting methane emissions control technologies on the Chinese mainland
Methane Guiding Principles	Using the guiding principles as a foundation, we collaborate with industry peers to reduce methane emissions in the production value chain

Natural Resources and Environmental Management

In addition to advancing renewable energy initiatives and lowering GHG emissions, we are dedicated to enhancing natural and environmental management across material areas, including energy, water resources, waste management, and air quality.

By implementing effective energy management practices, we can reduce our dependence on fossil fuels and cut GHG emissions. We are continually improving energy efficiency through the use of energy-saving products, monitoring energy performance, and utilising the latest technologies. This strategy helps reduce energy consumption throughout our operations and across the entire value chain, leading to cost savings and creating long-term value for stakeholders.

This Year's Energy Consumption Data

Energy Conservation Measures	Latest Progress/Performance

Improving Energy Efficiency of Office Buildings
• Energy management of the North Point headquarters
  ○ Upgraded the lighting system to energy-efficient LED lights
  ○ Installed human motion sensors and smart electricity metres
• Green office measures
  ○ Encouraged participation in energy-saving activities organised by green groups, such as Earth Hour
	The North Point headquarters saved **130,000 kWh** of electricity, achieving over a **2.5%** reduction in electricity usage this year compared to 2023
	
	Energy intensity: **0.46 GJ/m²**

Renewable Energy Applications • Distributed photovoltaic systems ○ Zhongshan Hong Kong and China Gas designed a smart distributed photovoltaic power generation solution for its new office building	The distributed photovoltaic power generation system for the new office building has a total installed capacity of **172.15 kWp**

Water Resource Management

Water resource protection is an integral part of our environmental management approach. Continuous improvements in Group's water management practices ensure the efficient utilisation of this vital resource. Concurrently, we enhance water use efficiency and preventing wastewater leakage to minimise potential environmental impacts.

The North Point headquarters' total water usage decreased by over **4%** this year, saving **660 m³**

Water efficiency target is not lower than **96%**

0 cases of reportable effluent spills

To achieve these water management goals, we have launched a series of measures. For example, at the North Point headquarters, rainwater collection tanks have been installed for irrigation purpose, thereby reducing dependence on drinking water. Additionally, the North Point headquarters completed washroom renovations this year, incorporating smart washroom facilities, including leak detection sensors to address potential leakage problems more quickly. Water taps with Water Efficiency Label Grade 1 are also installed to reduce waste.

Journey of a Drop of Water Tour

This year, the theme of China Water Week was "Optimise Water Usage with Precision, Manage Water Resources with Rigor". In support of this theme and to raise public awareness of water conservation, several water companies under the Group actively organised a variety of themed activities to promote water-saving awareness for the public.

Introduction of Water Plant

To educate the public about tap water production, water quality testing, and the overall water supply situation, one of our water companies – Suzhou Industrial Park Qingyuan Hong Kong and China Water Co., Ltd. conducted the "Journey of a Drop of Water" tour. This initiative invited citizens to visit the Xinggang Street Water Plant, encouraging visitors to conserve water usage.

Water Quality Testing Activity

280 students and parents participated

Waste Management

Beyond optimising water resource management, we strive to reduce operational waste at the source. The Group's waste management approach adheres to the "5R" principles, including Replace, Reduce, Reuse, Recover, and Recycle, to comprehensively regulate waste management. We also educate our clients, business partners, suppliers, and the public on the importance of waste management for environmental protection, working together with them to advance sustainability.

The ongoing Used Gas Appliance Recycling Programme enables Towngas to collect used gas appliances from customers for resale to recycling companies, with all proceeds supporting environmental initiatives. Through our efforts this year, we recovered 1,425 tonnes of metal from old appliances.

Towngas received "Wastewi$e Certificates" at the Excellence Level for **23** consecutive years

Hong Kong's First Gas-Powered Food Waste Processing Machine

The food waste processing machine can reduce food waste volume by over **90%**

Towngas teamed up with EASi Solutions Global Technology to develop Hong Kong's first gas-powered food waste processing machine. The composite microbial consortium in this equipment can decompose food waste into harmless substances such as carbon dioxide and water at temperature between 75°C and 85°C. The decomposed food waste can be reused as fertiliser in diverse locations such as residential estates, hotels, restaurants, and hospitals. This approach prevents secondary pollution associated with traditional food waste disposal methods, achieving waste reduction at source.

Establishing Organic Waste Utilisation Project in Suzhou Industrial Park

The Group has launched an organic waste utilisation project in Suzhou Industrial Park to advance circular economy. This project is dedicated to the collection and treatment of organic waste, including food waste and expired food products. Through collaboration with nearby sludge drying plants, wastewater treatment plants, natural gas terminals, and thermal power plants, the project converts organic waste into reusable biogas, achieving efficient resource circularity.

Air Quality Management

The Group actively works to reduce air emissions to improve the overall air quality. Our main air emissions include nitrogen oxides (NO_x), sulphur oxides (SO_x), and respirable suspended particulates (RSP), primarily resulting from the burning of natural gas and naphtha, as well as vehicle fuel. To enhance indoor air quality in our office buildings, we have implemented a series of measures, effectively protecting employees' health and well-being.

These measures include conducting regular air quality tests to ensure compliance with health standards, installing high-efficiency air filtration systems to remove harmful pollutants, and advocating for using greenery in office spaces—enhancing both aesthetics and air quality.

Installing Smart Air Quality Monitoring Sensors to Improve Indoor Air Quality

This year, we completed washroom renovation at the North Point headquarters, which included the installation of smart washroom facilities to improve air quality. These upgrades feature air quality monitoring sensors that track five indicators: H_2S (excrement odour), NH_3 (excrement odour), PM2.5 (respirable suspended particulates, renovation dust, etc.), temperature, and humidity, to enhance air quality and improve users' comfort and safety.

Protecting Biodiversity Ecosystems

The Group recognises that business operations may generate impacts in ecologically valuable sites, including nature reserves and wetlands. We place a high value on relevant risk management to ensure adequate protection of these critical locations. To honour our pledge in the Environmental Policy, we are working forwards no net loss in biodiversity, and strive to net positive impact. Meanwhile, we maintain focus on safeguarding, and protecting the Earth's ecosystem during our energy transition.

To minimise impacts on biodiversity, the Group has formulated the following biodiversity protection measures:

- Avoiding areas rich in biodiversity;
- Deploying mitigation and compensation measures for works;
- Using innovative technologies to reduce impacts; and
- Raising awareness of biodiversity.

Risk Identification and Assessment

As the degradation of natural resources and the loss of biodiversity intensify, a growing trend has emerged among corporations and financial institutions to incorporate nature-related factors into their financial and business decisions. The Task Force on Nature-related Financial Disclosures (TNFD) unveiled a universally applicable reporting framework in 2023 to guide organisations in reporting their dependencies on nature, as well as the impacts, risks, and opportunities.

Towards Carbon Neutral – Composing a New Chapter in Green Initiatives

In active response to the TNFD framework, the Group released the corresponding the Guide. We referenced the TNFD's recommended integrated LEAP approach of assessing nature-related risks, which covers four steps – Locate, Evaluate, Assess, and Prepare, to conduct an in-depth analysis of our business operating locations. The analysis results indicate that most of our operating locations and projects have relatively small impacts on biodiversity; however, we continue to take actions, striving to further reduce the negative environmental impacts of our operations.

Locate
Locate your interface with nature

Evaluate
Evaluate the dependencies and impacts

Assess
Assess the risks and opportunities

Prepare
Prepare to respond to nature-related risks and opportunities, and report

Assessment Tools	• TNFD nature risk assessment (LEAP) • Exploring Natural Capital Opportunities, Risks and Exposure (ENCORE)
Assessment Scope	Selected 117 relevant locations for analysis
Location Prioritisation	Through the Integrated Biodiversity Assessment Tool (IBAT), we identified locations with high biodiversity value and prioritised them based on the overlap between direct and indirect impacts of sites and biodiversity indicators
Risk Identification and Assessment	Assessment based on dependencies and impact drivers identified across our business activities: 1. Risk drivers 2. Transmission channels 3. Business impacts
Risk Mitigation and Management	To address the identified risks, we develop effective biodiversity risk mitigation and management strategies in business operations and across the entire value chain. We also collaborate with key sectors to actively promote positive impacts on biodiversity
Risk Monitoring and Reporting	To ensure the effectiveness of these measures, we have established a comprehensive review and regular monitoring process, and we report on our progress regularly
Risk Identification Results	Currently, a total of 69 high biodiversity value locations have been identified. Among them, 11 sites are within 10 km of key biodiversity areas, four of which are also within 10 km of protected areas. From a biodiversity perspective, the 11 sites near key biodiversity areas represent our priority focus of future work.

Towngas Supports the University Student Sponsorship Programme in Wildlife Conservation

In collaboration with the Ocean Park Conservation Foundation, Hong Kong (OPCF Hong Kong), the Group sponsored 24 university students this year to explore the 11 identified locations in key biodiversity areas. Under the mentorship of local conservation teams, these students conducted assessments and research on threatened species and their population sizes. One of the key research projects focuses on the giant panda, a national treasure, and its habitat in Sichuan province.

The habitat of wild giant pandas has been severely compromised by climate change and human activities. In May, the students visited five panda centres in Sichuan, dedicating over 25 hours to laboratory work. They investigated the breeding periods of giant pandas by measuring hormone levels in their urine and faeces, thereby contributing to the preservation of ecosystem.

OPCF Hong Kong 香港海洋公園保育基金 Ocean Park Conservation Foundation Hong Kong

Nature and Ecological Conservation

Traditional photovoltaic power generation projects typically require significant land areas for solar panel installations, which may alter or destroy existing natural habitats and threaten local biodiversity. To mitigate these negative impacts, we adopt measures such as installing distributed photovoltaic systems on rooftops to fulfil our promise towards sustainability and nature conservation.

100% of photovoltaic systems installed on factory rooftops within zero-carbon smart industrial parks

Meanwhile, we maintain close cooperation with various stakeholders, including community and environmental organisations, to promote nature conservation at the community level. Through these joint efforts, we hope to achieve a win-win situation between ecological protection and economic development, laying a solid foundation for future environmental sustainability.

Organising Ecological Conservation Advocacy Campaign to Promote Biodiversity Awareness

Towngas Smart Energy initiated a low-carbon environmental advocacy campaign themed "Low-Carbon Environmental Protection Campaign to Recharge the Earth", volunteer activities include tree planting, and waste recycling. The campaign is centred around five core initiatives: "Towngas Tree Planting Day", "Earth Hour", "Eco-Classroom", "Reinvent and Renew", and "A Fresh Start"; all designed to encourage employees to adopt green, low-carbon lifestyles.

Planting over **10,000** trees, vegetables, and potted plants, in total

Case Study

Appreciating Nature and Building a Low-Carbon Ecosystem

The global community is currently facing the pressing challenges of climate change, prompting governments worldwide to commit to GHG emission reductions and accelerate the transition towards renewable energy sources. In June 2024, the Hong Kong SAR Government released The Strategy of Hydrogen Development in Hong Kong, recognising hydrogen as a promising low-carbon energy source with significant business opportunities. Research and application of other new green energies, such as green methanol and SAF suitable for sea and air transport respectively, have become prominent topics of discussion. Meanwhile, with the TNFD officially releasing the Recommendations of the Taskforce on Nature-related Financial Disclosures, biodiversity issues are also receiving increased attention and concern from enterprises.

Biodiversity and New Energies Symposium

In support of National Ecology Day on 15 August, Towngas and Towngas Smart Energy jointly held the Biodiversity and New Energies Symposium. This initiative aimed to promote cooperation across industries, enhance biodiversity conservation, and advance new energy development, all in pursuit of a sustainable future. More than 20 representatives from various fields, including business, public utilities, conservation groups, and academia, gathered at the symposium to discuss the growth of the hydrogen industry, the green transformation of transport through new energy, improvements in corporate nature-related financial disclosures, and the balance between development and ecological preservation. The event attracted a diverse array of participants, including representatives from foreign consulates and trade organisations, underscoring the increasing global focus on new energy and biodiversity issues.

The full-day symposium attracted over **5,000** online and offline attendance

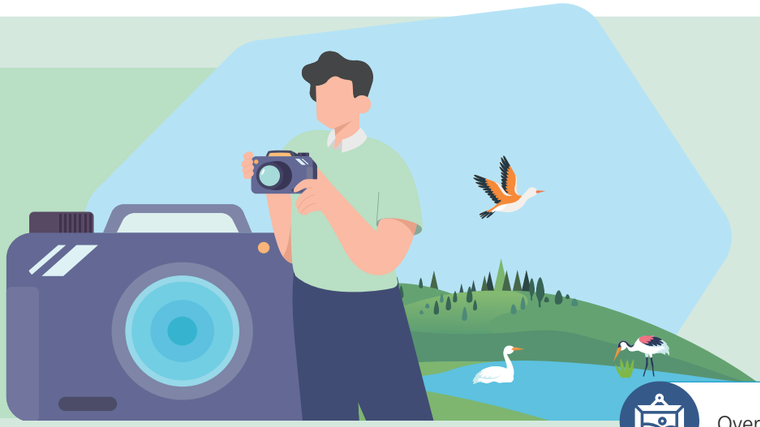
The Group showcased its latest progress in building an integrated clean energy ecosystem, featuring green methanol, hydrogen, and SAF for sea, land, and air transportation respectively.

Additionally, a platform was established for professionals from various industries to collaborate and share knowledge, in a bid to call for collective action in achieving a more environmentally friendly and sustainable future. Further, the symposium emphasised the key role of technological innovation in promoting energy transition and sustainable development, along with the importance of cross-industry collaboration in reaching these objectives.

Capturing Nature's Masterpieces: Wildlife Photography Contest

We organised the "Capturing Nature's Masterpieces: Wildlife Photography Contest" to foster greater public awareness of biodiversity issues, showcasing the most breathtaking moments of nature through their lenses. The contest highlighted animals from sea, land, and air, reflecting the Group's endeavour to low-carbon energy development across these domains. The response was overwhelmingly positive, with many remarkable images featuring endangered and regionally unique species.

To promote biodiversity conservation, we matched the total competition prize fund with equal donations to three non-profit environmental organisations: the Hong Kong Bird Watching Society, OPCF Hong Kong, and The Nature Conservancy, to support their environmental protection initiatives.



Over **1,000** entries

Winning Entries

Life In the Sea | Life On the Land | Life In the Air

Youth Group

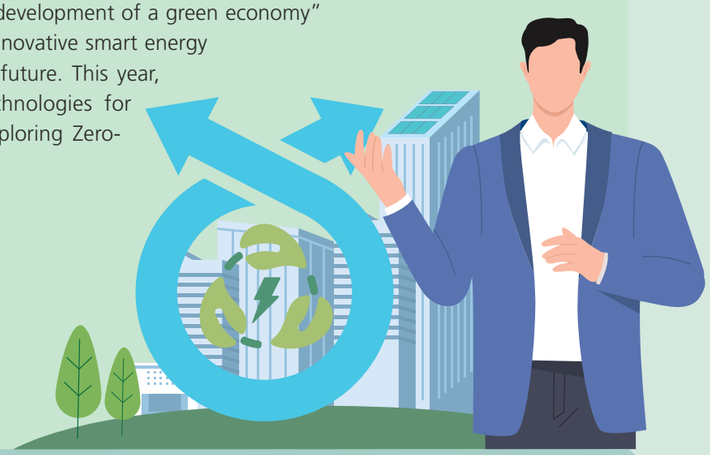
Adult Group

The winning entries were showcased at the Biodiversity and New Energies Symposium and transformed into special stamp packs, all aimed at raising public awareness about the importance of ecological conservation.

Case Study

TERA-Award Smart Energy Innovation Competition

The TERA-Award Smart Energy Innovation Competition (TERA-Award) works towards the mission of "empowering the development of a green economy" by accelerating the commercialisation of innovative smart energy technologies and solutions developed for future. This year, the third TERA-Award explored core technologies for zero-carbon energy under the theme "Exploring Zero-Carbon Innovations for the Future".



The Third TERA-Award Smart Energy Innovation Competition Award Presentation Ceremony

Attracted entries from **59** countries and regions globally

Including **450** technology projects

1 TERA-Award Gold: Received US$1,000,000

R&D and Industrialisation of Off-grid and Advanced Alkaline Hydrogen Producing Equipment and Key Components

Hua Xia Hydrogen Technology (Xiamen) Co., Ltd. (China)

High-efficiency water electrolysis is used to produce hydrogen, making it suitable for direct hydrogen production from renewable energy sources. This approach greatly reduces equipment costs while enhancing overall performance and long-term operational stability. The technology can be widely applied in industries, transport, power, construction, and other scenarios, providing low-cost hydrogen production and utilisation solutions.

Direct current power consumption per m^3 of hydrogen is less than **4.3 kWh**

2 TERA-Award Silver: Received US$100,000

Reshaping H_2 Storage and Transportation

Hydro X (Israel)

Water and bicarbonates are used to store hydrogen, offering advantages such as being non-toxic, non-flammable, and non-explosive. It can be transported at close to ambient temperature and pressure.

The cost of hydrogen storage and transportation reduced to below **US$1** per kg

3 TERA-Award Bronze: Received US$50,000

Phase Change Thermal Management Expert

Shenzhen Thero New Material Technology Co., Ltd. (China)

The high-efficiency phase change material (PCM) technology absorbs and stores thermal energy or cold energy under extreme high and low temperature conditions, making it safer and more stable than traditional cooling or heating methods. This technology significantly improves equipment service lifespan and can be widely applied in temperature-sensitive scenarios, such as cold storage warehouses and data centres.

Saves up to **20%** energy compared to traditional technologies

Towards Carbon Neutral – Composing a New Chapter in Green Initiatives

Innovative Technologies Incubated by the TERA-Award

Towngas accelerates the growth of innovative low-carbon technology projects recognised at the TERA-Award. In addition to granting prize money to winning projects, it offers application scenarios, funding, and resources to projects with commercial potential.

Mr. Alan Chan Ying-lung
Executive Chairman of the TERA-Award Organising Committee, Towngas Executive Director and Chief Investment Officer

"TERA-Award is more than just a technology competition, it is a platform for incubating innovation and accelerating growth. Towngas will continue to leverage its professional expertise in the energy sector to support the development of innovative zero-carbon technology enterprises and their commercial applications."

For further details about the TERA-Award Smart Energy Innovation Competition, please visit the TERA-Award website

Safe and Low-Cost Flow Battery

The inaugural Bronze Award Winner - Luquos Energy developed a battery utilising aqueous solution and sulphur as electrolytes. Sulphur is not only cost-effective but also completely free of heavy metals. The team's proprietary ion-exchange membrane extends battery lifespan to over 15 years, outperforming traditional lithium batteries in safety, cost efficiency, and environmental friendliness.

To further support this excellent technological innovation and facilitate the rapid implementation of the Sulphur-based Flow Battery Energy Storage System, Towngas Smart Energy has established cooperation with Luquos Energy, with the first demonstration project officially commencing in Shenzhen in 2024.

The energy storage system is applied to an electric vehicle charging station with thirty charging points, charging and storing electricity during off-peak periods when electricity charges are lower, and discharging to charging points during peak hours when electricity costs more. This system also helps reduce electricity load during demand peaks. Widespread use of the system will offer greater stability overall to the power grid.

Saves nearly **70%** in electricity costs

Professor Lu Yi-chun
Co-founder and Chief Scientist of Luquos Energy

"Thanks to the TERA-Award's support, we are able to deploy our products in real business environment."

Electricity-Free Cooling Technology

The second TERA-Award Gold winner, i2Cool Limited (i2Cool), has developed an electricity-free cooling coating that reduces surface temperature by reflecting solar and infrared thermal radiation. Experiments have shown that when this technology is applied to building roofs in Hong Kong, the roof surface temperature decreases from 60°C to 30°C during daytime, thereby helping to reduce electricity consumption for air conditioning.

i2Cool's technology is now applied to over a hundred projects globally, covering more than 20 countries and regions including the Chinese mainland, Hong Kong, Macau, Southeast Asia, the Middle East, Europe, and United States. It is employed in construction, chemical engineering, power, communications, new energy, logistics, grain storage, photovoltaics, and other fields. At the same time, i2Cool is building an electricity-free cooling ecosystem, accelerating the commercialisation of diverse products such as cooling ceramics, temperature-controlled textiles, and automotive paint.

This year, the Group helped i2Cool complete Series A financing, becoming one of its investors. The financing funds will aid i2Cool's technology and product development, as well as its global market expansion.

Saves **430 kWh** of electricity per square metre of coating annually
Reduces **250 kg** of CO_2 emissions per square metre of coating annually
Saves up to **40%** electricity consumption from air-conditioning

Dr. Martin Zhu Yihao
Co-founder and CEO of i2Cool

"With the support of various incubation and investment institutions, i2Cool has achieved rapid development. The support and empowerment from the TERA-Award have brought new opportunities and resources to the company."

Stakeholders Partnership

Enhancing Value Chain Resilience

The Group is committed to fully integrating sustainable development principles into value chain management, focusing on both supplier and quality management as core areas. We firmly believe that enhancing supply chain management not only effectively identifies and mitigates operational risks but also allows us to collaborate with suppliers on carbon reduction initiatives, achieving a win-win outcome for environmental benefits and corporate values.

Our mission is to provide safe, reliable, and clean smart energy, delivering high-quality services to our customers. We continually optimise product design and enhance production processes to ensure the safety and security of households.

Key Highlights

Supplier Management

- The **first** public utility in Greater China to launch a sustainability-linked supplier payment solution
- **100%**[15] of new suppliers were screened using environmental and social standards as one of the criteria
- Over **90%**[4] of critical tier 1 suppliers have used S-Carbon to complete GHG emissions quantification

Quality Management

- The reliability of gas supply[3] is as high as **99.992%** (Hong Kong)
- The emergency team arrived on-site in an average of **21.12 minutes** (Hong Kong)
- The overall customer satisfaction rate for the extended businesses brand "Bauhinia" reached **99.5%**

[3] Unplanned gas supply interruption.
[4] Based on the total procurement value of products and materials (refers to Hong Kong business and city-gas business on the Chinese mainland).
[15] Refers to Hong Kong business and city-gas business on the Chinese mainland.

Management Approach

To continuously enhance the creating capacity of the value chain, the Group strictly adhere to national laws and regulations, including the Bid Invitation and Bidding Law of the People's Republic of China and the Product Quality Law of the People's Republic of China. We have also established internal policies, including the Purchasing Policy, Sustainable Purchasing Policy, and Code of Practice for Suppliers, to ensure compliance in supply chain and product management. Additionally, we closely monitor national and regional policy developments while continuously optimising supplier cooperation mechanisms and product management standards. Through these efforts, we are committed to building a competitive value chain ecosystem with long-term development potential.

Supply Chain Management

During this year, our major procurement categories include natural gas, naphtha, gas appliances, underground pipelines, and related accessories.

Suppliers' Profile by Geographical Location and Expenditure	% (Number of Suppliers)	% (Expenditure Amount)
Hong Kong Business		
Hong Kong	90	38
Chinese Mainland	4	18
Others	6	44
City-Gas and Renewable Energy Businesses		
Chinese Mainland	100	100[16]

[16] Based on the total procurement value of products and materials.

Critical Supplier Identification

A tiered classification model for supplier management has been adopted, wherein suppliers are categorised as critical tier 1 suppliers or non-critical tier 1 suppliers according to procurement volume. This classification serves as the foundation for establishing differentiated management mechanisms.

Definition of Critical Tier 1 Suppliers (Hong Kong Business)	Total Expenditure[17]	Number Suppliers	Major Products Supplied
Annual procurement value exceeding HK$5 million/ non-substitutable suppliers	96%	23	• Gas production raw materials • Gas appliances • Pipeline components • Gas metres

Providers of non-substitutable materials and products to our critical tier 1 suppliers are classified as non-critical tier 1 suppliers, of which two have been identified in our Hong Kong business. Additionally, there are 64 critical tier 1 suppliers in the mainland city-gas and renewable energy businesses, accounting for over 80% of the total value of products and materials purchased.

Sustainability-related Risk Assessment

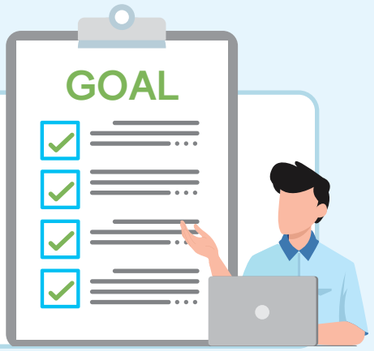
A continuous monitoring and regular assessment mechanism has been established by the Group for all existing suppliers, with a particular focus on the evaluation of ESG performance among critical tier 1 suppliers through a sustainable risk identification process. As at the end of 2024, we completed assessments of 34 Hong Kong business tier 1 suppliers through self-assessments, questionnaire submissions, and site inspections. These evaluations identified 13 suppliers present relatively high sustainability risks. When issues are identified during these evaluations, the relevant suppliers are required to submit improvement plans, with three-year follow-up monitoring. We reserve the right to terminate cooperation if these suppliers fail to meet the required standards.

[17] Based on the total procurement value of products and materials (Hong Kong business).

During this year, for new suppliers, we achieved the following targets:

100% Acknowledged and committed to complying the Code of Practice for Suppliers and the Sustainable Purchasing Policy (Hong Kong business)

100% Environmental and social standards were used as one of the criteria to screen new suppliers (Hong Kong and mainland city-gas businesses)



Supplier Capacity Development and Training

Towngas maintains close working relationships with suppliers and strive to promote sustainability throughout the supply chain. The Group requires suppliers to commit to five key areas of corporate social responsibility, including business ethics, employee relations, market activities, community engagement, and environmental protection. Furthermore, to effectively manage our supply chain's GHG emissions, we have partnered with SGS Hong Kong Limited (SGS) and are utilising the S-Carbon platform to track GHG emission data. This initiative not only improves the accuracy of our GHG (Scope 3) data but also strengthens suppliers' understanding of climate change and their awareness of emission reduction, driving the entire industry chain towards sustainable development goals.

Over **90%** of suppliers[4] have completed GHG emission quantification using S-Carbon

[4] Based on the total procurement value of products and materials (refers to Hong Kong business and city-gas business on the Chinese mainland).

To drive green transformation of our supply chain, we have organised multiple ESG and sustainability training sessions to help suppliers understand the latest market trends and policy requirements.

Supply Chain ESG Promotion and Carbon Verification Conference

As the impact of global climate change becomes increasingly pronounced, the Group is committed to building a more sustainable and climate-resilient supply chain. In 2024, we provided specialised training for suppliers on climate change risk assessment to deepen their understanding of the risks and opportunities associated with the transformation of their supply chains.

During the training sessions, suppliers were engaged in small group discussions to explore the risks arising from structural transformation in the emission reduction process across four areas, namely policy and law, market, technology, and reputation. The risks and opportunities presented by climate change are as follows. Additionally, we shared our ESG strategies, sustainability goals, and measures for addressing climate change. Experts were invited to analyse domestic and international low-carbon policy trends and business opportunities.

Risks	Opportunities
Supply Chain Disruption, Customer Loss, Decline in Demand for High-carbon Products/Replacement, Cost Increases	Energy Transition, New Market Development, Product Upgrading, Green Finance/Carbon Trading

The analysis showed that the climate change transformation risks faced by the Group's supply chain are generally consistent with those faced by the suppliers themselves. Through the training, suppliers are able to gain a deeper understanding of these risks and opportunities, allowing them to formulate mitigation plans and response strategies to minimise financial impacts and assist in the gradual transformation of the supply chain.

Going forward, the Group will continue to collaborate with suppliers to contribute to the industry's green transformation and promote sustainable development.

Customer Services Quality

We uphold strict quality management and continuously innovate new products, allowing us to provide safe and reliable energy services that create superior experiences for our customers.

Product and Service Quality

We implement rigorous quality control processes to ensure that all residential appliances and installation components meet safety standards. Firstly, all incoming materials undergo systematic inspection according to our internal standards. If any non-compliant products are identified, we take immediate actions to assess the impact and implement measures such as sales suspension, inspection, rectification, and product replacement. Furthermore, we regularly deploy specialists to installation sites for random checks on materials, procedures, and safety, thereby ensuring the installation quality.

Cross-Segment Superior Quality Service (SQS) Programme —Trainer Workshop

Product and service quality are continuously enhanced through initiatives such as the inaugural "Cross-Segment Superior Quality Service (SQS) Programme—Trainer Workshop" held by the Group in Shenzhen this year. Specifically, representatives from various business sectors received professional training from the China Association for Quality during this two-day workshop, learning how to apply innovative thinking to improve quality management standards.

29 employees participated

Reliable Energy Supply and Services

We have implemented comprehensive management measures in both Hong Kong and the Chinese mainland to ensure energy supply safety and service reliability.

Hong Kong Business

Towngas has refined management in network operations to enhance operational performance and ensure energy supply reliability.

Artificial Intelligence (AI) Monitoring System

Gas network safety monitoring has been strengthened through our collaboration with local suppliers to develop an AI construction site monitoring system that monitors engineering activities around key gas pipeline facilities in real time. The system provides immediate alerts when heavy machinery excavation occur nearby. We utilise this intelligent early warning mechanism to effectively prevent accidental damage to pipelines from third-party construction, thereby improving safety management standards of gas infrastructure.

Gas Network Maintenance

- We have replaced 16.7 kilometres of old metal pipelines and introduced bypass connection measures to swiftly restore gas supply services to customers affected by leaks while ensuring safety;
- We have collaborated with suppliers to develop Phased Array Ultrasonic Testing (PAUT) and Time of Flight Diffraction (TOFD) equipment to improve quality testing efficiency at polyethylene pipeline interfaces; and
- An artificial intelligence system was jointly developed for quality verification of X-ray inspection results of steel pipe welds.

Stakeholders Partnership – Enhancing Value Chain Resilience

Chinese Mainland Businesses

The Group is committed to ensuring the stability and reliability of energy supply through diversified strategies.

Mainland Utilities

A series of instructional videos has been launched to address issues encountered by customers during gas usage. By viewing these videos on mobile devices and receiving remote assistance, customers can quickly resolve their problems, thereby enhancing their user experience.

Renewable Energy Business

The intelligent energy management platform integrates photovoltaic power generation, energy storage facilities and charging station systems. It provides sustainable energy supply solutions for zero-carbon smart industrial parks and enhances the energy efficiency and service convenience for our commercial and industrial customers.

Extended Businesses

Reliable gas equipment and comprehensive after-sales support are provided to users through 24-hour free delivery, installation, and professional maintenance services, ensuring reliable gas usage.

Gas Resources Business

Robust storage and peak-shaving capabilities have been developed through optimised operational management, strengthened gas storage facility construction, and technical upgrades, ensuring stable gas supply.

Green Fuels & Chemicals Business

A stable supply of green methanol is ensured through strict compliance with relevant laws and regulations, and industry standards via a standardised operating system.

Contingency Peak-shaving Storage Base in Operation

Two parts of the first phase of contingency peak-shaving storage base have successively been put into operation. Upon full operation, this project will become the largest planned city-gas emergency peak-shaving reserve base on the Chinese mainland.

Storage Capacity: Construction is planned in two phases, with a total of **110,000 cubic metres** of LNG storage tanks and pipeline facilities

Production Capacity: Current production capacity is **500,000 cubic metres per day**

Gas Pipeline Network: **Five** export pipelines have been connected, reaching Jintan in Jiangsu, Wuhan in Hubei, Jiangxi Province, Guangxi Province, Guizhou Province and Xi'an

Ningxia Yida: Ensuring Stable Gas Supply through Multiple Measures

Various measures have been strengthened this year by Ningxia Yida Natural Gas Company Limited to further ensure gas supply stability.

Measures	Main Actions
Gas Supply	Supply stability has been enhanced through a successful connection to upstream coke oven gas.
Pipeline Maintenance	The annual self-inspection of over 1.8 kilometres of industrial pipelines has been completed, covering multiple inspection items including pipeline defects, wall thickness, and safety accessories.
Equipment Inspection	Comprehensive preventive maintenance has been conducted on critical equipment, including mechanical, electrical, and instrumentation systems.

Exemplary Service with Courtesy and Integrity

High-quality products and services are provided to customers through strict compliance with laws, regulations, and standards in the locations where we operate, with "Courtesy, Mastercraft and Integrity" serving as the three pillars of quality management. Meanwhile, the Customer Services Code of Conduct Policy has been formulated to ensure service quality through standardised service standards.

Quality Customer Service

A comprehensive service quality management system has been established based on the Group's "Customer-Centric" service philosophy. In Hong Kong business, the system defines specific service commitments and key performance indicators in various areas such as safe gas supply, service efficiency and customer experience. Moreover, high-efficiency and high-quality services are ensured for customers through standardised processes and professional training.

Our excellent service has been widely recognised, with the Group earning service quality awards from renowned organisations and establishing industry benchmarks.

Service pledges	Service targets	2024 Results
Reliability		
Uninterrupted gas supply[3]	Over 99.99%	99.992%
In case of supply interruption (on account of maintenance or engineering work)	Customer notification 3 days in advance	100%
Restoration of gas supply	Within 12 hours	100%
Safety		
Emergency Teams	Arrive on site within 25 minutes	Average 21.12 minutes
Appointments		
Availability of maintenance and installation services	Within 2 working days	Average 1.09 days
Speed and Convenience		
Customer Service Hotline	Calls answered within 4 rings	96.68%
Connect or disconnect gas supply	Within 1 working day	100% (In response to customer requests)
Service Quality		
Efficiency	8.5 out of a total score of 10	9.00
Courteous and friendly attitude	8.5 out of a total score of 10	8.98
Handling Suggestions		
Written comments or suggestions	Acknowledgment reply within 3 working days	100%
	Resolution, or a statement of when the matter will be resolved, within 2 weeks	100%

[3] Unplanned gas supply interruption.

Stakeholders Partnership – Enhancing Value Chain Resilience

Customer Service Performance Receives Numerous Accolades

The Hong Kong Call Centre Association has awarded Towngas the Gold Award in the "Mystery Caller Assessment Award - Public Service and Utilities Category" for six consecutive years. We have also received the Bronze Award for "Inbound Contact Centre Team Leader of the Year". These recognitions serve as significant industry benchmarks in the customer service sector, fully demonstrating our outstanding performance.

Digital Service Customer Centre

The Group continuously optimises online service platforms and advances intelligent customer service systems to adapt to digital transformation trends. In 2024, the Hong Kong Call Centre Association honoured us with the Merit Award for "Digital Customer Contact Professional of the Year", highlighting the innovative achievements we have made in smart services.

- Customer inquiries successfully handled by the AI chatbot, Tinny over **20%**
- Customer inquiries processed through digital channels over **60%**
- Self-arranged maintenance service over **50%**

AI Technology Enhances Service Efficiency

Towngas has developed a breakthrough AI analytical solution – the Speech Analytics Model, revolutionising traditional manual customer service. This advanced AI technology enables the system to perform Cantonese speech-to-text conversion, keyword extraction, and intelligent classification, enhancing our understanding of customer needs and processing efficiency. Additionally, the speech recognition system operates offline, ensuring data security while analysing massive amounts of customer enquiry data and predicting business trends, providing precise direction for service optimisation. This project has also won the Hong Kong Business Technology Excellence Award, presented by the Hong Kong Business Magazine.

- Translation accuracy exceeds **94%**
- Classification accuracy reaches **88%**

Smart Home Technologies

We actively embrace technological innovation and heavily invest in smart product research and development. By applying cutting-edge technologies and developing innovative products, we creates safer, more convenient and comfortable energy experiences for customers.

Smart Gas Metres

- Smart gas metres employ advanced Internet of Things (IoT) technology with the following capabilities:
  - Remote control and automated metre reading
  - Abnormal flow detection with automatic gas supply cut-off
- **33%**[18] adoption rate among Hong Kong users by the end of 2024

Smart Home Products

- Smart Water Heaters:
  - Equipped with dedicated mobile application
  - Remote control and real-time monitoring of water heaters from anywhere

[18] Gas meter with automatic reading function.

Case Study

Driving ESG Implementation among Suppliers to Build a Green Supply Chain

In the face of global climate change challenges, corporate environmental responsibility extends beyond operational GHG emissions to include GHG management throughout the supply chain. The "Towngas Green Supply Chain Finance Programme" has been launched as an innovative solution targeting Scope 3 emissions. By providing financial support and ESG training, this initiative encourages suppliers to adopt low-carbon technologies and sustainable practices, effectively reducing the overall carbon footprint of the supply chain.

"Towngas is committed to implementing ESG practices across all aspects of our business, and actively working with partners upstream in the value chain to reduce GHG emissions. By linking sustainability performance to payment services, we hope to take on a leading role in further encouraging suppliers to improve their ESG management standards and jointly promote the sustainable transformation of the industry chain."

Mr. Felix Lee
Head of Group Corporate Affairs and Sustainability
Towngas

"As the world's leading trade bank, HSBC plays a crucial role in helping to decarbonise cross-border trade flow and supply chains. Through the use of sustainable supply chain finance, we are able to have a positive impact across the full value chain. We promote ESG transparency, encourage disclosure and incentivise suppliers who manage and report their emissions."

Mr. Aditya Gahlaut
Managing Director and Regional Head of Global Trade Solutions, Asia Pacific
HSBC

"We participate in this programme not only strengthens our ESG transformation and development, but also brings tangible benefits to the company's cash flow. The payment period has been significantly shortened, allowing us to receive funds earlier. The preferential lending rate is lower than market rates, effectively reducing operational costs while accelerating our company's pace in green and low-carbon transformation."

Ms. Vincci Yu
Executive Assistant to the Chairman
SCE Hardware Company Limited

Initiators:
Towngas and HSBC

Target Participants:
The programme currently focuses on suppliers in Towngas' appliance sales and installation business segment.

Launch Date:
July 2024

Eight suppliers
have joined the programme
(as of 31 December 2024)

The annual total procurement amount for participating suppliers is approximately
HK$57 million

Strategic Significance and Long-Term Goals

Towngas and HSBC have jointly signed an agreement for the "Towngas Green Supply Chain Finance Programme", establishing the Group as the **first public utility** in Greater China to launch a sustainability-linked supplier payment solution.

This programme will drive suppliers' GHG emissions management, further enhancing Towngas' GHG Scope 3 data collection system. It not only helps meet regulatory requirements but also sets higher industry standards for sustainable development.

Incentives and Mechanisms

Participating suppliers who meet redetermined sustainability goals, such as implementing GHG emissions data management and auditing, as well as attending ESG training, will be eligible for early payment and preferential leading rates, effectively improving their working capital position.

New Model for Green Collaboration

A new supply chain finance model has been established through this programme. Combined with supplier assessments and professional training programmes, the initiative guides suppliers to continuously improve their environmental and social performance, creating a responsible green supply chain through collaboration.

Case Study

Creating New Smart Home Experience with Self-Developed Products

With ongoing advancements in technology, smart home systems have become a significant trend in modern living. Towngas has introduced a smart home system that combines cutting-edge IoT technology with energy management, prioritising user experience and significantly enhancing the convenience of gas usage. Additionally, to address gas safety concerns for elderly individuals living alone, Towngas has donated self-developed smart controllers for cooking stoves. These devices allow seniors to monitor appliance usage in real time via mobile application, thereby improving gas safety at home.

Smart Water Heaters

Our advanced smart water heaters are equipped with a controller communication module, enabling Towngas customers to remotely monitor the operational status and adjust temperature settings via mobile application. Users can also view water consumption and gas usage records through the same interface.

"Smart Safety" Gas Meters

Our new smart gas meters are equipped with a real-time monitoring system that goes beyond basic usage statistics and reporting functions. This system monitors total gas consumption across all downstream appliances. In the event of abnormal usage, it automatically disconnects the gas supply and sends emergency notifications to Towngas, ensuring a prompt response.

Smart Cooker Hoods

Our new smart cooker hood features remote control functionality, allowing users to monitor and operate it through a dedicated mobile application. Another highlight of this device is its ability to achieve smart linkage control of kitchen appliances when coordinated with smart cooking stoves.

Smart Controllers for Cooking Stove

Users can monitor stove operations in real time through mobile devices, with safety features including remote shutdown and departure reminders. The system is equipped with intelligent timing and staged reminder functions that automatically control gas usage duration, effectively enhancing both cooking safety and convenience.

Appendix I: Key Statistics

This section presents an overview of the 2024 key performance indicators (KPIs) of the Group, with a focus on economic, employee, environmental, safety and social aspects. The scope of disclosures covers Towngas and its subsidiaries, unless stated otherwise.

To enhance transparency and comprehensiveness, the codes (**G, RB**) denotes reporting scopes of: **G** for City-Gas Business and **RB** for Renewable Energy Business.

Group Performance

Economic

The scope of disclosures aligns with Towngas' financial reporting. More information is available in the Towngas Annual Report 2024.

	Unit	2024	2023	2022	2021	2020
Operation						
Customers (Town gas business)	Million	**2.04**	2.02	2.00	1.96	1.94
Customers (City-gas business)	Million	**42.5**	40.2	37.3	35.0	31.8
Customers (Water business)	Million	**3.16**	2.93	2.77	2.62	2.53
Town gas sales (Hong Kong)	Million MJ	**27,159**	27,125	27,398	27,677	27,947
Gas sales (Chinese mainland)	Billion m^3	**36.4**	34.7	32.1	31.1	26.9
Water sales (Chinese mainland)	Million tonnes	**1,062**	1,041	1,027	994	917
Financial						
Revenue	HK$ million	**55,473**	56,971	60,953	53,564	40,927
Manpower costs	HK$ million	**4,030**	3,879	3,741	3,624	3,284
Capital expenditure	HK$ million	**6,460**	8,428	8,321	8,387	7,295
Taxation	HK$ million	**1,729**	2,003	1,859	2,155	1,713
Dividends	HK$ million	**6,531**	6,531	6,531	6,531	6,220
Profit attributable to shareholders	HK$ million	**5,712**	6,070	5,248	5,017	6,007

Greeenhouse Gas (GHG) Emissions

	Unit	2024	2023	2022	2021	2020
Scope 1 and 2 [1)]						
Scope 1	Tonnes CO_2e	**1,628,000**	1,596,000	1,830,000	1,808,000	1,682,000
Scope 2 (location-based)	Tonnes CO_2e	**518,000**	618,000	673,000	694,000	676,000
Scope 2 (market-based)	Tonnes CO_2e	**518,000**	618,000	673,000	694,000	676,000
Total emissions	Tonnes CO_2e	**2,146,000**	2,214,000	2,503,000	2,502,000	2,358,000
Gas Production (Hong Kong)	Tonnes CO_2e	**310,105**	310,016	329,052	339,068	344,549
Scope 3						
Category 1: Purchased goods and services	Tonnes CO_2e	**3,339,000**	3,686,000	–	–	–
Category 2: Capital goods	Tonnes CO_2e	**259,000**	337,000	–	–	–
Category 3: Fuel-and-energy related activities	Tonnes CO_2e	**170,000**	152,000	–	–	–
Category 11: Use of sold products	Tonnes CO_2e	**20,669,000**	23,133,000	–	–	–
Other Categories [2)]	Tonnes CO_2e	**198,000**	247,000	–	–	–
Total emissions	Tonnes CO_2e	**24,635,000**	27,555,000	–	–	–

Note:

1) Data are consolidated using the control approach in the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004), emissions prior to 2021 are restated to align the calculation methodology across years.

GHG inventory covers seven types of GHGs specified in the Kyoto Protocol. The global warming potentials were from the IPCC Sixth Assessment Report (2023).

The emission factors used to calculate GHG emissions from electricity consumption are obtained from two local electricity companies in Hong Kong and the Ministry of Ecology and Environment and the National Bureau of Statistics of the People's Republic of China, utilising the most up-to-date data and information available during the reporting year. Other emission factors were obtained from local governments and authorities in their respective jurisdictions. In situations where local emissions factors are not available, other recognised sources are referenced.

Ozone-depleting substances were taken into consideration and their amount was found to be negligible. Hence, separate disclosure is not presented in the report.

2) Other categories included Category 4 – upstream transportation and distribution; Category 5: Waste generated in operations; Category 6 – Business travel; Category 7 – Employee commuting; Category 9 – Downstream transportation and distribution; and, Category 12 – End-of-life treatment of sold products.

Appendix I: Key Statistics

Hong Kong
Employees

	Unit	2024	2023	2022	2021	2020
Employment Type						
Full-time	Number	**2,456**	2,402	2,352	2,442	2,495
Part-time	Number	**129**	144	156	113	140
Permanent	Number	**2,320**	2,274	2,226	–	–
Contract	Number	**136**	128	126	–	–
By gender						
Male	Number	**1,893**	1,865	1,854	1,900	1,950
Female	Number	**563**	537	498	542	545
By age group						
≤35	Number	**694**	657	618	607	612
36-55	Number	**1,092**	1,082	1,081	1,141	1,230
≥56	Number	**670**	663	653	694	653
By employee category						
Managerial employee	Number	**311**	293	267	271	267
Supervisory employee	Number	**967**	912	898	901	918
General employee	Number	**1,178**	1,197	1,187	1,270	1,310
Voluntary Turnover (number and rate) [1)]						
Total	Number (%)	**209 (8.6)**	255 (10.7)	263 (11.0)	(8.9)	(5.0)
By gender						
Male	Number (%)	**136 (7.2)**	185 (9.9)	177 (9.4)	(7.7)	(4.2)
Female	Number (%)	**73 (13.3)**	70 (13.5)	86 (16.5)	(13.1)	(7.6)
By age group						
≤35	Number (%)	**83 (12.3)**	118 (18.5)	124 (20.2)	(16.4)	(8.2)
36-55	Number (%)	**95 (8.7)**	101 (9.3)	104 (9.4)	(8.1)	(3.4)
≥56	Number (%)	**31 (4.7)**	36 (5.5)	35 (5.2)	(3.4)	(5.0)
New Recruitment (number and rate) [2)]						
Total	Number (%)	**255 (10.5)**	340 (14.3)	324 (13.5)	235	203
By gender						
Male	Number (%)	**168 (8.9)**	232 (12.5)	239 (12.7)	158	141
Female	Number (%)	**87 (15.8)**	108 (20.9)	85 (16.3)	77	62
By age group						
≤35	Number (%)	**143 (21.2)**	193 (30.3)	197 (32.2)	152	122
36-55	Number (%)	**96 (8.8)**	128 (11.8)	109 (9.8)	64	58
≥56	Number (%)	**16 (2.4)**	19 (2.9)	18 (2.7)	19	23

	Unit	2024	2023	2022	2021	2020
Performance and Career Reviews						
Total percentage	%	**83.1**	81.3	82.0	83.5	84.6
By gender						
Male	%	**84.9**	82.8	83.1	85.1	85.9
Female	%	**76.9**	75.8	78.1	78.2	80.0
By employee category						
Managerial employee	%	**81.4**	78.5	77.5	81.9	83.1
Supervisory employee	%	**86.3**	85.2	86.5	90.7	91.4
General employee	%	**80.9**	78.9	79.6	78.8	80.2
Training						
Total	Hours	**91,074**	56,550	52,759	62,216	51,865
Average (per employee)	Hours	**37.1**	23.5	22.4	21.6	17.5
Average training spend (per employee)	HK$	**3,432**	2,907	–	–	–
Anti-corruption training	Hours	**235**	226	1,101	162	156
Percentage of employees who received anti-corruption training	%	**100**	–	–	–	–
By gender (average training hours and percentage of employees who received training)						
Male	Hours (%)	**37.7 (92.3)**	25.7 (88.5)	25.2 (95.5)	24.3 (78.6)	19.1 (63.4)
Female	Hours (%)	**34.9 (85.4)**	16.1 (83.6)	12.2 (94.4)	13.5 (68.2)	12.4 (58.0)
By employee category (average training hours and percentage of employees who received training)						
Managerial employee	Hours (%)	**21.2 (93.6)**	14.2 (91.8)	12.1 (92.1)	11.2 (79.6)	7.4 (73.5)
Supervisory employee	Hours (%)	**43.4 (91.9)**	13.3 (86.4)	9.9 (95.7)	12.5 (81.6)	8.3 (70.4)
General employee	Hours (%)	**36.1 (89.0)**	33.6 (87.1)	34.2 (95.7)	29.7 (71.8)	25.3 (54.6)

Appendix I: Key Statistics

	Unit	2024	2023	2022	2021	2020
Diversity (ratio of male to female)						
By employee category						
Managerial employee	Ratio	**2.8:1**	2.6:1	2.9:1	2.9:1	3.1:1
Supervisory employee	Ratio	**2.5:1**	2.7:1	2.9:1	2.9:1	3.0:1
General employee	Ratio	**4.9:1**	4.7:1	4.9:1	4.3:1	4.2:1
Managerial employee – revenue-generating functions	Ratio	**2.1:1**	2.3:1	2.5:1	–	–
Gender Pay Ratio (male to female)						
Total – Base Salary	Ratio	**1.0:1**	1.0:1	1.0:1	–	–
By employee category – base salary						
Managerial employee	Ratio	**1.0:1**	1.1:1	1.1:1	–	–
Supervisory employee	Ratio	**1.1:1**	1.1:1	1.2:1	–	–
General employee	Ratio	**1.1:1**	1.0:1	1.0:1	–	–
By employee category – remuneration						
Managerial employee	Ratio	**1.1:1**	1.1:1	1.1:1	–	–
Supervisory employee	Ratio	**1.1:1**	1.1:1	1.2:1	–	–
General employee	Ratio	**1.1:1**	1.1:1	1.1:1	–	–
Parental Leave						
Number of employees that were entitled to parental leave						
Male	Number	**25**	21	20	–	–
Female	Number	**9**	4	8	–	–
Number of employees took parental leave						
Male	Number	**25**	21	20	–	–
Female	Number	**9**	4	8	–	–
Number of employees returned to work in the reporting year after parental leave ended						
Male	Number	**25**	21	19	–	–
Female	Number	**9**	3	7	–	–
Return to work rate						
Male	%	**100**	100	95	–	–
Female	%	**100**	75	88	–	–

Note:

1) Starting from 2022, both "Number of Voluntary Turnover" and "Voluntary Turnover Rate" are disclosed. Numbers prior to 2022 are reported as "Turnover Rate".

2) Starting from 2022, both "Number of New Recruitment" and "New Recruitment Rate" are disclosed. Numbers prior to 2022 are reported as "Number of New Recruitment".

Safety

	Unit	2024	2023	2022	2021	2020
Employees						
Recordable work-related injuries [1]	Number (per 1,000,000 work-hours)	**11 (2.3)**	14 (2.8)	19 (4.0)	15 (2.2)	21 (3.2)
Lost days due to work injuries [2]	Number of work-days	**490**	845	657	1,013	386
High-consequence work-related injuries	Number (per 1,000,000 work-hours)	**0 (0)**	0 (0)	0 (0)	–	–
Recordable work-related ill health [3]	Number (per 1,000,000 work-hours)	**0 (0)**	0 (0)	0 (0)	0 (0)	0 (0)
Fatalities [4]	Number (per 1,000,000 work-hours)	**0(0)**	0 (0)	0 (0)	0 (0)	0 (0)
Contractors						
Recordable work-related injuries [1]	Number (per 1,000,000 work-hours)	**4 (1.0)**	7 (1.7)	5 (1.3)	5 (1.2)	11 (2.5)
Lost days due to work injuries [2]	Number of work-days	**144**	201	103	–	–
High-consequence work-related injuries	Number (per 1,000,000 work-hours)	**0 (0)**	0 (0)	0 (0)	–	–
Recordable work-related ill health [3]	Number (per 1,000,000 work-hours)	**0 (0)**	0 (0)	0 (0)	–	–
Fatalities [4]	Number (per 1,000,000 work-hours)	**0 (0)**	0 (0)	0 (0)	0 (0)	0 (0)

Note:

1) Starting from 2022, "Recordable work-related injuries" replaces "Accident – all industrial injuries" to include traffic accidents. Numbers and rates prior to 2022 are reported as "Accident – all industrial injuries" and "Accident frequency rate".

2) Starting from 2022, "Lost days due to work injuries" replaces "Industrial injury man-days lost". Numbers prior to 2022 are reported as "Industrial injury man-days lost".

3) Starting from 2022, "Recordable work-related ill health" replaces "Occupational diseases". Numbers prior to 2022 are reported as numbers for "Occupational diseases".

4) Refers to the number of fatalities as a result of work-related injury.

Appendix I: Key Statistics

Value Chain

	Unit	2024	2023	2022	2021	2020
Customers						
Products sold or shipped subject to recalls for safety and health reasons	%	**0**	0	0	0	0
Customer compliments [1]	Number	**6,014**	5,552	5,932	6,170	5,814
Customer complaints [1]	Number	**2**	1	3	13	7
Suppliers						
Critical tier 1 Suppliers	Number	**23**	22	-	–	–
Suppliers' profile by geographical location (Hong Kong)	%	**90**	90	90	–	–
Suppliers' profile by geographical location (Chinese mainland)	%	**4**	4	4	–	–
Suppliers' profile by geographical location (Others)	%	**6**	6	6	–	–
Payment to suppliers by geographical location (Hong Kong)	%	**38**	44	47	–	–
Payment to suppliers by geographical location (Chinese mainland)	%	**18**	17	13	–	–
Payment to suppliers by geographical location (Others)	%	**44**	39	40	–	–

Note:

1) Includes compliments and complaints with written records.

Community

	Unit	2024	2023	2022	2021	2020
Charitable donations [1]	HK$ million	**5.3**	4.1	8.6	3.0	7.9
Employees participating in Volunteering services	Number	**757**	695	711	768	785
Volunteer service hours [2]	Hours	**20,254**	14,487	9,329	14,122	16,633
Beneficiaries	Number	**644,770**	547,833	385,773	299,828	347,526

Note:

1) Includes charitable donations from the Group.

2) Include service hours from Towngas Volunteer Service Team and Towngas Customer Volunteer Team.

Environmental

	Unit	2024	2023	2022	2021	2020
Energy Consumption						
Natural gas	GJ	**4,739,124**	4,620,309	4,910,984	5,219,173	5,178,927
Naphtha	GJ	**639,707**	656,650	663,241	671,774	665,811
Synthetic natural gas and landfill gas	GJ	**427,791**	385,042	210,836	135,146	124,985
Town gas	GJ	**226,148**	239,500	222,818	212,420	225,531
Diesel	GJ	**12,921**	13,202	17,193	19,494	18,527
Unleaded petrol	GJ	**6,880**	7,062	7,032	8,587	9,071
Electricity	GJ	**389,604**	394,483	338,941	353,681	477,749
Total energy consumption	GJ	**6,442,175**	6,316,248	6,371,045	6,620,275	6,700,601
Water Withdrawal/Discharge [1]						
Water withdrawal – from municipal water supplies	m^3 (m^3 per million MJ of town gas)	**1,076,415 (39.6)**	934,286 (34.4)	960,505 (35.1)	992,022 (35.8)	982,034 (35.9)
Wastewater discharged – total	m^3 (m^3 per million MJ of town gas)	**119,381 (4.4)**	120,449 (4.4)	126,809 (4.6)	100,412 (3.6)	98,550 (3.5)
Wastewater discharged – to marine water bodies (treated)	m^3	**35,076**	33,616	28,184	13,870	13,505
Wastewater discharged – to sewage	m^3	**84,305**	86,833	98,625	86,505	84,680
Waste Management						
Non-hazardous waste						
Non-hazardous waste landfilled [2]	Tonnes	**219.0** [4]	146.8	144.1	160.3	169.0
Non-hazardous waste recycled [3]	Tonnes	**79.5**	105.7	143.8	154.6	135.4
Hazardous waste [4]						
Chemical waste generated (process related)	Kg (Kg per million MJ of town gas)	**10,331 (0.4)**	14,147 (0.5)	11,174 (0.4)	48,180 (1.8)	52,925 (2.0)
Waste recycled						
Metal – from old gas appliances	Tonnes	**1,425**	1,432	1,521	1,607	1,626
Metal – from construction and maintenance of plant and pipelines	Tonnes	**20**	23	73	68	62
Lead acid batteries	Tonnes	**1.9** [5]	20.3	10.1	23.5	16.8

Appendix I: Key Statistics

	Unit	2024	2023	2022	2021	2020
Air Emissions						
Nitrogen oxides (NO_x)	Kg (Kg per million MJ of town gas)	**102,879 (3.8)**	98,040 (3.6)	112,388 (4.1)	107,675 (4.0)	108,770 (4.0)
Sulphur oxides (SO_x)	Kg (Kg per million MJ of town gas)	**638 (0.02)**	508 (0.02)	499 (0.02)	402 (0.02)	365 (0.01)
Packaging Material Use						
Carton	Tonnes	**864**	820	920	916	842
Wood	Tonnes	**24.9**	17.3	14.7	15.9	15.5
Plastic	Tonnes	**1.04**	1.26	1.27	1.38	1.41

Note:

1) For gas production only.

All water is freshwater purchased from and distributed by the HKSAR Water Supplies Department. All wastewater handling procedures comply with the local regulations.

2) "Non-hazardous waste landfilled" refers to the refuse and construction waste collected from our operations. Starting from 2024, the collection scope expanded to improve comprehensiveness.

3) "Non-hazardous waste recycled" refers to the plastics, papers, paper cartons and metals collected and delivered to recycling contractors. Apart from these waste categories, we also recycle other non-hazardous waste, such as used printing cartridges, on a regular basis.

4) All chemical waste handling procedures comply with the Waste Disposal Ordinance (Cap. 354). We also collect other non-process related hazardous waste, such as rechargeable batteries, fluorescent tubes and obsolete electronic products, and deliver them to licensed recyclers on a regular basis.

5) No major disposal of batteries (such as UPS) in 2024.

Outside Hong Kong

Employees

	Unit	2024	2023	2022	2021	2020
Total						
Full-time	Number	**20,330**	20,693	21,820	52,637	51,067
Part-time	Number	**24**	8	3	10	7
Permanent	Number	**20,330**	20,693	21,820	–	–
Contract	Number	**0**	0	0	–	–
By gender						
Male	Number	**14,047**	14,404	15,302	35,975	34,876
Female	Number	**6,283**	6,289	6,518	16,662	16,191
By age group						
≤35	Number	**7,997**	8,765	9,463	21,846	21,990
36-55	Number	**11,280**	10,958	11,382	28,064	26,734
≥56	Number	**1,053**	970	975	2,727	2,343
By employee category						
Managerial employee	Number	**731**	732	691	1,149	1,082
Supervisory employee	Number	**3,835**	2,971	3,215	5,380	5,013
General employee	Number	**15,764**	16,990	17,914	46,108	44,972
Voluntary Turnover (number and rate) 1)						
Total	Number (%)	**896 (4.4)**	868 (4.1)	1,308 (6.0)	(2.6)	(2.0)
By gender						
Male	Number (%)	**692 (4.9)**	627 (4.2)	1,036 (6.8)	(2.8)	(2.1)
Female	Number (%)	**204 (3.2)**	214 (3.3)	272 (4.2)	(2.1)	(1.7)
By age group						
≤35	Number (%)	**589 (7.0)**	604 (6.6)	943 (10.0)	(4.3)	(3.2)
36-55	Number (%)	**280 (2.5)**	251 (2.2)	345 (3.0)	(1.4)	(1.1)
≥56	Number (%)	**27 (2.7)**	13 (1.3)	20 (2.1)	(0.5)	(0.8)

Appendix I: Key Statistics

	Unit	2024	2023	2022	2021	2020
New Recruitment (number and rate) [2)]						
Total	Number (%)	**1,286 (6.3)**	1,684 (7.9)	2,086 (9.6)	2,193	1,493
By gender						
Male	Number (%)	**881 (6.2)**	1,184 (8.0)	1,492 (9.8)	1,535	1,123
Female	Number (%)	**405 (6.4)**	500 (7.8)	594 (9.1)	658	370
By age group						
≤35	Number (%)	**947 (11.3)**	1,232 (13.5)	1,575 (16.6)	1,690	1,127
36-55	Number (%)	**330 (3.0)**	418 (3.7)	498 (4.4)	492	354
≥56	Number (%)	**9 (0.9)**	34 (3.5)	13 (1.3)	11	12
Performance and Career Reviews						
Total percentage	%	**98.6**	95.5	96.0	–	–
By gender						
Male	%	**98.8**	95.8	95.9	–	–
Female	%	**98.3**	94.8	96.3	–	–
By employee category						
Managerial employee	%	**97.0**	95.9	97.0	–	–
Supervisory employee	%	**98.6**	96.9	93.3	–	–
General employee	%	**98.7**	95.2	96.4	–	–
Training						
Total	Hours	**1,283,444**	2,074,140	1,350,836	1,392,042	–
Average (per employee)	Hours	**63.1**	100	62	51.5	–
Average training spend (per employee)	HK$	**1,327**	–	–	–	–
Anti-corruption training	Hours	**24,604**	–	–	–	–
Percentage of employees who received anti-corruption training	%	**81.3**	–	–	–	–

	Unit	2024	2023	2022	2021	2020
By gender (average training hours and percentage of employees who received training)						
Male	Hours (%)	**66.5 (92.4)**	102.7 (92.8)	61.8 (97.6)	51.2 (96.6)	–
Female	Hours (%)	**55.6 (89.4)**	94.5 (90.7)	62.2 (96.6)	52.1 (95.8)	–
By employee category (average training hours and percentage of employees who received training)						
Managerial employee	Hours (%)	**47.61 (93.3)**	60.1 (93.0)	39.8 (97.4)	45.7 (93.2)	–
Supervisory employee	Hours (%)	**53.0 (64.5)**	72.0 (87.2)	47.0 (93.9)	46.7 (91.2)	–
General employee	Hours (%)	**66.31 (98.0)**	106.9 (93.0)	65.4 (97.9)	52.4 (97.2)	–
Diversity (ratio of male to female)						
Managerial employee	Ratio	**3.8:1**	3.7:1	5.6:1	–	–
Supervisory employee	Ratio	**2.3:1**	2.5: 1	2.5:1	–	–
General employee	Ratio	**2.2:1**	2.2:1	2.3:1	–	–
Parental Leave						
Number of employees that were entitled to parental leave						
Male	Number	**259**	–	–	–	–
Female	Number	**173**	–	–	–	–
Number of employees took parental leave						
Male	Number	**259**	–	–	–	–
Female	Number	**173**	–	–	–	–
Number of employees returned to work in the reporting year after parental leave ended						
Male	Number	**259**	–	–	–	–
Female	Number	**171**	–	–	–	–
Return to work rate						
Male	%	**100**	–	–	–	–
Female	%	**99**	–	–	–	–
Legal Rights [3)]						
Coverage of labour contract	%	**100**	100	100	100	100
Coverage of social insurance	%	**100**	100	100	100	100

Note:

1) Starting from 2022, both "Number of Voluntary Turnover" and "Voluntary Turnover Rate" are disclosed. Numbers prior to 2022 are reported as "Turnover Rate".

2) Starting from 2022, both "Number of New Recruitment" and "New Recruitment Rate" are disclosed. Numbers prior to 2022 are reported as "Number of New Recruitment".

3) Reporting scope includes Chinese mainland only.

Appendix I: Key Statistics

Safety

	Unit	2024	2023	2022	2021	2020
Employees						
Recordable work-related injuries	Number (per 1,000,000 work-hours)	**5 (0.12)**	6 (0.15)	13 (0.3)	–	–
Lost days due to work injuries [1]	Number of work-days	**348**	448	395	1,072	955
High-consequence work-related injuries	Number (per 1,000,000 work-hours)	**0 (0)**	0 (0)	0 (0)	–	–
Recordable work-related ill health	Number (per 1,000,000 work-hours)	**0 (0)**	0 (0)	0 (0)	–	–
Fatalities [2]	Number (per 1,000,000 work-hours)	**0 (0)**	0 (0)	1 (0.02)	0	0
Contractors						
Recordable work-related injuries	Number (per 1,000,000 work-hours)	**1 (0.06)**	0 (0)	2	–	–
Lost days due to work injuries	Number of work-days	**120**	0	18	–	–
High-consequence work-related injuries	Number (per 1,000,000 work-hours)	**0 (0)**	0 (0)	0	–	–
Recordable work-related ill health	Number (per 1,000,000 work-hours)	**0 (0)**	0 (0)	0	–	–
Fatalities [2]	Number (per 1,000,000 work-hours)	**0 (0)**	0 (0)	1	–	–

Note:

1) Starting from 2022, "Lost days due to work injuries" replaces "Industrial injury man-days lost". Numbers prior to 2022 are reported as "Industrial injury man-days lost".

2) Refers to the number of fatalities as a result of work-related injury.

Value Chain

	Unit	2024	2023	2022	2021	2020
Customers [1]						
Products sold or shipped subject to recalls for safety and health reasons	%	**0**	0	0	0	0
Product- and service-related complaints received	Number	**186**	109	–	–	–
Suppliers [G,RB]						
Critical tier 1 suppliers	Number	**64**	–	–	–	–
Suppliers' profile by geographical location (Chinese mainland)	%	**100**	–	–	–	–
Suppliers' profile by geographical location (Others)	%	**0**	–	–	–	–
Payment to suppliers by geographical location (Chinese mainland) [2]	%	**100**	–	–	–	–
Payment to suppliers by geographical location (Others) [2]	%	**0**	–	–	–	–

Note:

1) Reporting scope includes gas-related business only.

2) Based on the total purchase value of products and materials

Community

	Unit	2024	2023	2022	2021	2020
Charity investment [1]	HK$ million	**5.8**	6.1	7.0	–	–
Employees participating in Volunteering services	Number	**14,322**	10,765	13,379	12,923	11,176
Volunteer service hours	Hours	**212,090**	440,607	584,329	578,586	714,300
Beneficiaries	Number	**74,316**	–	–	–	–

Note:

1) Reporting scope includes mainland utilities only.

Appendix I: Key Statistics

Environmental

	Unit	2024	2023	2022	2021	2020
Energy Consumption [1)]						
Natural gas	GJ	**856,654**	1,464,808	1,194,172	903,818	473,302
Unleaded petrol	GJ	**99,929**	101,550	107,095	110,901	101,924
Diesel	GJ	**74,420**	87,806	98,121	107,864	85,499
LPG	GJ	**15[2)]**	39,009	55,220	54,105	54,105
Others	GJ	**4,183,612**	3,821,540	5,233,363	10,973,756	10,410,330
Electricity	GJ	**2,784,814**	2,611,937	2,822,163	2,876,782	2,726,131
Total energy consumption	GJ	**7,999,444**	8,126,750	9,510,134	15,027,226	13.851,261
Water Withdrawal/Discharge						
Water withdrawal – from municipal water supplies	Million m^3	**4.8**	4.5	4.6	5.1	5.2
Water withdrawal – from fresh surface water [3)]	Million m^3	**505**	472	469	459	428
Wastewater discharged – to sewage [4)]	Million m^3	**1.7**	1.6	1.2	1.2	1.2
Waste Management [5)]						
Hazardous waste [4)]	Tonnes	**1,867**	3,929	2,185	2,441	1,084
Non-hazardous waste	Tonnes	**282,530**	280,820	368,734	359,085	294,114
Air Emissions [6)]						
Nitrogen oxides (NO_x)	Tonnes	**157.4**	184.0	175.9	190.0	223.7
Sulphur dioxides (SO_x)	Tonnes	**105.1**	89.0	133.6	256.6	258.0
Respirable suspended particulates (PM_{10})	Tonnes	**15.1**	2.6	4.6	2.6	2.3
Packaging Material Use [7)]						
Total packaging	Tonnes	**1,186**	–	–	–	–
Weight intensity	kg/piece	**1.8**	–	–	–	–

Note:

1) The categorisation of energy consumption has been revised, historical numbers are restated accordingly.

2) The Group has transitioned away from using LPG.

3) From water projects.

4) All hazardous waste and wastewater discharged – to sewage handling procedures comply with the national regulations.

5) Solid and liquid waste have been combined.

6) From fuel combustion and vehicle emissions.

7) Reporting scope includes gas-related business only.

Scope 3 Emissions Reporting Methodology

The total scope 3 carbon emissions in 2024 were 24,635,000 tCO_2e, with most significant source comes from Category 11 – use of sold products, as categorised by the Greenhouse Gas Protocol. These emissions accounts for over 80% of our value chain emissions. The table below outlines the calculation methodologies for Scope 3.

Category	Methodology & Activity Data	Emission Factor
1. Purchased goods and services	**Average-data** (product related) Quantities of purchased fuel and water from internal system. **Spend-based** (non-product related) Annual spend data from internal system.	• Australian Government "National Greenhouse Accounts Factors 2024" • Hong Kong Water Supplies Department Annual Report 2022-2023 • US Environmental Protection Agency Supply Chain Greenhouse Gas Emission Factors v1.3
2. Capital goods	**Spend-based** Annual spend data from internal system.	• US Environmental Protection Agency Supply Chain Greenhouse Gas Emission Factors v1.3
3. Fuel- and energy related activities	**Average-data** Quantities of consumed fuels and electricity consumed in production process from the internal system.	• Australian Government "National Greenhouse Accounts Factors 2024"
4. Upstream transportation and distribution	**Distance-based** Quantities, types of gas appliances procured and regional split of purchase from the internal system.	• US Environmental Protection Agency "2025 GHG Emission Factors Hub"
5. Waste generated in operations	**Waste-type-specific** Quantities of waste generated during operation by type from internal system.	• US Environmental Protection Agency "2025 GHG Emission Factors Hub" • Hong Kong Drainage Services Department Sustainability Report 2022-2024
6. Business travel	**Distance-based** Air travel data collected from corporate travel service providers.	• US Environmental Protection Agency "2025 GHG Emission Factors Hub"
7. Employee commuting	**Distance-based** Number of employees from internal system with estimated travel mode and average distance travelled.	• City University of Hong Kong "Carbon Audit Guidelines"
8. Upstream leased assets	Exclusion – Emissions of leased offices are included in scope 2 emissions. No other operation of leased assets.	

Appendix I: Key Statistics

Category	Methodology & Activity Data	Emission Factor
9. Downstream transportation and distribution	**Distance-based** Annual revenue data of sold gas appliances and energy products (where applicable) from internal system with estimated travel mode and distance travelled.	• US Environmental Protection Agency "2025 GHG Emission Factors Hub"
10. Processing of sold products	Exclusion – Major products are end products which processing is not required.	
11. Use of sold products	**Average-data (gas and methanol)** Quantities and types of products sold from internal system. **Spend-based (others)** Annual revenue data from sales of products from internal system.	• 2006 IPCC Guidelines for National Greenhouse Gas Inventories
12. End-of-life treatment of sold products	**Average-data** Data of sold gas appliances and water sales collected from internal system. For energy products, no end-of-life treatment is required.	• US Environmental Protection Agency "2025 GHG Emission Factors Hub" • Australian Government "National Greenhouse Accounts Factors 2024"
13. Downstream leased assets	Exclusion – Leasing business is minimal/negligible.	
14. Franchises	Exclusion – Franchise business is is minimal/negligible.	
15. Investments	Exclusion – Data not available.	

Appendix II: Indices for the Report

Hong Kong Stock Exchange ESG Reporting Guide Content Index

This report complies with the mandatory disclosure requirements and the "comply or explain" provisions outlined in the ESG Reporting Guide of The Stock Exchange of Hong Kong Limited. Please refer to the table below for detailed information, as well as additional resources available on the Towngas corporate website, and in the Annual Report 2024, the ESG Report 2024, and the Climate-Related and Nature-Related Directive Guide.

Mandatory Disclosure Requirements		Location in the ESG Report 2024	Other References
Governance Structure	A statement from the board containing the following elements: (i) a disclosure of the board's oversight of ESG issues; (ii) the board's ESG management approach and strategy, including the process used to evaluate, prioritise and manage material ESG-related issues (including risks to the issuer's businesses); and (iii) how the board reviews progress made against ESG-related goals and targets with an explanation of how they relate to the issuer's businesses.	P. 3 Board Statement P. 30 Resilient Governance – Foundation for Collaborative Development – Management Approach P. 31-33 Professional Training and Risk Governance	Governance Structure
Reporting Principles – Materiality	The ESG report should disclose: (i) The process to identify and the criteria for the selection of material ESG factors; (ii) if a stakeholder engagement is conducted, a description of significant stakeholders identified, and the process and results of the issuer's stakeholder engagement.	P. 50-55 Stakeholders Engagement	Stakeholder Engagement
Reporting Principles – Quantitative	Information on the standards, methodologies, assumptions and/or calculation tools used, and source of conversion factors used, for the reporting of emissions/energy consumption. (where applicable)	P. 106-107 Carbon Footprint P. 153, 160, 166-168 Key Statistics	–
Reporting Principles – Consistency	The issuer should disclose in the ESG report any changes to the methods or KPIs used, or any other relevant factors affecting a meaningful comparison.	P. 2 About This Report	–
Reporting Boundary	A narrative explaining the reporting boundaries of the ESG report and describing the process used to identify which entities or operations are included in the ESG report. If there is a change in the scope, the issuer should explain the difference and reason for the change.	P. 2 Reporting Scope and Boundary	–

Appendix II: Indices for the Report
Hong Kong Stock Exchange ESG Reporting Guide Content Index

Subject Areas, Aspects, General Disclosures and KPIs		Location in the ESG Report 2024	Other References
A. Environmental			
A1: Emissions			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.	P. 98 Towards Carbon Neutral – Composing a New Chapter in Green Initiatives – Management Approach P. 100 Climate Change Management	Carbon Neutrality Air Emissions Resources Management Climate Change Policy Environmental Policy
KPI A1.1	The types of emissions and respective emissions data.	P. 153, 159-160, 166 Key Statistics	–
KPI A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P. 106 Targets and Metrics P. 153 Key Statistics	–
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P. 159, 166 Key Statistics	–
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	P. 159, 166 Key Statistics	–
KPI A1.5	Description of emission target(s) set and steps taken to achieve them.	P. 98-125 Towards Carbon Neutral – Composing a New Chapter in Green Initiatives	–
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	P. 121-122 Waste Management	Resources Management
A2: Use of Resources			
General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	P. 98 Towards Carbon Neutral – Composing a New Chapter in Green Initiatives – Management Approach	Environmental Policy Resources Management
KPI A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	P. 120 This Year's Energy Consumption Data P. 159, 166 Key Statistics	–
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	P. 120 Water Resource Management P. 159, 160 Key Statistics	–
KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	P. 109-114 Carbon Reduction Initiatives P. 120 Natural Resource and Environmental Management	–
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	P. 120-121 Water Resource Management	–
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	P. 160, 166 Key Statistics	–

Subject Areas, Aspects, General Disclosures and KPIs		Location in the ESG Report 2024	Other References
A3: The Environment and Natural Resources			
General Disclosure	Policies on minimising the issuer's significant impacts on the environment and natural resources.	P. 98 Towards Carbon Neutral – Composing a New Chapter in Green Initiatives – Management Approach P. 123 Protecting Biodiversity Ecosystems	Biodiversity Environmental Management Resources Management Environmental Policy
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	P. 119-121 Natural Resource and Environmental Management P. 123-125 Protecting Biodiversity and Ecological Resources	Resources Management
A4: Climate Change			
General Disclosure	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	P. 98 Towards Carbon Neutral – Composing a New Chapter in Green Initiatives – Management Approach	Climate Change Policy
KPI A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	P. 100-105 Climate Change Management P. 109-114 Carbon Reduction Initiatives P. 115-119 Promoting Low-Carbon Development with Stakeholders	Climate-Related and Nature-Related Directive Guide Climate Change Management Carbon Neutrality
B. Social			
B1: Employment			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	P. 58 People Centric – Co-Creating a Sustainable Future – Management Approach	Employee Policy Human Rights Policy Anti-Discrimination Policy Employee Engagement
KPI B1.1	Total workforce by gender, employment type (for example, full- or part-time), age group and geographical region.	P. 154, 161 Key Statistics	–
KPI B1.2	Employee turnover rate by gender, age group and geographical region.		

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Subject Areas, Aspects, General Disclosures and KPIs		Location in the ESG Report 2024	Other References
B2: Health and Safety			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	P. 58 People Centric – Co-Creating a Sustainable Future – Management Approach	Health and Safety Policy Health and Safety
KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	P. 157, 164 Key Statistics	–
KPI B2.2	Lost days due to work injury.	P. 157, 164 Key Statistics	–
KPI B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	P. 61-65 Occupational Health and Safety	Health and Safety
B3: Development and Training			
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	P. 73-79 Creating a Harmonious Workplace	Employee Policy Employee Engagement
KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	P. 155, 162-163 Key Statistics	–
KPI B3.2	The average training hours completed per employee by gender and employee category.	P. 73 Training and Development P. 155, 162-163 Key Statistics	–
B4: Labour Standards			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	P. 43-45 Business Ethics P. 58 People Centric – Co-Creating a Sustainable Future – Management Approach	Human Rights Policy Employee Engagement
KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	P. 43-45 Business Ethics	Employee Engagement
KPI B4.2	Description of steps taken to eliminate such practices when discovered.	P. 43-45 Business Ethics	Employee Engagement

Subject Areas, Aspects, General Disclosures and KPIs		Location in the ESG Report 2024	Other References
B5: Supply Chain Management			
General Disclosure	Policies on managing environmental and social risks of the supply chain.	P. 136 Stakeholders Partnership – Enhancing Value Chain Resilience – Management Approach	Code of Practices for Suppliers Sustainable Purchasing Policy
KPI B5.1	Number of suppliers by geographical region.	P. 136 Supply Chain Management P. 158, 165 Key Statistics	–
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	P. 136-139 Supply Chain Management	Supply Chain Management
KPI B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	P. 136-139 Supply Chain Management	
KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	P. 136-139 Supply Chain Management	
B6: Product Responsibility			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	P. 44-45 Business Ethics P. 145 Exemplary Service with Courtesy and Integrity	Health and Safety Customer Experience Health and Safety Policy Customers Services Code of Conduct Policy Personal Data Privacy Policy Information Security Policy Security Policy

Appendix II: Indices for the Report
Hong Kong Stock Exchange ESG Reporting Guide Content Index

Subject Areas, Aspects, General Disclosures and KPIs		Location in the ESG Report 2024	Other References
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	P. 158, 165 Key Statistics	–
KPI B6.2	Number of products and service related complaints received and how they are dealt with.	P. 145-147 Exemplary Service with Courtesy and Integrity P. 158, 165 Key Statistics	Customer Experience
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	P. 47 Intellectual Property Protection	Business Integrity Code of Conduct
KPI B6.4	Description of quality assurance process and recall procedures.	P. 145 Quality Customer Services	Customer Experience
KPI B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	P. 45-46 Data Privacy and Cyber Security	Data Privacy and Cyber Security Personal Data Privacy Policy Information Security Policy
B7: Anti-corruption			
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	P. 43-45 Business Ethics	Business Integrity Anti-Fraud Policy Code of Conduct
KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	P. 44-45 Legal Compliance	–
KPI B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	P. 43-45 Business Ethics	Business Integrity Whistleblowing Policy
KPI B7.3	Description of anti-corruption training provided to directors and staff.	P. 43-45 Business Ethics	Business Integrity
B8: Community Investment			
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	P. 58 People Centric – Co-Creating a Sustainable Future – Management Approach	Community Engagement Social Investment Policy
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	P. 80-85 Building a Caring Community	–
KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	P. 80-85 Building a Caring Community P. 158, 165 Key Statistics	–

Appendix II: Indices for the Report

IFRS S1 General Requirements for the Disclosure of Sustainability-related Financial Information Content Index

This content index is based on the International Sustainability Standards Board (ISSB)'s IFRS S1 General Requirements for the Disclosure of Sustainability-related Financial Information, released in June 2023. Please refer to the table below for detailed information, and consult the related resources available on the Towngas corporate website, as well as in the Annual Report 2024, the ESG Report 2024, and the Climate-Related and Nature-Related Directive Guide.

Reference Paragraph	IFRS Core Content	References/Explanation: Location in the ESG Report 2024	References/Explanation: Other References
Governance			
26	The objective of sustainability-related financial disclosures on governance is to enable users of general purpose financial reports to understand the governance processes, controls and procedures an entity uses to monitor, manage and oversee sustainability-related risks and opportunities.		
27	To achieve this objective, an entity shall disclose information about:		
	(a) the governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of sustainability-related risks and opportunities. Specifically, the entity shall identify that body(s) or individual(s) and disclose information about:		
	(i) how responsibilities for sustainability-related risks and opportunities are reflected in the terms of reference, mandates, role descriptions and other related policies applicable to that body(s) or individual(s);	P. 31-33 Professional Training and Risk Governance P. 98-99 Environmental Management Policies	P. 8-11 Climate-Related and Nature-Related Directive Guide Corporate Governance Governance Structure Terms of Reference of Board ESG Committee
	(ii) how the body(s) or individual(s) determines whether appropriate skills and competencies are available or will be developed to oversee strategies designed to respond to sustainability-related risks and opportunities;	P. 31-33 Professional Training and Risk Governance	P. 8-11 Climate-Related and Nature-Related Directive Guide Corporate Governance Governance Structure Terms of Reference of Remuneration Committee Terms of Reference of Board ESG Committee
	(iii) how and how often the body(s) or individual(s) is informed about sustainability-related risks and opportunities;		
	(iv) how the body(s) or individual(s) takes into account sustainability-related risks and opportunities when overseeing the entity's strategy, its decisions on major transactions and its risk management processes and related policies, including whether the body(s) or individual(s) has considered trade-offs associated with those risks and opportunities; and	P. 34-42 Risk Management	
	(v) how the body(s) or individual(s) oversees the setting of targets related to sustainability-related risks and opportunities, and monitors progress towards those targets (see paragraph 51), including whether and how related performance metrics are included in remuneration policies.	P. 31-33 Professional Training and Risk Governance	

Appendix II: Indices for the Report

IFRS S1 General Requirements for the Disclosure of Sustainability-related Financial Information Content Index

Reference Paragraph	IFRS Core Content	References/Explanation: Location in the ESG Report 2024	References/Explanation: Other References
	(b) management's role in the governance processes, controls and procedures used to monitor, manage and oversee sustainability-related risks and opportunities, including information about:		
	(i) whether the role is delegated to a specific management-level position or management-level committee and how oversight is exercised over that position or committee; and	P. 31-33 ESG Governance P. 99 Environmental Management Policies	P. 8-11 Climate-Related and Nature-Related Directive Guide Corporate Governance Governance Structure Double Materiality Assessment Terms of Reference of Board ESG Committee Stakeholder Engagement Risk Management Risk Management Framework
	(ii) whether management uses controls and procedures to support the oversight of sustainability-related risks and opportunities and, if so, how these controls and procedures are integrated with other internal functions.	P. 34-35 Risk Management	
Strategy			
28	The objective of sustainability-related financial disclosures on strategy is to enable users of general purpose financial reports to understand an entity's strategy for managing sustainability-related risks and opportunities.		
29	Specifically, an entity shall disclose information to enable users of general purpose financial reports to understand:		
	(a) the sustainability-related risks and opportunities that could reasonably be expected to affect the entity's prospects (see paragraphs 30-31);	P. 35-42 Risk Identification and Mitigation P. 100-105 Climate Change Management	P. 12-25 Climate-Related and Nature-Related Directive Guide Climate Change Management Risk Management Risk Management Framework
	(b) the current and anticipated effects of those sustainability-related risks and opportunities on the entity's business model and value chain (see paragraph 32);		
	(c) the effects of those sustainability-related risks and opportunities on the entity's strategy and decision-making (see paragraph 33);		
	(d) the effects of those sustainability-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period, and their anticipated effects on the entity's financial position, financial performance and cash flows over the short, medium and long-term, taking into consideration how those sustainability-related risks and opportunities have been factored into the entity's financial planning (see paragraphs 34-40); and	P. 100-105 Climate Change Management	
	(e) the resilience of the entity's strategy and its business model to those sustainability-related risks (see paragraphs 41-42).	P. 35-42 Risk Identification and Mitigation P. 100-105 Climate Change Management	

Reference Paragraph	IFRS Core Content	References/Explanation: Location in the ESG Report 2024	References/Explanation: Other References
Sustainability-related risks and opportunities			
30	An entity shall disclose information that enables users of general purpose financial reports to understand the sustainability-related risks and opportunities that could reasonably be expected to affect the entity's prospects. Specifically, the entity shall:		
	(a) describe sustainability-related risks and opportunities that could reasonably be expected to affect the entity's prospects;	P. 35-42 Risk Identification and Mitigation P. 100-105 Climate Change Management	P. 12-25 Climate-Related and Nature-Related Directive Guide
	(b) specify the time horizons – short, medium or long-term – over which the effects of each of those sustainability-related risks and opportunities could reasonably be expected to occur; and		
	(c) explain how the entity defines 'short-term', 'medium-term' and 'long-term' and how these definitions are linked to the planning horizons used by the entity for strategic decision-making.		
31	Short-, medium- and long- term time horizons can vary between entities and depend on many factors, including industry-specific characteristics, such as cash flow, investment and business cycles, the planning horizons typically used in an entity's industry for strategic decision-making and capital allocation plans, and the time horizons over which users of general purpose financial reports conduct their assessments of entities in that industry.		
Business model and value chain			
32	An entity shall disclose information that enables users of general purpose financial reports to understand the current and anticipated effects of sustainability-related risks and opportunities on the entity's business model and value chain. Specifically, the entity shall disclose:		
	(a) a description of the current and anticipated effects of sustainability-related risks and opportunities on the entity's business model and value chain; and	P. 35-42 Risk Identification and Mitigation P. 100-105 Climate Change Management	P. 12-25 Climate-Related and Nature-Related Directive Guide Climate Change Management
	(b) a description of where in the entity's business model and value chain sustainability-related risks and opportunities are concentrated (for example, geographical areas, facilities and types of assets).		
Strategy and decision-making			
33	An entity shall disclose information that enables users of general purpose financial reports to understand the effects of sustainability-related risks and opportunities on its strategy and decision-making. Specifically, the entity shall disclose information about:		
	(a) how the entity has responded to, and plans to respond to, sustainability-related risks and opportunities in its strategy and decision-making;	P. 35-42 Risk Identification and Mitigation P. 100-104 Climate Change Management	P. 26-29 Climate-Related and Nature-Related Directive Guide Climate Change Management Risk Management Risk Management Framework
	(b) the progress against plans the entity has disclosed in previous reporting periods, including quantitative and qualitative information; and	P. 101 Identifying, Assessing, and Managing Climate-related Risks	
	(c) trade-offs between sustainability-related risks and opportunities that the entity considered (for example, in making a decision on the location of new operations, an entity might have considered the environmental impacts of those operations and the employment opportunities they would create in a community).	P. 26-27 Supporting the United Nations Sustainable Development Goals P. 35-42 Risk Identification and Mitigation P. 101-104 Climate Risk Management	–

Appendix II: Indices for the Report

IFRS S1 General Requirements for the Disclosure of Sustainability-related Financial Information Content Index

Reference Paragraph	IFRS Core Content	References/Explanation: Location in the ESG Report 2024	References/Explanation: Other References
Financial position, financial performance and cash flows			
34	An entity shall disclose information that enables users of general purpose financial reports to understand:		
	(a) the effects of sustainability-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period (current financial effects); and	P. 8-9 Business Overview P. 10-11 Green and Sustainable Finance P. 35-42 Risk Identification and Mitigation P. 101-104 Climate Risk Management P.152 Key Statistics	P. 25 Climate-Related and Nature-Related Directive Guide Green and Sustainable Finance
	(b) the anticipated effects of sustainability-related risks and opportunities on the entity's financial position, financial performance and cash flows over the short, medium and long-term, taking into consideration how sustainability-related risks and opportunities are included in the entity's financial planning (anticipated financial effects).	P. 35-42 Risk Identification and Mitigation P. 101-104 Climate Risk Management	
35	Specifically, an entity shall disclose quantitative and qualitative information about:		
	(a) how sustainability-related risks and opportunities have affected its financial position, financial performance and cash flows for the reporting period;	P. 35-42 Risk Identification and Mitigation P. 101-104 Climate Risk Management	P. 25 Climate-Related and Nature-Related Directive Guide
	(b) the sustainability-related risks and opportunities identified in paragraph 35(a) for which there is a significant risk of a material adjustment within the next annual reporting period to the carrying amounts of assets and liabilities reported in the related financial statements;	Towngas is preparing for future disclosure.	
	(c) how the entity expects its financial position to change over the short, medium and long-term, given its strategy to manage sustainability-related risks and opportunities, taking into consideration:		
	(i) its investment and disposal plans (for example, plans for capital expenditure, major acquisitions and investments, joint ventures, business transformation, innovation, new business areas, and asset retirements), including plans the entity is not contractually committed to; and	P. 10-11 Green and Sustainable Finance P. 109-114 Carbon Reduction Initiatives P. 130-133 Case Study: TERA-Award Smart Energy Innovation Competition	P. 28-29 Climate-Related and Nature-Related Directive Guide A Culture of Innovation – Innovation Funding Business Innovation Energy Transition Green and Sustainable Finance
	(ii) its planned sources of funding to implement its strategy;		
	(d) how the entity expects its financial performance and cash flows to change over the short, medium and long-term, given its strategy to manage sustainability-related risks and opportunities.	P.35-42 Risk Identification and Mitigation P.101-104 Climate Risk Management	Climate Change Management

Reference Paragraph	IFRS Core Content	References/Explanation: Location in the ESG Report 2024	References/Explanation: Other References
36	In providing quantitative information, an entity may disclose a single amount or a range.	P. 105 Financial Impact Assessment	P. 25, 28-29 Climate-Related and Nature-related Directive Guide
37	In preparing disclosures about the anticipated financial effects of a sustainability-related risk or opportunity, an entity shall:		
	(a) use all reasonable and supportable information that is available to the entity at the reporting date without undue cost or effort (see paragraphs B8–B10); and	P. 10-11 Green and Sustainable Finance P. 100-101 Climate Change Management	P. 25, 28-29 Climate-Related and Nature-Related Directive Guide Green and Sustainable Finance
	(b) use an approach that is commensurate with the skills, capabilities and resources that are available to the entity for preparing those disclosures.		
38	An entity need not provide quantitative information about the current or anticipated financial effects of a sustainability-related risk or opportunity if the entity determines that:		
	(a) those effects are not separately identifiable; or		
	(b) the level of measurement uncertainty involved in estimating those effects is so high that the resulting quantitative information would not be useful (see paragraphs 77-82).		
39	In addition, an entity need not provide quantitative information about the anticipated financial effects of a sustainability-related risk or opportunity if the entity does not have the skills, capabilities or resources to provide that quantitative information.		
40	If an entity determines that it need not provide quantitative information about the current or anticipated financial effects of a sustainability-related risk or opportunity applying the criteria set out in paragraphs 38-39, the entity shall:		
	(a) explain why it has not provided quantitative information;		
	(b) provide qualitative information about those financial effects, including identifying line items, totals and subtotals within the related financial statements that are likely to be affected, or have been affected, by that sustainability-related risk or opportunity; and		
	(c) provide quantitative information about the combined financial effects of that sustainability-related risk or opportunity with other sustainability-related risks or opportunities and other factors unless the entity determines that quantitative information about the combined financial effects would not be useful.		
Resilience			
41	An entity shall disclose information that enables users of general purpose financial reports to understand its capacity to adjust to the uncertainties arising from sustainability-related risks. An entity shall disclose a qualitative and, if applicable, quantitative assessment of the resilience of its strategy and business model in relation to its sustainability-related risks, including information about how the assessment was carried out and its time horizon. When providing quantitative information, an entity may disclose a single amount or a range.	P. 34-42 Risk Management P. 50-55 Stakeholder Engagement P. 100-105 Climate Change Management	P. 12-25 Climate-Related and Nature-Related Directive Guide Climate Change Management Risk Management Risk Management Framework

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IFRS S1 General Requirements for the Disclosure of Sustainability-related Financial Information Content Index

Reference Paragraph	IFRS Core Content	References/Explanation: Location in the ESG Report 2024	References/Explanation: Other References
42	Other IFRS Sustainability Disclosure Standards may specify the type of information an entity is required to disclose about its resilience to specific sustainability-related risks and how to prepare those disclosures, including whether a scenario analysis is required.		
Risk management			
43	The objective of sustainability-related financial disclosures on risk management is to enable users of general purpose financial reports:		
	(a) to understand an entity's processes to identify, assess, prioritise and monitor sustainability-related risks and opportunities, including whether and how those processes are integrated into and inform the entity's overall risk management process; and (b) to assess the entity's overall risk profile and its overall risk management process.	P. 34-42 Risk Management P. 50-55 Stakeholder Engagement P. 100-105 Climate Change Management	P. 12-25 Climate-Related and Nature-Related Directive Guide Double Materiality Assessment Risk Management Risk Management Framework Stakeholder Engagement
44	To achieve this objective, an entity shall disclose information about:		
	(a) the processes and related policies the entity uses to identify, assess, prioritise and monitor sustainability-related risks, including information about:		
	(i) the inputs and parametres the entity uses (for example, information about data sources and the scope of operations covered in the processes);	P. 8 Group Introduction P. 50-55 Stakeholder Engagement P. 100-105 Climate Change Management	P. 12-17 Climate-Related and Nature-Related Directive Guide Climate Change Management Corporate Governance Governance Structure Double Materiality Assessment Risk Management Risk Management Framework
	(ii) whether and how the entity uses scenario analysis to inform its identification of sustainability related risks;	P. 100-105 Climate Change Management	
	(iii) how the entity assesses the nature, likelihood and magnitude of the effects of those risks;	P. 35-42 Risk Identification and Mitigation	
	(iv) whether and how the entity prioritises sustainability-related risks relative to other types of risk (for example, whether the entity considers quantitative factors, quantitative thresholds or other criteria);	P. 50-55 Stakeholder Engagement P. 100-105 Climate Change Management	
	(v) how the entity monitors sustainability-related risks; and	P. 31-33 Professional Training and Risk Governance P. 34-35 Risk Management P. 98-99 Environmental Management Policies	
	(vi) whether and how the entity has changed the processes it uses compared with the previous reporting period;	Towngas did not make changes to the processes.	
	(b) the processes the entity uses to identify, assess, prioritise and monitor sustainability-related opportunities; and (c) the extent to which, and how, the processes for identifying, assessing, prioritising and monitoring sustainability-related risks and opportunities are integrated into and inform the entity's overall risk management process.	P. 34-42 Risk Management P. 50-55 Stakeholder Engagement P. 100-105 Climate Change Management	Climate Change Management P. 12-25 Climate-Related and Nature-Related Directive Guide Double Materiality Assessment Risk Management Risk Management Framework
Metrics and targets			
45	The objective of sustainability-related financial disclosures on metrics and targets is to enable users of general purpose financial reports to understand an entity's performance in relation to its sustainability-related risks and opportunities, including progress towards any targets the entity has set, and any targets it is required to meet by law or regulation.		
46	An entity shall disclose, for each sustainability-related risk and opportunity that could reasonably be expected to affect the entity's prospects:		
	(a) metrics required by an applicable IFRS Sustainability Disclosure Standard; and	P. 2 Editorial Guidelines	P. 27 Climate-Related and Nature-Related Directive Guide Carbon Neutrality Climate Change Management
	(b) metrics the entity uses to measure and monitor: (i) that sustainability-related risk or opportunity; and (ii) its performance in relation to that sustainability-related risk or opportunity, including progress forwards any targets the entity has set, and any targets it is required to meet by law or regulation.	P. 10-11 Green and Sustainable Finance P. 26-27 Supporting the United Nations Sustainable Development Goals P. 97-113 Towards Carbon Neutral – Composing a New Chapter in Green Initiatives	
47	In the absence of an IFRS Sustainability Disclosure Standard that specifically applies to a sustainability-related risk or opportunity, an entity shall apply paragraphs 57-58 to identify applicable metrics.		
48	Metrics disclosed by an entity applying paragraphs 45-46 shall include metrics associated with particular business models, activities or other common features that characterise participation in an industry.	P. 2 Editorial Guideline P. 10-11 Green and Sustainable Finance P. 152-166 Key Statistics	Carbon Neutrality
49	If an entity discloses a metric taken from a source other than IFRS Sustainability Disclosure Standards, the entity shall identify the source and the metric taken.		

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IFRS S1 General Requirements for the Disclosure of Sustainability-related Financial Information Content Index

Reference Paragraph	IFRS Core Content	References/Explanation: Location in the ESG Report 2024	References/Explanation: Other References
50	If a metric has been developed by an entity, the entity shall disclose information about:		
	(a) how the metric is defined, including whether it is derived by adjusting a metric taken from a source other than IFRS Sustainability Disclosure Standards and, if so, which source and how the metric disclosed by the entity differs from the metric specified in that source;		
	(b) whether the metric is an absolute measure, a measure expressed in relation to another metric or a qualitative measure (such as a red, amber, green—or RAG—status);		
	(c) whether the metric is validated by a third party and, if so, which party; and		
	(d) the method used to calculate the metric and the inputs to the calculation, including the limitations of the method used and the significant assumptions made.		
51	An entity shall disclose information about the targets it has set to monitor progress towards achieving its strategic goals, and any targets it is required to meet by law or regulation. For each target, the entity shall disclose:		
	(a) the metric used to set the target and to monitor progress towards reaching the target;	P. 100-104 Climate Charge Management	Carbon Neutrality
	(b) the specific quantitative or qualitative target the entity has set or is required to meet;		
	(c) the period over which the target applies;		
	(d) the base period from which progress is measured;		
	(e) any milestones and interim targets;		
	(f) performance against each target and an analysis of trends or changes in the entity's performance; and		
	(g) any revisions to the target and an explanation for those revisions.		
52	The definition and calculation of metrics, including metrics used to set the entity's targets and monitor progress towards reaching them, shall be consistent over time. If a metric is redefined or replaced, an entity shall apply paragraph B52.		
53	An entity shall label and define metrics and targets using meaningful, clear and precise names and descriptions.		

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IFRS S2 Climate-Related Disclosures Content Index

This content index is based on the International Sustainability Standards Board (ISSB)'s IFRS S2 Climate-Related Disclosures, released in June 2023. Please refer to the table below for detailed information, and consult the related resources available on the Towngas corporate website, as well as in the Annual Report 2024, the ESG Report 2024, and the Climate-Related and Nature-Related Directive Guide.

Reference Paragraph	IFRS Core Content	References/Explanation: Location in the ESG Report 2024	References/Explanation: Other References
Governance			
5	The objective of Climate-Related financial disclosures on governance is to enable users of general purpose financial reports to understand the governance processes, controls and procedures an entity uses to monitor, manage and oversee Climate-Related risks and opportunities.		
6	To achieve this objective, an entity shall disclose information about:		
	(a) the governance body(s) (which can include a board, committee or equivalent body charged with governance) or individual(s) responsible for oversight of Climate-Related risks and opportunities. Specifically, the entity shall identify that body(s) or individual(s) and disclose information about:		
	(i) how responsibilities for Climate-Related risks and opportunities are reflected in the terms of reference, mandates, role descriptions and other related policies applicable to that body(s) or individual(s);	P. 31-33 Professional Training and Risk Governance P. 98-99 Environmental Management Policies	P. 8-11 Climate-Related and Nature-related Directive Guide Corporate Governance Governance Structure Terms of Reference of Board ESG Committee
	(ii) how the body(s) or individual(s) determines whether appropriate skills and competencies are available or will be developed to oversee strategies designed to respond to Climate-Related risks and opportunities;	P. 31-33 Professional Training and Risk Governance	
	(iii) how and how often the body(s) or individual(s) is informed about Climate-Related risks and opportunities;	P. 31-33 Professional Training and Risk Governance	
	(iv) how the body(s) or individual(s) takes into account Climate-Related risks and opportunities when overseeing the entity's strategy, its decisions on major transactions and its risk management processes and related policies, including whether the body(s) or individual(s) has considered trade-offs associated with those risks and opportunities; and	P. 26-27 Supporting the United Nations Sustainable Development Goals P. 34-42 Risk Management P. 100-105 Climate Change Management	
	(v) how the body(s) or individual(s) oversees the setting of targets related to Climate-Related risks and opportunities, and monitors progress towards those targets (see paragraphs 33-36), including whether and how related performance metrics are included in remuneration policies (see paragraph 29(g)).	P. 31-33 Professional Training and Risk Governance	

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IFRS S2 Climate-related Disclosures Content Index

Reference Paragraph	IFRS Core Content	References/Explanation: Location of the ESG Report	References/Explanation: Other References
	(b) management's role in the governance processes, controls and procedures used to monitor, manage and oversee climate-related risks and opportunities, including information about:		
	(i) whether the role is delegated to a specific management-level position or management-level committee and how oversight is exercised over that position or committee; and	P. 31-33 Professional Training and Risk Governance P. 98-99 Environmental Management Policies	P. 8-11 Climate-Related and Nature-Related Directive Guide Corporate Governance Governance Structure Terms of Reference of Board ESG Committee
	(ii) whether management uses controls and procedures to support the oversight of climate-related risks and opportunities and, if so, how these controls and procedures are integrated with other internal functions.		
7	In preparing disclosures to fulfil the requirements in paragraph 6, an entity shall avoid unnecessary duplication in accordance with IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information (IFRS S1) (see paragraph B42(b) of IFRS S1). For example, although an entity shall provide the information required by paragraph 6, if oversight of sustainability-related risks and opportunities is managed on an integrated basis, the entity would avoid duplication by providing integrated governance disclosures instead of separate disclosures for each sustainability-related risk and opportunity.		
Strategy			
8	The objective of climate-related financial disclosures on strategy is to enable users of general purpose financial reports to understand an entity's strategy for managing climate-related risks and opportunities.		
9	Specifically, an entity shall disclose information to enable users of general purpose financial reports to understand:		
	(a) the climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects (see paragraphs 10-12);	P. 34-42 Risk Management P. 100-109 Climate Change Management	P. 12-25 Climate-Related and Nature-Related Directive Guide Risk Management Framework
	(b) the current and anticipated effects of those climate-related risks and opportunities on the entity's business model and value chain (see paragraph 13);	P. 100-105 Climate Change Management	
	(c) the effects of those climate-related risks and opportunities on the entity's strategy and decision-making, including information about its climate-related transition plan (see paragraph 14);		
	(d) the effects of those climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period, and their anticipated effects on the entity's financial position, financial performance and cash flows over the short, medium and long-term, taking into consideration how those climate-related risks and opportunities have been factored into the entity's financial planning (see paragraphs 15-21); and		
	(e) the climate resilience of the entity's strategy and its business model to climate-related changes, developments and uncertainties, taking into consideration the entity's identified climate-related risks and opportunities (see paragraph 22).	P. 100-109 Climate Change Management	P. 26-29 Climate-Related and Nature-Related Directive Guide

Reference Paragraph	IFRS Core Content	References/Explanation: Location of the ESG Report	References/Explanation: Other References
Climate-related risks and opportunities			
10	An entity shall disclose information that enables users of general purpose financial reports to understand the climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects. Specifically,the entity shall:		
	(a) describe climate-related risks and opportunities that could reasonably be expected to affect the entity's prospects;	P. 34-42 Risk Management P. 100-109 Climate Change Management	P. 12-25 Climate-Related and Nature-Related Directive Guide
	(b) explain, for each climate-related risk the entity has identified, whether the entity considers the risk to be a climate-related physical risk or climate-related transition risk;		
	(c) specify, for each climate-related risk and opportunity the entity has identified, over which time horizons—short, medium or long-term– the effects of each climate-related risk and opportunity could reasonably be expected to occur; and		
	(d) explain how the entity defines 'short-term', 'medium-term' and 'long-term' and how these definitions are linked to the planning horizons used by the entity for strategic decision-making.		
11	In identifying the climate-related risks and opportunities that could reasonably be expected to affect an entity's prospects, the entity shall use all reasonable and supportable information that is available to the entity at the reporting date without undue cost or effort, including information about past events, current conditions and forecasts of future conditions.		
12	In identifying the climate-related risks and opportunities that could reasonably be expected to affect an entity's prospects, the entity shall refer to and consider the applicability of the industry-based disclosure topics defined in the Industry-based Guidance on Implementing IFRS S2.		
Business model and value chain			
13	An entity shall disclose information that enables users of general purpose financial reports to understand the current and anticipated effects of climate-related risks and opportunities on the entity's business model and value chain. Specifically, the entity shall disclose:		
	(a) a description of the current and anticipated effects of climate-related risks and opportunities on the entity's business model and value chain; and	P. 34-42 Risk Management P. 100-109 Climate Change Management	P. 12-25 Climate-Related and Nature-Related Directive Guide
	(b) a description of where in the entity's business model and value chain climate-related risks and opportunities are concentrated (for example, geographical areas, facilities and types of assets).		

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IFRS S2 Climate-related Disclosures Content Index

Reference Paragraph	IFRS Core Content	References/Explanation: Location of the ESG Report	References/Explanation: Other References
Strategy and decision-making			
14	An entity shall disclose information that enables users of general purpose financial reports to understand the effects of climate-related risks and opportunities on its strategy and decision-making. Specifically, the entity shall disclose:		
	(a) information about how the entity has responded to, and plans to respond to, climate-related risks and opportunities in its strategy and decision-making, including how the entity plans to achieve any climate-related targets it has set and any targets it is required to meet by law or regulation. Specifically, the entity shall disclose information about:		
	(i) Current and anticipated changes to the entity's business model, including its resource allocation, to address climate-related risks and opportunities (for example, these changes could include plans to manage or decommission carbon-, energy- or water-intensive operations; resource allocations resulting from demand or supply-chain changes; resource allocations arising from business development through capital expenditure or additional expenditure on research and development; and acquisitions or divestments);	P. 100-109 Climate Change Management	P. 18-24 Climate-Related and Nature-Related Directive Guide Carbon Neutrality Climate Change Management Energy Transition
	(ii) current and anticipated direct mitigation and adaptation efforts (for example, through changes in production processes or equipment, relocation of facilities, workforce adjustments, and changes in product specifications);		
	(iii) current and anticipated indirect mitigation and adaptation efforts (for example, through working with customers and supply chains);		
	(iv) any climate-related transition plan the entity has, including information about key assumptions used in developing its transition plan, and dependencies on which the entity's transition plan relies; and		
	(v) how the entity plans to achieve any climate-related targets, including any greenhouse gas emissions targets, described in accordance with paragraphs 33-36.		
	(b) information about how the entity is resourcing, and plans to resource, the activities disclosed in accordance with paragraph 14(a).		
	(c) quantitative and qualitative information about the progress of plans disclosed in previous reporting periods in accordance with paragraph 14(a).		
Financial position, financial performance and cash flows			
15	An entity shall disclose information that enables users of general purpose financial reports to understand:		
	(a) the effects of climate-related risks and opportunities on the entity's financial position, financial performance and cash flows for the reporting period (current financial effects); and	P. 10-11 Green and Sustainable Finance P. 34-42 Risk Management P. 100-109 Climate Change Management	P. 25 Climate-Related and Nature-Related Directive Guide Green and Sustainable Finance
	(b) the anticipated effects of climate-related risks and opportunities on the entity's financial position, financial performance and cash flows over the short, medium and long-term, taking into consideration how climate-related risks and opportunities are included in the entity's financial planning (anticipated financial effects).	P. 34-42 Risk Management P. 100-109 Climate Change Management	–
16	Specifically, an entity shall disclose quantitative and qualitative information about:		
	(a) how climate-related risks and opportunities have affected its financial position, financial performance and cash flows for the reporting period;	P. 100-109 Climate Change Management	P. 25, 28-29 Climate-Related and Nature-Related Directive Guide
	(b) the climate-related risks and opportunities identified in paragraph 16(a) for which there is a significant risk of a material adjustment within the next annual reporting period to the carrying amounts of assets and liabilities reported in the related financial statements;	Towngas is preparing for future disclosure.	
	(c) how the entity expects its financial position to change over the short, medium and long-term, given its strategy to manage climate-related risks and opportunities, taking into consideration:		
	(i) its investment and disposal plans (for example, plans for capital expenditure, major acquisitions and divestments, joint ventures, business transformation, innovation, new business areas, and asset retirements), including plans the entity is not contractually committed to; and	P. 10-11 Green and Sustainable Finance P. 109-119 Carbon Reduction Initiatives P. 130-133 Case Study: TERA-Award Smart Energy Innovation Competition	P. 28-29 Climate-Related and Nature-Related Directive Guide A Culture of Innovation – Innovation Funding Business Innovation Energy Transition Green and Sustainable Finance
	(ii) its planned sources of funding to implement its strategy; and		
	(d) how the entity expects its financial performance and cash flows to change over the short, medium and long-term, given its strategy to manage climate-related risks and opportunities (for example, increased revenue from products and services aligned with a lower-carbon economy; costs arising from physical damage to assets from climate events; and expenses associated with climate adaptation or mitigation).	P. 100-109 Climate Change Management	–

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IFRS S2 Climate-related Disclosures Content Index

Reference Paragraph	IFRS Core Content	References/Explanation: Location of the ESG Report	References/Explanation: Other References
17	In providing quantitative information, an entity may disclose a single amount or a range.	P. 100-109 Climate Change Management	P. 25 Climate-Related and Nature-Related Directive Guide
18	In preparing disclosures about the anticipated financial effects of a climate-related risk or opportunity, an entity shall:		
	(a) use all reasonable and supportable information that is available to the entity at the reporting date without undue cost or effort; and	P. 100-109 Climate Change Management	P 12-25 Climate-Related and Nature-Related Directive Guide Climate Change Management
	(b) use an approach that is commensurate with the skills, capabilities and resources that are available to the entity for preparing those disclosures.		
19	An entity need not provide quantitative information about the current or anticipated financial effects of a climate-related risk or opportunity if the entity determines that:		
	(a) those effects are not separately identifiable; or		
	(b) the level of measurement uncertainty involved in estimating those effects is so high that the resulting quantitative information would not be useful.		
20	In addition, an entity need not provide quantitative information about the anticipated financial effects of a climate-related risk or opportunity if the entity does not have the skills, capabilities or resources to provide that quantitative information.		
21	If an entity determines that it need not provide quantitative information about the current or anticipated financial effects of a climate-related risk or opportunity applying the criteria set out in paragraphs 19-20, the entity shall:		
	(a) explain why it has not provided quantitative information;		
	(b) provide qualitative information about those financial effects, including identifying line items, totals and subtotals within the related financial statements that are likely to be affected, or have been affected, by that climate-related risk or opportunity; and		
	(c) provide quantitative information about the combined financial effects of that climate-related risk or opportunity with other climate-related risks or opportunities and other factors unless the entity determines that quantitative information about the combined financial effects would not be useful.		

Reference Paragraph	IFRS Core Content	References/Explanation: Location of the ESG Report	References/Explanation: Other References
Climate resilience			
22	An entity shall disclose information that enables users of general purpose financial reports to understand the resilience of the entity's strategy and business model to climate-related changes, developments and uncertainties, taking into consideration the entity's identified climate-related risks and opportunities. The entity shall use climate-related scenario analysis to assess its climate resilience using an approach that is commensurate with the entity's circumstances (see paragraphs B1–B18). In providing quantitative information, the entity may disclose a single amount or a range. Specifically, the entity shall disclose:		
	(a) the entity's assessment of its climate resilience as at the reporting date, which shall enable users of general purpose financial reports to understand:		
	(i) the implications, if any, of the entity's assessment for its strategy and business model, including how the entity would need to respond to the effects identified in the climate-related scenario analysis;	P. 100-109 Climate Change Management	P. 12-25 Climate-Related and Nature-Related Directive Guide Neutralising our Footprint
	(ii) the significant areas of uncertainty considered in the entity's assessment of its climate resilience;		
	(iii) the entity's capacity to adjust or adapt its strategy and business model to climate change over the short, medium and long-term, including		
	(1) the availability of, and flexibility in, the entity's existing financial resources to respond to the effects identified in the climate-related scenario analysis, including to address climate-related risks and to take advantage of climate-related opportunities;	P. 10-11 Green and Sustainable Finance	P. 28-29 Climate-Related and Nature-Related Directive Guide
	(2) the entity's ability to redeploy, repurpose, upgrade or decommission existing assets; and	P. 109-119 Carbon Reduction Initiatives	Energy Transition Health & Safety Network Safety
	(3) the effect of the entity's current and planned investments in climate-related mitigation, adaptation and opportunities for climate resilience; and	P. 100-109 Climate Change Management P. 130-133 Case Study: TERA-Award Smart Energy Innovation Competition	P. 25, 27-29, 50-57 Climate-Related and Nature-Related Directive Guide Business Innovation Green and Sustainable Finance
	(b) how and when the climate-related scenario analysis was carried out, including:		
	(i) information about the inputs the entity used, including:		
	(1) which climate-related scenarios the entity used for the analysis and the sources of those scenarios;	P. 100-109 Climate Change Management	P. 12-25 Climate-Related and Nature-Related Directive Guide
	(2) whether the analysis included a diverse range of climate-related scenarios;		
	(3) whether the climate-related scenarios used for the analysis are associated with climate-related transition risks or climate-related physical risks;		
	(4) whether the entity used, among its scenarios, a climate-related scenario aligned with the latest international agreement on climate change;		

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IFRS S2 Climate-related Disclosures Content Index

Reference Paragraph	IFRS Core Content	References/Explanation: Location of the ESG Report	References/Explanation: Other References
	(5) why the entity decided that its chosen climate-related scenarios are relevant to assessing its resilience to climate-related changes, developments or uncertainties;		
	(6) the time horizons the entity used in the analysis; and		
	(7) what scope of operations the entity used in the analysis (for example, the operating locations and business units used in the analysis);		
	(ii) the key assumptions the entity made in the analysis, including assumptions about:		
	(1) climate-related policies in the jurisdictions in which the entity operates;	P. 98 Towards Carbon Neutral – Composing a New Chapter in Green Initiatives – Management Approach	–
	(2) macroeconomic trends;	P. 4-5 Chairman's Statement P. 6-7 Managing Director's Statement	Double Materiality Assessment
	(3) national- or regional-level variables (for example, local weather patterns, demographics, land use, infrastructure and availability of natural resources);	P. 100-109 Climate Change Management	–
	(4) energy usage and mix; and	P. 119-122 Natural Resources and Environmental Management	P. 51 Climate-Related and Nature-Related Directive Guide
	(5) developments in technology; and	P. 109-119 Carbon Reduction Initiatives P. 130-133 Case Study: TERA-Award Smart Energy Innovation Competition	P. 52-57 Climate-Related and Nature-Related Directive Guide Business Innovation Energy Transition
	(iii) the reporting period in which the climate-related scenario analysis was carried out (see paragraph B18).	P. 100-109 Climate Change Management	P. 12-17 Climate-Related and Nature-Related Directive Guide
23	In preparing disclosures to meet the requirements in paragraphs 13-22, an entity shall refer to and consider the applicability of cross-industry metric categories, as described in paragraph 29, and industry-based metrics associated with disclosure topics defined in the Industry-based Guidance on Implementing IFRS S2 as described in paragraph 32.		

Reference Paragraph	IFRS Core Content	References/Explanation: Location of the ESG Report	References/Explanation: Other References
Risk management			
24	The objective of climate-related financial disclosures on risk management is to enable users of general purpose financial reports to understand an entity's processes to identify, assess, prioritise and monitor climate-related risks and opportunities, including whether and how those processes are integrated into and inform the entity's overall risk management process.		
25	To achieve this objective, an entity shall disclose information about:		
	(a) the processes and related policies the entity uses to identify, assess, prioritise and monitor climate-related risks, including information about:		
	(i) the inputs and parametres the entity uses (for example, information about data sources and the scope of operations covered in the processes);	P. 100-109 Climate Change Management	P. 12-17 Climate-Related and Nature-Related Directive Guide Climate Change Management Double Materiality Assessment Risk Management Risk Management Framework
	(ii) whether and how the entity uses climate-related scenario analysis to inform its identification of climate-related risks		
	(iii) how the entity assesses the nature, likelihood and magnitude of the effects of those risks (for example, whether the entity considers qualitative factors, quantitative thresholds or other criteria);	P. 34-42 Risk Management P. 100-109 Climate Change Management	
	(iv) whether and how the entity prioritises climate-related risks relative to other types of risk;		
	(v) how the entity monitors climate-related risks; and	P. 31-33 Professional Training and Risk Governance P. 100-109 Climate Change Management P. 109-119 Carbon Reduction Initiatives	P. 8-11 Climate-Related and Nature-Related Directive Guide Corporate Governance Governance Structure Terms of Reference of Board ESG Committee Health & Safety Network Safety
	(vi) whether and how the entity has changed the processes it uses compared with the previous reporting period;	Towngas did not make changes to the process.	

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IFRS S2 Climate-related Disclosures Content Index

Reference Paragraph	IFRS Core Content	References/Explanation: Location of the ESG Report	References/Explanation: Other References
	(b) the processes the entity uses to identify, assess, prioritise and monitor climate-related opportunities, including information about whether and how the entity uses climate-related scenario analysis to inform its identification of climate-related opportunities; and	P. 34-42 Risk Management P. 100-109 Climate Change Management	Climate Change Management P. 12-17 Climate-Related and Nature-Related Directive Guide Double Materiality Assessment Risk Management Risk Management Framework
	(c) the extent to which, and how, the processes for identifying, assessing, prioritising and monitoring climate-related risks and opportunities are integrated into and inform the entity's overall risk management process.		
26	In preparing disclosures to fulfil the requirements in paragraph 25, an entity shall avoid unnecessary duplication in accordance with IFRS S1 (see paragraph B42(b) of IFRS S1). For example, although an entity shall provide the information required by paragraph 25, if oversight of sustainability-related risks and opportunities is managed on an integrated basis, the entity would avoid duplication by providing integrated risk management disclosures instead of separate disclosures for each sustainability-related risk and opportunity.		
Metrics and targets			
27	The objective of climate-related financial disclosures on metrics and targets is to enable users of general purpose financial reports to understand an entity's performance in relation to its climate-related risks and opportunities, including progress towards any climate-related targets it has set, and any targets it is required to meet by law or regulation.		
28	To achieve this objective, an entity shall disclose:		
	(a) information relevant to the cross-industry metric categories (see paragraphs 29-31);	P. 96-125 Towards Carbon Neutral – Composing a New Chapter in Green Initiatives	–
	(b) industry-based metrics that are associated with particular business models, activities or other common features that characterise participation in an industry (see paragraph 32); and		
	(c) targets set by the entity, and any targets it is required to meet by law or regulation, to mitigate or adapt to climate-related risks or take advantage of climate-related opportunities, including metrics used by the governance body or management to measure progress towards these targets (see paragraphs 33-37).		
Climate-related metrics			
29	An entity shall disclose information relevant to the cross-industry metric categories of:		
	(a) greenhouse gases—the entity shall:		
	(i) disclose its absolute gross greenhouse gas emissions generated during the reporting period, expressed as metric tonnes of CO2 equivalent (see paragraphs B19–B22), classified as:		
	(1) Scope 1 greenhouse gas emissions;	P. 100-109 Climate Change Management P. 153 Key Statistics	–
	(2) Scope 2 greenhouse gas emissions; and		
	(3) Scope 3 greenhouse gas emissions;		
	(ii) measure its greenhouse gas emissions in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (2004) unless required by a jurisdictional authority or an exchange on which the entity is listed to use a different method for measuring its greenhouse gas emissions (see paragraphs B23–B25);	P. 100-109 Climate Change Management P. 153 Key Statistics P. 167 Scope 3 Emissions Reporting Methodology	–
	(iii) disclose the approach it uses to measure its greenhouse gas emissions (see paragraphs B26–B29) including:		
	(1) the measurement approach, inputs and assumptions the entity uses to measure its greenhouse gas emissions;	P. 100-109 Climate Change Management P. 153 Key Statistics P. 167 Scope 3 Emissions Reporting Methodology	–
	(2) the reason why the entity has chosen the measurement approach, inputs and assumptions it uses to measure its greenhouse gas emissions; and		
	(3) any changes the entity made to the measurement approach, inputs and assumptions during the reporting period and the reasons for those changes; Towngas did not make changes to the measurement approach.	Towngas did not make changes to the measurement approach.	
	(iv) for Scope 1 and Scope 2 greenhouse gas emissions disclosed in accordance with paragraph 29(a)(i)(1)–(2), disaggregate emissions between:		
	(1) the consolidated accounting group (for example, for an entity applying IFRS Accounting Standards, this group would comprise the parent and its consolidated subsidiaries); and	P. 100-109 Climate Change Management P. 153 Key Statistics	–
	(2) other investees excluded from paragraph 29(a)(iv)(1) (for example, for an entity applying IFRS Accounting Standards, these investees would include associates, joint ventures and unconsolidated subsidiaries);		
	(v) for Scope 2 greenhouse gas emissions disclosed in accordance with paragraph 29(a)(i)(2), disclose its location-based Scope 2 greenhouse gas emissions, and provide information about any contractual instruments that is necessary to inform users' understanding of the entity's Scope 2 greenhouse gas emissions (see paragraphs B30–B31); and	P. 100-109 Climate Change Management P. 153 Key Statistics	–
	(vi) for Scope 3 greenhouse gas emissions disclosed in accordance with paragraph 29(a)(i)(3), and with reference to paragraphs B32–B57, disclose:		
	(1) the categories included within the entity's measure of Scope 3 greenhouse gas emissions, in accordance with the Scope 3 categories described in the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (2011); and	P. 100-109 Climate Change Management P. 153 Key Statistics P. 167 Scope 3 Emissions Reporting Methodology	–
	(2) additional information about the entity's Category 15 greenhouse gas emissions or those associated with its investments (financed emissions), if the entity's activities include asset management, commercial banking or insurance (see paragraphs B58–B63);		

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IFRS S2 Climate-related Disclosures Content Index

Reference Paragraph	IFRS Core Content	References/Explanation: Location of the ESG Report	References/Explanation: Other References
	(b) climate-related transition risks—the amount and percentage of assets or business activities vulnerable to climate-related transition risks;	P. 10-11 Green and Sustainable Finance P. 100-109 Climate Change Management P. 109-119 Carbon Reduction Initiatives P. 130-133 Case Study: TERA-Award Smart Energy Innovation Competition	P. 18-25, 28-29 Climate-Related and Nature-Related Directive Guide
	(c) climate-related physical risks—the amount and percentage of assets or business activities vulnerable to climate-related physical risks;		
	(d) climate-related opportunities—the amount and percentage of assets or business activities aligned with climate-related opportunities;		
	(e) capital deployment—the amount of capital expenditure, financing or investment deployed towards climate-related risks and opportunities;		
	(f) internal carbon prices—the entity shall disclose:		
	(i) an explanation of whether and how the entity is applying a carbon price in decision-making (for example, investment decisions, transfer pricing and scenario analysis); and	P. 100-109 Climate Change Management	–
	(ii) the price for each metric tonne of greenhouse gas emissions the entity uses to assess the costs of its greenhouse gas emissions;		
	(g) remuneration—the entity shall disclose:		
	(i) a description of whether and how climate-related considerations are factored into executive remuneration (see also paragraph 6(a)(v)); and	P. 31-33 Professional Training and Risk Governance	–
	(ii) the percentage of executive management remuneration recognised in the current period that is linked to climate-related considerations		

Reference Paragraph	IFRS Core Content	References/Explanation: Location of the ESG Report	References/Explanation: Other References
30	In preparing disclosures to meet the requirements in paragraph 29(b)–(d), an entity shall use all reasonable and supportable information that is available to the entity at the reporting date without undue cost or effort.		
31	In preparing disclosures to meet the requirements in paragraph 29(b)–(g), an entity shall refer to paragraphs B64–B65.		
32	An entity shall disclose industry-based metrics that are associated with one or more particular business models, activities or other common features that characterise participation in an industry. In determining the industry-based metrics that the entity discloses, the entity shall refer to and consider the applicability of the industry-based metrics associated with disclosure topics described in the Industry-based Guidance on Implementing IFRS S2.		
Climate-related targets			
33	An entity shall disclose the quantitative and qualitative climate-related targets it has set to monitor progress towards achieving its strategic goals, and any targets it is required to meet by law or regulation, including any greenhouse gas emissions targets. For each target, the entity shall disclose:		
	(a) the metric used to set the target (see paragraphs B66–B67);	P. 100-109 Climate Change Management P. 153 Key Statistics	P. 26-27 Climate-Related and Nature-Related Directive Guide
	(b) the objective of the target (for example, mitigation, adaptation or conformance with science-based initiatives);		
	(c) the part of the entity to which the target applies (for example, whether the target applies to the entity in its entirety or only a part of the entity, such as a specific business unit or specific geographical region);		
	(d) the period over which the target applies;		
	(e) the base period from which progress is measured;		
	(f) any milestones and interim targets;		
	(g) if the target is quantitative, whether it is an absolute target or an intensity target; and		
	(h) how the latest international agreement on climate change, including jurisdictional commitments that arise from that agreement, has informed the target.		
34	An entity shall disclose information about its approach to setting and reviewing each target, and how it monitors progress against each target, including:		
	(a) whether the target and the methodology for setting the target has been validated by a third party;	P. 217-219 Verification Statement P. 100-109 Climate Change Management	–
	(b) the entity's processes for reviewing the target;		
	(c) the metrics used to monitor progress towards reaching the target; and		
	(d) any revisions to the target and an explanation for those revisions.	No revision has been made to the target.	

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IFRS S2 Climate-related Disclosures Content Index

Reference Paragraph	IFRS Core Content	References/Explanation: Location of the ESG Report	References/Explanation: Other References
35	An entity shall disclose information about its performance against each climate-related target and an analysis of trends or changes in the entity's performance.	P. 100-109 Climate Change Management	P. 50-57 Climate-Related and Nature-Related Directive Guide
36	For each greenhouse gas emissions target disclosed in accordance with paragraphs 33-35, an entity shall disclose:		
	(a) which greenhouse gases are covered by the target.	P. 100-109 Climate Change Management P. 153 Key Statistics	–
	(b) whether Scope 1, Scope 2 or Scope 3 greenhouse gas emissions are covered by the target.		
	(c) whether the target is a gross greenhouse gas emissions target or net greenhouse gas emissions target. If the entity discloses a net greenhouse gas emissions target, the entity is also required to separately disclose its associated gross greenhouse gas emissions target (see paragraphs B68–B69).		
	(d) whether the target was derived using a sectoral decarbonisation approach.		
	(e) Towngas is preparing for more comprehensive disclosures.		
	(i) the extent to which, and how, achieving any net greenhouse gas emissions target relies on the use of carbon credits	Towngas is preparing for future disclosure.	
	(ii) which third-party scheme(s) will verify or certify the carbon credits;		
	(iii) the type of carbon credit, including whether the underlying offset will be nature-based or based on technological carbon removals, and whether the underlying offset is achieved through carbon reduction or removal; and		
	(iv) any other factors necessary for users of general purpose financial reports to understand the credibility and integrity of the carbon credits the entity plans to use (for example, assumptions regarding the permanence of the carbon offset).		
37	In identifying and disclosing the metrics used to set and monitor progress towards reaching a target described in paragraphs 33-34, an entity shall refer to and consider the applicability of cross-industry metrics (see paragraph 29) and industry-based metrics (see paragraph 32), including those described in an applicable IFRS Sustainability Disclosure Standard, or metrics that otherwise satisfy the requirements in IFRS S1.		

Appendix II: Indices for the Report

Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) Content Index

This Report and the Guide are aligned with the four pillars recommended by the TCFD. Please refer to the table below for more information.

Recommended Disclosures	Location in the ESG Report 2024	Location in the Guide
Governance		
Disclose the organisation's governance around climate-related risks and opportunities.		
a) Describe the board's oversight of climate-related risks and opportunities.	P. 3 Board Statement P. 31-33 Professional Training and Risk Governance P. 98-99 Environmental Management Policies P. 100-109 Climate Change Management	P. 8-11 Corporate Governance Structure
b) Describe management's role in assessing and managing climate-related risks and opportunities.		
Strategy		
Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material.		
a) Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long-term.	P. 100-109 Climate Change Management	P. 18-25 Identification, Assessment and Management of Risks and Opportunities
b) Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.		
c) Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.		P. 12-24 Climate Chapter: TCFD Results and Case Study P. 26-29 Decarbonisation Strategy
Risk Management		
Disclose how the organisation identifies, assesses, and manages climate-related risks.		
a) Describe the organisation's processes for identifying and assessing climate-related risks.	P. 98-99 Environmental Management Policies P. 100-109 Climate Change Management	P. 12-24 Climate Chapter: TCFD Results and Case Study

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Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) Content Index

Recommended Disclosures	Location of the ESG Report	Location of the Guide
b) Describe the organisation's processes for managing climate-related risks.	P. 98-99 Environmental Management Policies P. 100-109 Climate Change Management	P. 18-24 Identification, Assessment and Management of Risks and Opportunities
c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.	P. 3 Board Statement P. 31-33 Professional Training and Risk Governance P. 98-99 Environmental Management Policies P. 100-109 Climate Change Management	P. 8-11 Corporate Governance Structure
Metrics and Targets		
Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.		
a) Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	P. 100-109 Climate Change Management	P. 27 Metrics
b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	P. 100-109 Climate Change Management P. 153 Key Statistics	P. 26-27 Decarbonisation Strategy
c) Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	P. 100-109 Climate Change Management	P. 28-29 Financing Decarbonisation P. 50-60 Business Outlook

Appendix II: Indices for the Report

Global Reporting Initiative (GRI) Standards Content Index

This Report was prepared in alignment with the Global Reporting Initiative Content (GRI) Universal Standards 2021 and GRI 11: Oil and Gas Sector 2021. Please refer to the table below for detailed information, as well as additional resources available on the Towngas corporate website, and in the Annual Report 2024, the ESG Report 2024, and the Guide.

GRI Standards	Disclosure	Location/URL (Unless otherwise specified, references pertain to the sections of the ESG Report 2024)	Omission/Remarks	GRI 11: Oil and Gas Sector 2021
General Disclosures				
GRI 2: General Disclosures 2021				
2-1	Organisational details	P. 2 About This Report P. 8 Business Overview	–	–
2-2	Entities included in the organisation's sustainability reporting	P. 2 About This Report	–	–
2-3	Reporting period, frequency and contact point	P. 2 About This Report	–	–
2-4	Restatements of information	P.2 About This Report	–	–
2-5	External assurance	P. 217-219 Verification Statement	–	–
2-6	Activities, value chain and other business relationships	P. 8 Business Overview P. 135-151 Stakeholders Partnership – Enhancing Value Chain Resilience	There are no significant changes in business relationships compared to the previous reporting period.	–
2-7	Employees	P. 57-95 People-Centric – Co-Creating a Sustainable Future P. 154-156, 161-163 Key Statistics	No significant fluctuations in the number of employees were recorded between the current and previous Reporting Periods.	–
2-8	Workers who are not employees	P. 57-95 People-Centric – Co-Creating a Sustainable Future P. 154-156, 161-163 Key Statistics	–	–
2-9	Governance structure and composition	P. 30-33 Governance Structure	–	–

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Global Reporting Initiative (GRI) Standards Content Index

GRI Standards	Disclosure	Location/URL (Unless otherwise specified, references pertain to the sections of the ESG Report 2024)	Omission/Remarks	GRI 11: Oil and Gas Sector 2021
2-10	Nomination and selection of the highest governance body	Annual Report 2024 Nomination Policy Nomination Committee	–	–
2-11	Chair of the highest governance body	Annual Report 2024 Board of Directors	–	–
2-12	Role of the highest governance body in overseeing the management of impacts	Annual Report 2024 Governance Structure	–	–
2-13	Delegation of responsibility for managing impacts	Annual Report 2024 Governance Structure	–	–
2-14	Role of the highest governance body in sustainability reporting	P. 31-32 Professional Training and Risk Governance Governance Structure	–	–
2-15	Conflicts of interest	Annual Report 2024	–	–
2-16	Communication of critical concerns	P. 50-55 Stakeholders Engagement	–	–
2-17	Collective knowledge of the highest governance body	P. 31 Professional Training and Risk Governance	–	–
2-18	Evaluation of the performance of the highest governance body	Annual Report 2024 Governance Structure	–	–
2-19	Remuneration policies	P. 58 People-Centric-Co-Creating a Sustainable Future – Management Approach Remuneration Committee	–	–
2-20	Process to determine remuneration	P. 58 People-Centric-Co-Creating a Sustainable Future – Management Approach Remuneration Committee	–	–
2-21	Annual total compensation ratio	Annual Report 2024	–	–
2-22	Statement on sustainable development strategy	P. 3 Board Statement	–	–
2-23	Policy commitments	P. 33 ESG Policy P. 58 People Centric – Co-Creating a Sustainable Future – Governance Approach P. 98 Towards Carbon Neutral – Composing a New Chapter in Green Initiatives – Governance Approach P. 136 Stakeholders Partnership – Enhancing Value Chain Resilience – Governance Approach ESG Policies	–	–

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Global Reporting Initiative (GRI) Standards Content Index

GRI Standards	Disclosure	Location/URL (Unless otherwise specified, references pertain to the sections of the ESG Report 2024)	Omission/Remarks	GRI 11: Oil and Gas Sector 2021
2-24	Embedding policy commitments	P. 33 ESG Policy P. 58 People Centric – Co-Creating a Sustainable Future – Governance Approach P. 98 Towards Carbon Neutral – Composing a New Chapter in Green Initiatives – Governance Approach P. 136 Stakeholders Partnership – Enhancing Value Chain Resilience – Governance Approach ESG Policies	–	–
2-25	Processes to remediate negative impacts	P. 44 Whistle blowing Mechanism	–	–
2-26	Mechanisms for seeking advice and raising concerns	P. 44 Legal Compliance Business Integrity	–	–
2-27	Compliance with laws and regulations	P. 43-45 Business Ethics P. 58 People Centric – Co-Creating a Sustainable Future – Governance Approach P. 98 Towards Carbon Neutral – Composing a New Chapter in Green Initiatives – Governance Approach P. 136 Stakeholders Partnership – Enhancing Value Chain Resilience – Governance Approach	–	–
2-28	Membership associations	P. 118-119 Collaborative Carbon Neutral Partnerships Memberships in Association	–	–
2-29	Approach to stakeholder engagement	P. 50-55 Stakeholder Engagement and Double Materiality Assessment (DMA) Stakeholder Engagement	–	–
2-30	Collective bargaining agreements	Employee Engagement	–	–
Material Topics				
GRI 3: Material Topics 2021				
3-1	Process to determine material topics	P. 50-55 Stakeholder Engagement	–	–
3-2	List of material topics	P. 53 Impacts and Impact Scopes of Material Issues	–	–

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GRI Standards	Disclosure	Location/URL (Unless otherwise specified, references pertain to the sections of the ESG Report 2024)	Omission/Remarks	GRI 11: Oil and Gas Sector 2021
Economic				
GRI 201: Economic Performance 2016				
3-3	Management of material topics	P. 50-55 Stakeholders Engagement	–	11.14.1
201-1	Direct economic value generated and distributed	P. 8 Group Introduction P. 9 Financial Analysis P. 152 Key Statistics Annual Report 2024	–	11.14.2 11.21.2
201-2	Financial implications and other risks and opportunities due to climate change	P. 100-105 Climate Change Management P. 36-37 Climate-Related and Nature-Related Directive Guide	–	11.2.2
201-4	Financial assistance received from government	Annual Report 2024	–	11.21.3
GRI 202: Market Presence 2016				
3-3	Management of material topics	P. 8 Business Overview	–	11.14.1
202-1	Ratios of standard entry-level wage by gender compared to local minimum wage	Towngas is preparing for more comprehensive disclosures.	–	–
202-2	Proportion of senior management hired from the local community	–	All senior management are hired from the local community.	11.14.3
GRI 203: Indirect Economic Impacts 2016				
3-3	Management of material topics	P. 35-42 Risk Identification and Mitigation	–	11.14.1
203-1	Infrastructure investments and services supported	P. 58-66 Jointly Build a Security Defence Line P. 80-85 Building a Caring Community	–	11.14.4
203-2	Significant indirect economic impacts	Annual Report 2024	–	11.14.5
GRI 204: Procurement Practices 2016				
3-3	Management of material topics	P. 135-147 Stakeholders Partnership – Enhancing Value Chain Resilience	–	11.14.1
204-1	Proportion of spending on local suppliers	P. 136 Supply Chain Management P. 158, 165 Key Statistics	–	11.14.6
GRI 205: Anti-corruption 2016				
3-3	Management of material topics	P. 43-45 Business Ethics	–	11.20.1
205-1	Operations assessed for risks related to corruption, anti-trust, and monopoly practices	P. 43-45 Business Ethics	–	11.20.2
205-2	Communication and training about anti-corruption policies and procedures	P. 43-44 Business Ethics P. 155, 162 Key Statistics	–	11.20.3
205-3	Confirmed incidents of corruption and actions taken	P. 45 Business Ethics	–	11.20.4
GRI 206: Anti-competitive Behavior 2016				
3-3	Management of material topics	P. 43-45 Business Ethics	–	11.19.1
206-1	Legal actions for anti-competitive behaviour	P. 43-45 Business Ethics	–	11.19.2

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GRI Standards	Disclosure	Location/URL (Unless otherwise specified, references pertain to the sections of the ESG Report 2024)	Omission/Remarks	GRI 11: Oil and Gas Sector 2021
GRI 207: Tax 2019				
3-3	Management of material topics	Annual Report 2024	–	11.21.1
207-1	Approach to tax	Annual Report 2024	–	11.21.4
207-2	Tax governance, control, and risk management	Annual Report 2024	–	11.21.5
207-3	Stakeholder engagement and management of concerns related to tax	Annual Report 2024	–	11.21.6
207-4	Country-by-country reporting	Annual Report 2024	–	11.21.7
Environmental				
GRI 301: Materials 2016				
3-3	Management of material topics	P. 119-123 Natural Resource and Environmental Management	–	–
301-1	Materials used by weight or volume	P. 159-160, 166 Key Statistics	–	–
301-2	Recycled input materials used	P. 121-122 Waste Management	–	–
GRI 302: Energy 2016				
3-3	Management of material topics	P. 109-114 Carbon Reduction Initiatives	–	11.1.1
302-1	Energy consumption within the organisation	P. 120 This Year's Energy Consumption Data P. 159, 166 Key Statistics	–	11.1.2
302-2	Energy consumption outside of the organisation	P. 8 Group Introduction P. 152 Key Statistics	–	11.1.3
302-3	Energy intensity	P. 120 This Year's Energy Consumption Data	–	11.1.4
302-4	Reduction of energy consumption	P. 109-114 Carbon Reduction Initiatives P. 119-123 Natural Resource and Environmental Management	–	–
302-5	Reductions in energy requirements of products and services	P. 109-114 Carbon Reduction Initiatives P. 119-123 Natural Resource and Environmental Management	–	–

GRI Standards	Disclosure	Location/URL (Unless otherwise specified, references pertain to the sections of the ESG Report 2024)	Omission/Remarks	GRI 11: Oil and Gas Sector 2021
GRI 303: Water and Effluents 2018				
3-3	Management of material topics	P. 120-121 Natural Resource and Environmental Management	–	11.6.1
303-1	Interactions with water as a shared resource	P. 120-121 Natural Resource and Environmental Management	–	11.6.2
303-2	Management of water discharge-related impacts	P. 120-121 Natural Resource and Environmental Management	–	11.6.3
303-3	Water withdrawal	P. 159, 166 Key Statistics	–	11.6.4
303-4	Water discharge	P. 159, 166 Key Statistics	–	11.6.5
303-5	Water consumption	P. 159, 166 Key Statistics	–	11.6.6
GRI 304: Biodiversity 2016				
3-3	Management of material topics	P. 123-125 Protecting Biodiversity and Ecological Resources P. 30-39 Climate-Related and Nature-Related Directive Guide	–	11.4.1
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	P. 123-125 Protecting Biodiversity and Ecological Resources P. 36-39 Climate-Related and Nature-Related Directive Guide	–	11.4.2
304-2	Significant impacts of activities, products and services on biodiversity	P. 123-125 Protecting Biodiversity and Ecological Resources P. 35 Climate-Related and Nature-Related Directive Guide	–	11.4.3
304-3	Habitats protected or restored	P. 123-125 Protecting Biodiversity and Ecological Resources P. 126-129 Case Study: Appreciating Nature and Building a Low-Carbon Ecosystem P. 36-39 Climate-Related and Nature-Related Directive Guide	–	11.4.4
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	P. 36 Climate-Related and Nature-Related Directive Guide	–	11.4.5

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GRI Standards	Disclosure	Location/URL (Unless otherwise specified, references pertain to the sections of the ESG Report 2024)	Omission/Remarks	GRI 11: Oil and Gas Sector 2021
GRI 305: Emissions 2016				
3-3	Management of material topics	P. 100-105 Climate Change Management P. 109-114 Carbon Reduction Initiatives P. 119-123 Natural Resource and Environmental Management Carbon Neutrality	–	11.1.1 11.2.1 11.3.1
305-1	Direct (Scope 1) GHG emissions	P. 106 Carbon Footprint P. 153 Key Statistics	All CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3 are covered in the calculation.	11.1.5
305-2	Energy indirect (Scope 2) GHG emissions	P. 106 Carbon Footprint P. 153 Key Statistics	All CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3 are covered in the calculation.	11.1.6
305-3	Other indirect (Scope 3) GHG emissions	P. 106-107 Carbon Footprint P. 153 Key Statistics	–	11.1.7
305-4	GHG emissions intensity	P. 106-107 Carbon Footprint	All CO_2, CH_4, N_2O, HFCs, PFCs, SF_6, NF_3 are covered in the calculation. Scope 1 and 2 of GHG emissions are included in the intensity ratio.	11.1.8
305-5	Reduction of GHG emissions	P. 106-107 Carbon Footprint	–	11.2.3
305-6	Emissions of ozone-depleting substances (ODS)	P. 166 Key Statistics	–	–
305-7	Nitrogen oxides (NO_x), sulphur oxides (SO_x), and other significant air emissions	P. 160, 166 Key Statistics	–	11.3.2

GRI Standards	Disclosure	Location/URL (Unless otherwise specified, references pertain to the sections of the ESG Report 2024)	Omission/Remarks	GRI 11: Oil and Gas Sector 2021
GRI 306: Waste 2020				
3-3	Management of material topics	P. 119-123 Natural Resource and Environmental Management	–	11.5.1
306-1	Waste generation and significant waste-related impacts	P. 119-123 Natural Resource and Environmental Management	–	11.5.2
306-2	Management of significant waste-related impacts	P. 119-123 Natural Resource and Environmental Management	–	11.5.3
306-3	Waste generated	P. 119-123 Natural Resource and Environmental Management P. 159, 166 Key Statistics	–	11.5.4
306-4	Waste diverted from disposal	P. 119-123 Natural Resource and Environmental Management	–	11.5.5
306-5	Waste directed to disposal	P. 119-123 Natural Resource and Environmental Management P. 159, 166 Key Statistics	–	11.5.6
GRI 308: Supplier Environmental Assessment 2016				
3-3	Management of material topics	P. 136-139 Supply Chain Management Supply Chain Management	–	–
308-1	New suppliers that were screened using environmental criteria	P. 136-139 Supply Chain Management	–	–
308-2	Negative environmental impacts in the supply chain and actions taken	P. 136-139 Supply Chain Management	–	–

Appendix II: Indices for the Report
Global Reporting Initiative (GRI) Standards Content Index

GRI Standards	Disclosure	Location/URL (Unless otherwise specified, references pertain to the sections of the ESG Report 2024)	Omission/Remarks	GRI 11: Oil and Gas Sector 2021
Social				
GRI 401: Employment 2016				
3-3	Management of material topics	P. 57-80 People Centric – Co-Creating a Sustainable Future Employee Engagement	–	11.10.1
401-1	New employee hires and employee turnover	P. 154, 161-162 Key Statistics	–	11.10.2
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	P. 69-79 Creating a Harmonious Workplace	–	11.10.3
401-3	Parental leave	P. 156, 163 Key Statistics	–	11.10.4
GRI 402: Labour/Management Relations 2016				
3-3	Management of material topics	P. 67-79 Creating a Harmonious Workplace Employee Engagement	–	11.10.1
402-1	Minimum notice periods regarding operational changes	Towngas is preparing for more comprehensive disclosures.	–	11.10.5
GRI 403: Occupational Health and Safety 2018				
3-3	Management of material topics	P. 58-67 Jointly Build a Security Defence Line Health and Safety	–	11.9.1
403-1	Occupational health and safety management system	P. 58-67 Jointly Build a Security Defence Line	–	11.9.2
403-2	Hazard identification, risk assessment, and incident investigation	P. 58-67 Jointly Build a Security Defence Line	–	11.9.3
403-3	Occupational health services	P. 69-72 Creating a Harmonious Workplace	–	11.9.4
403-4	Worker participation, consultation and communication on occupational health and safety	P. 58-65 Jointly Build a Security Defence Line P. 69-72 Creating a Harmonious Workplace Health and Safety	–	11.9.5
403-5	Worker training on occupational health and safety	P. 60-65 Jointly Build a Security Defence Line P. 152,162-163 Key Statistics	–	11.9.6
403-6	Promotion of worker health	P. 67-72 Creating a Harmonious Workplace	–	11.9.7
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	P. 60-65 Jointly Build a Security Defence Line P. 67-72 Creating a Harmonious Workplace	–	11.9.8
403-8	Workers covered by an occupational health and safety management system	P. 58-65 Jointly Build a Security Defence Line P. 67-72 Creating a Harmonious workplace	Workers including contractors are covered by occupational safety and health management system.	11.9.9
403-9	Work-related injuries	P. 61 Jointly Build a Security Defence Line P. 157,164 Key Statistics	–	11.9.10
403-10	Work-related ill health	P. 61 Jointly Build a Security Defence Line P. 157,164 Key Statistics	–	11.9.11

Appendix II: Indices for the Report
Global Reporting Initiative (GRI) Standards Content Index

GRI Standards	Disclosure	Location/URL (Unless otherwise specified, references pertain to the sections of the ESG Report 2024)	Omission/Remarks	GRI 11: Oil and Gas Sector 2021
GRI 404: Training and Education 2016				
3-3	Management of material topics	P. 73-79 Creating a Harmonious Workplace Employee Engagement	–	11.10.1
404-1	Average hours of training per year per employee	P. 155 Key Statistics	–	11.10.6
404-2	Programmes for upgrading employee skills and transition assistance programmes	P. 73-79 Creating a Harmonious Workplace	–	11.10.7
GRI 405: Diversity and Equal Opportunity 2016				
3-3	Management of material topics	P. 67-68 Creating a Harmonious Workplace Employee Engagement	–	11.11.1
405-1	Diversity of governance bodies and employees	P. 30 Corporate Governance P. 67-68 Creating a Harmonious Workplace	–	11.11.5
405-2	Ratio of base salary and remuneration of women to men	P. 156 Key Statistics	–	11.11.6
GRI 406: Non-discrimination 2016				
3-3	Management of material topics	P. 58 People-Centric-Co-Creating a Sustainable Future P. 67-68 Creating a Harmonious Workplace Employee Engagement	–	11.11.1
406-1	Incidents of discrimination and corrective actions taken	P. 45 Legal Compliance Anti-Discrimination Policy	–	11.11.7

GRI Standards	Disclosure	Location/URL (Unless otherwise specified, references pertain to the sections of the ESG Report 2024)	Omission/Remarks	GRI 11: Oil and Gas Sector 2021
GRI 407: Freedom of Association and Collective Bargaining 2016				
3-3	Management of material topics	Employee Engagement	–	11.13.1
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Employee Engagement	–	11.13.2
GRI 408: Child Labour 2016				
3-3	Management of material topics	Employee Engagement	–	–
408-1	Operations and suppliers at significant risk for incidents of child labour	P. 45 Legal Compliance Employee Engagement	–	–
GRI 409: Forced or Compulsory Labour 2016				
3-3	Management of material topics	Employee Engagement	–	11.12.1
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labour	P. 45 Legal Compliance Employee Engagement	–	11.12.2
GRI 410: Security Practices 2016				
3-3	Management of material topics	Employee Engagement	–	11.18.1
410-1	Security personnel trained in human rights policies or procedures	Security Policy Employee Engagement	–	11.18.2
GRI 413: Local Communities 2016				
3-3	Management of material topics	P. 80-85 Building a Caring Community	–	11.15.1
413-1	Operations with local community engagement, impact assessments, and development programmes	P. 80-85 Building a Caring Community P. 158, 165 Key Statistics	–	–
413-2	Operations with significant actual and potential negative impacts on local communities	–	No actual and potential negative impacts on local communities were recorded.	11.15.3

Appendix II: Indices for the Report
Global Reporting Initiative (GRI) Standards Content Index

GRI Standards	Disclosure	Location/URL (Unless otherwise specified, references pertain to the sections of the ESG Report 2024)	Omission/Remarks	GRI 11: Oil and Gas Sector 2021
GRI 414: Supplier Social Assessment 2016				
3-3	Management of material topics	P. 135-147 Stakeholders Partnership – Enhancing Value Chain Resilience	–	11.10.1
414-1	New suppliers that were screened using social criteria	P. 138 Supply Chain Management	–	11.10.8
414-2	Negative social impacts in the supply chain and actions taken	P. 137 Supply Chain Management	–	11.10.9
GRI 415: Public Policy 2016				
3-3	Management of material topics	Stakeholder Engagement Policy	–	11.22.1
415-1	Political contributions	P. 80 Building a Caring Community	–	11.22.2
GRI 416: Customer Health and Safety 2016				
3-3	Management of material topics	P. 140-147 Customer Services Quality	–	11.3.1
416-1	Assessment of the health and safety impacts of product and service categories	P. 58-66 Jointly Build a Security Defence Line P. 140-147 Customer Services Quality	–	11.3.3
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	P. 45 Business Ethics P. 158, 165 Key Statistics	–	–
GRI 417: Marketing and Labelling 2016				
417-1	Requirements for product and service information and labeling	P. 45 Business Ethics P. 140-147 Customer Services Quality	–	–
417-2	Incidents of non-compliance concerning product and service information and labeling	P. 45 Business Ethics	–	–
417-3	Incidents of non-compliance concerning marketing communications	P. 45 Business Ethics	–	–

GRI Standards	Disclosure	Location/URL (Unless otherwise specified, references pertain to the sections of the ESG Report 2024)	Omission/Remarks	GRI 11: Oil and Gas Sector 2021
GRI 418: Customer Privacy 2016				
3-3	Management of material topics	P. 45-46 Data Privacy and Cyber Security Data Privacy and Cyber Security	–	–
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	P. 45 Legal Compliance	–	–
GRI 11.8 Asset integrity and critical incident management				
3-3	Management of material topics	P. 58-67 Jointly Build a Security Defence Line	–	11.8.1
306-3	Significant spills	P. 58-67 Jointly Build a Security Defence Line P. 114 Carbon Reduction Initiatives	–	11.8.2

Appendix II: Indices for the Report

Sustainability Accounting Standards Board (SASB) Standards for the Gas Utilities & Distributors Industry Content Index

This content index is based on the Sustainability Accounting Standards Board (SASB) Standards for the Gas Utilities & Distributors sector. Please refer to the table below for detailed information, and consult the related detailed information available through the Environmental, Social and Governance (ESG) Report 2024.

Topic	Code	Metric	Location in the ESG Report 2024
Sustainability Disclosure Topics & Metrics			
Energy Affordability	IF-GU-240a.1	Average retail gas rate for (1) residential, (2) commercial, (3) industrial customers, and (4) transportation services only	–
	IF-GU-240a.3	(1) Number of residential customer gas disconnections for non-payment, (2) percentage reconnected within 30 days	–
	IF-GU-240a.4	Discussion of impact of external factors on customer affordability of gas, including the economic conditions of the service territory	–
End-Use Efficiency	IF-GU-420a.2	Customer gas savings from efficiency measures, by market	–
Integrity of Gas Delivery Infrastructure	IF-GU-540a.1	Number of (1) reportable pipeline incidents, (2) corrective actions received and (3) violations of pipeline safety statutes	–
	IF-GU-540a.2	Percentage of distribution pipeline that is (1) cast or wrought iron and (2) unprotected steel	–
	IF-GU-540a.3	Percentage of gas (1) transmission and (2) distribution pipelines inspected	P. 59 Jointly Build a Security Defence Line
	IF-GU-540a.4	Description of efforts to manage the integrity of gas delivery infrastructure, including risks related to safety and emissions	P. 58-60 Jointly Build a Security Defence Line
Activity Metrics			
	IF-GU-000.A	Number of: (1) residential, (2) commercial, and (3) industrial customers served	–
	IF-GU-000.B	Amount of natural gas delivered to: (1) residential customers, (2) commercial customers, (3) industrial customers, and (4) transferred to a third party	–
	IF-GU-000.C	Length of gas (1) transmission and (2) distribution pipelines	P.59 Jointly Build a Security Defence Line

Verification Statement

bsi.

INDEPENDENT ASSURANCE OPINION STATEMENT

Statement No: SRA-HK-824017-000

The Hong Kong and China Gas Company Limited

Environmental, Social, and Governance ("ESG") Report 2024

The British Standards Institution is independent of The Hong Kong and China Gas Company Limited and its subsidiaries (hereinafter referred to as "Towngas" collectively in this statement) and has no financial interest in the operation of Towngas other than for the assessment and assurance of Towngas Environmental, Social, and Governance Report 2024 (the "Report").

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of the Report presented by Towngas. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and adequate.

Scope

The scope of engagement agreed upon with Towngas includes the following:

1. The assurance scope is consistent with the description of the Report. The Report is prepared in accordance with the Global Reporting Initiative ("GRI") Universal Standard 2021, GRI 11: Oil and Gas Sector Disclosures 2021, as well as the International Sustainability Standards Board's ("ISSB") IFRS® Sustainability Disclosure Standards – IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information ("IFRS S1") and IFRS S2 Climate-related Disclosures ("IFRS S2"), Appendix C2: ESG Reporting Guide under Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited ("SEHK"), and the Recommendations of the Task Force on Climate-related Financial Disclosures ("TCFD"), with reference to the Recommendations of the Taskforce on Nature-related Financial Disclosures ("TNFD"), China Enterprise Reform and Development Society and CSR Cloud Research Institute ("責任雲研究院") Guidelines on Corporate Social Responsibility Reporting for Chinese Enterprises ("CASS-ESG 6.0") and Sustainability Accounting Standards Board ("SASB") Standards for the Gas Utilities & Distributors sector.
2. In accordance with Type 2 High Level of Assurance as defined in the AA1000 Assurance Standard V3 ("AA1000AS V3"), BSI evaluates the nature and extent of Towngas' adherence to the four reporting principles of Inclusivity, Materiality, Responsiveness and Impact in preparing the Report. The reliability of specified sustainability performance information and data disclosed in the Report has also been evaluated.

Opinion Statement

We conclude that the Report provides a fair view of Towngas' sustainability plan and performance in the reporting year. The Report subject to assurance is free from material misstatement based upon evaluation within the limitations of the scope of the assurance, the information and data provided by Towngas and the samples taken. Based on our work carried out during the assurance process, we believe that data and information stated in the Reporting Organization's Report is correctly presented and that Inclusivity, Materiality, Responsiveness and Impact based on AA1000 criteria are correctly addressed. We believe that the environmental, social and governance general disclosures and key performance indicators are fairly represented in the Report, in which Towngas' efforts to pursue sustainable development are recognized by its stakeholders.

Our work was carried out by a team of sustainability report assurors in accordance with the AA1000AS V3. We planned and performed this part of our work to obtain the necessary information and explanations. We considered Towngas has provided sufficient evidence to support its self-declaration of compliance with GRI Universal Standard 2021, GRI 11: Oil and Gas Sector Disclosure 2021, as well as the IFRS S1 and IFRS S2, Appendix C2: ESG Reporting Guide under Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited ("SEHK"), and the Recommendations of the TCFD, with reference to Recommendations of the TNFD, CASS-ESG 6.0, and SASB Standards for the Gas Utilities & Distributors sector is fairly stated and the Report is considered acceptable in meeting the principles as set out in AA1000 AccountAbility Principles 2018 ("AA1000AP (2018)") .

For and behalf of BSI:

Michael Lam, Senior Vice President, APAC Assurance

...making excellence a habit.™

AA1000 Licensed Report 000-4/V3-13H2R

Issue Date: 2025-04-01

Effective Date: 2025-04-01

Verification Statement

Statement No: SRA-HK-824017-000

Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- A top level review of issues raised by external parties that could be relevant to Towngas' policies to provide a check on the appropriateness of statements made in the Report.
- Discussion with staff on Towngas' approach to stakeholder engagement. We had no direct contact with external stakeholders during this assurance process.
- Interview with staff involved in ESG management, report preparation and provision of report information.
- Review of key organizational developments.
- Review of supporting evidence for claims made in the Report, and
- An assessment of Towngas' reporting and management processes concerning reporting against the principles of Inclusivity, Materiality, Responsiveness and Impact as described in the AA1000AP (2018).

Conclusions

A review of the Report issued by Towngas against the AA1000AS V3 principles of Inclusivity, Materiality, Responsiveness and Impact, as well as the GRI Universal Standard 2021, GRI 11: Oil and Gas Sector Disclosure 2021, as well as the IFRS S1 and IFRS S2, Appendix C2: ESG Reporting Guide under Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited ("SEHK"), and the Recommendations of the TCFD is set out below:

Based on the procedures performed and evidence obtained, we believe that data and information stated in the Reporting Organization's Report is correctly presented and that Inclusivity, Materiality, Responsiveness and Impact based on AA1000 criteria are correctly addressed.

Although BSI reviews all 2024 ESG data indicators within our Sustainability Data Transparency Index ("SDTI") as part of our assurance process, specific attention and further review was paid to the following data points:

Energy Consumption	Naphtha, Natural Gas, Synthetic Natural Gas and Landfill Gas, Town Gas, Diesel, Unleaded Petrol, Electricity, and Total Energy Consumption (Hong Kong)
	Natural Gas, Diesel, Unleaded Petrol, LPG, Electricity, Total Energy Consumption, and Others (Outside Hong Kong)
Waste Disposal	Non-hazardous waste landfilled (Hong Kong and Outside Hong Kong)
	Chemical waste generated - process related (Hong Kong)
	Hazardous waste (Outside Hong Kong)
Water Withdrawal/ Discharge	Water withdrawal - from municipal water suppliers (Hong Kong and Outside Hong Kong)
	Water withdrawal - from fresh surface water (Outside Hong Kong)
	Wastewater discharged –to marine water bodies (treated) (Hong Kong)
	Wastewater discharged - to sewage (Hong Kong and Outside Hong Kong)
Air Emissions	NO_x and SO_x emissions (Hong Kong and Outside Hong Kong)
	Respirable suspended particulates (PM10) (Outside Hong Kong)
Fuel Mix	Natural Gas, Naphtha and Landfill Gas (Hong Kong)
Greenhouse Gas ("GHG") Emissions	Direct GHG emissions (Scope 1) and Indirect GHG emissions (Scope 2 and Scope 3) (Group)
	Carbon intensity (Hong Kong Gas Production)
Number of Employees	Full time (by gender, age, employee category) (Hong Kong and Outside Hong Kong)
Gender Pay Ratio	Base salary by employee category (Hong Kong)
Gender Ratio	By employee category (Hong Kong and Outside Hong Kong)
Fatalities	Employees and contractors (Hong Kong and Outside Hong Kong)
Lost-Time Injury Frequency Rate (LTIFR)	Employees and contractors (Group)
Critical Tier-1 supplier	Number and percentage of total purchased amount (Hong Kong)
Supplier Screening	Percentage of new suppliers that were screened using ESG criteria (in terms of total purchased amount) (Hong Kong)
Supplier Assessment and Development	Number of tier-1 supplier conducted ESG assessment and with potential negative impacts (Hong Kong)
	Percentage of critical tier-1 supplier used S-carbon platform (in terms of total purchased amount) (Hong Kong)
Scrap metal recycled from used gas appliances	Hong Kong
Emergency team's average arrival time	Hong Kong

We considered Towngas has provided sufficient evidence that its self-declaration of compliance with GRI Universal Standard 2021, GRI 11: Oil and Gas Sector Disclosure 2021, as well as the IFRS S1 and IFRS S2, the Appendix C2: ESG Reporting Guide under Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited ("SEHK"), and the Recommendations of the TCFD and with reference to Recommendations of the TNFD, CASS-ESG 6.0, and SASB Standards for the Gas Utilities & Distributors sector is fairly stated and the Report is considered acceptable in meeting the principles as set out in AA1000AP (2018).

Issue Date: 2025-04-01 Effective Date: 2025-04-01

Statement No: SRA-HK-824017-000

Assurance Level

The Type 2 High Level of Assurance provided in our review is defined by the scope and methodology described in this statement.

Responsibilities

It is the responsibility of Towngas' senior management to ensure that the information being presented in the Report is accurate. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

Ability and Independence

The assurance team was composed of Lead Assuror and Assuror, who are experienced in the industrial sector, and trained in a range of sustainability, environmental and social standards including GRI Series Standards, AA1000, HKEX Environmental, Social and Governance Reporting Guide, ISO 14064, ISO 14001, ISO 50001, ISO 45001, ISO 9001, etc.

British Standards Institution is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

Issue Date: 2025-04-01 Effective Date: 2025-04-01