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Environmental, Social and Governance Report 2020



Go Green 
EVERY DAY

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01 | BOARD STATEMENT

The Towngas Board of Directors (the Board) is committed to our environmental, social and governance (ESG) development for a sustainable future. This commitment is reflected in our Vision and Mission, which guide our evolving ESG strategy.

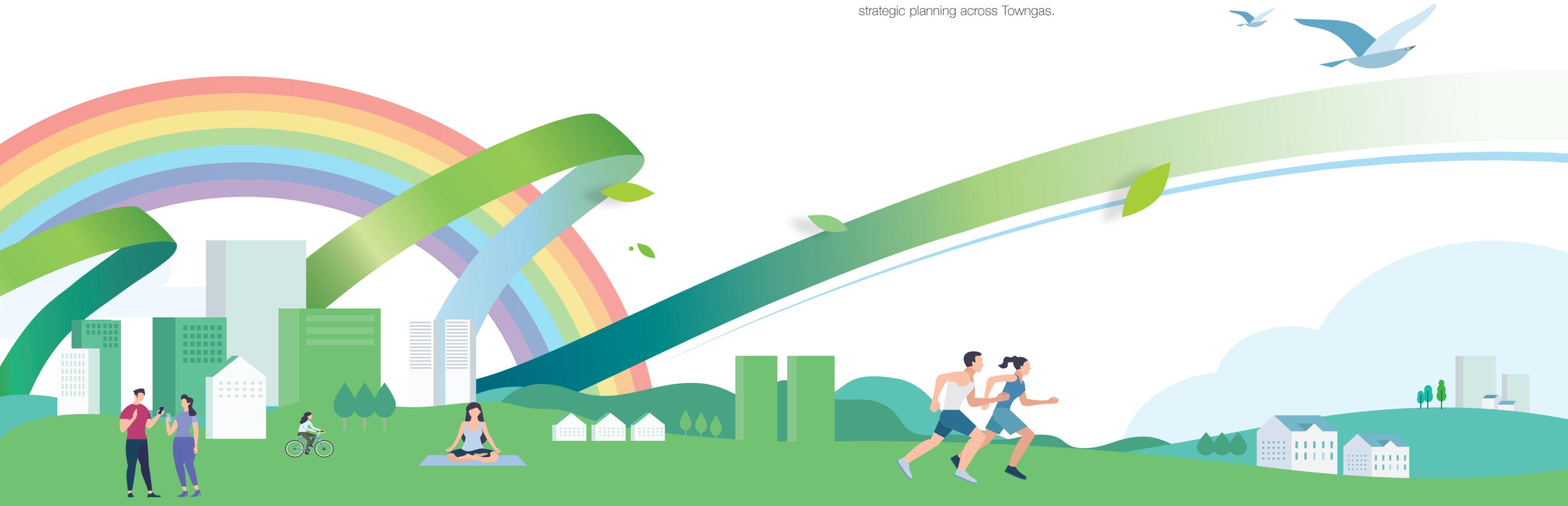
Our ESG Framework covers five key areas:

- Creating Business Opportunities,
- Ensuring Health and Safety,
- Protecting the Environment,
- Contributing to Stakeholders, and
- Strengthening Corporate Governance

Material ESG issues are prioritised and regularly reviewed through our engagement with stakeholders as well as monitoring of global trends. The Board has the overall responsibility of overseeing these material ESG issues and evaluating, determining and integrating relevant risks and opportunities into our key governance processes. Our governance procedures are applied to all areas of decision-making and strategic planning across Towngas.

To further integrate ESG practices into our business operations, the ESG Committee has been established. The Board has appointed the Managing Director be the Chairman of this Committee, which has responsibility for our strategies, policies and practices on ESG matters. Updates on ESG related policies, initiatives, progress, goals, targets and achievements are reported and discussed on a regular basis.

The Board will continue our commitment to our ESG efforts in every aspect of our operations as we work towards creating a sustainable world and long-term value for stakeholders.



02 | MANAGING DIRECTOR'S MESSAGE



“To stay ahead of challenges and embrace the new normal, we will continue to maintain our commitment to environmental, social and governance development and build a sustainable future.”

Alfred Chan Wing-kin
Managing Director

In 2020, we faced an extremely challenging year as a result of the COVID-19 outbreak, which affected all of us in Hong Kong and mainland China. Although the pandemic had an impact on our business and the overall economy, as a resilient and innovative company Towngas was able to emerge relatively unscathed from the past year's events. In large part, our recovery was due to the decisive actions of our senior management team and dedication of our colleagues who worked closely together and with the community to combat and contain the coronavirus.

As a result of their efforts, we were able to keep the pandemic mostly under control in our operations.

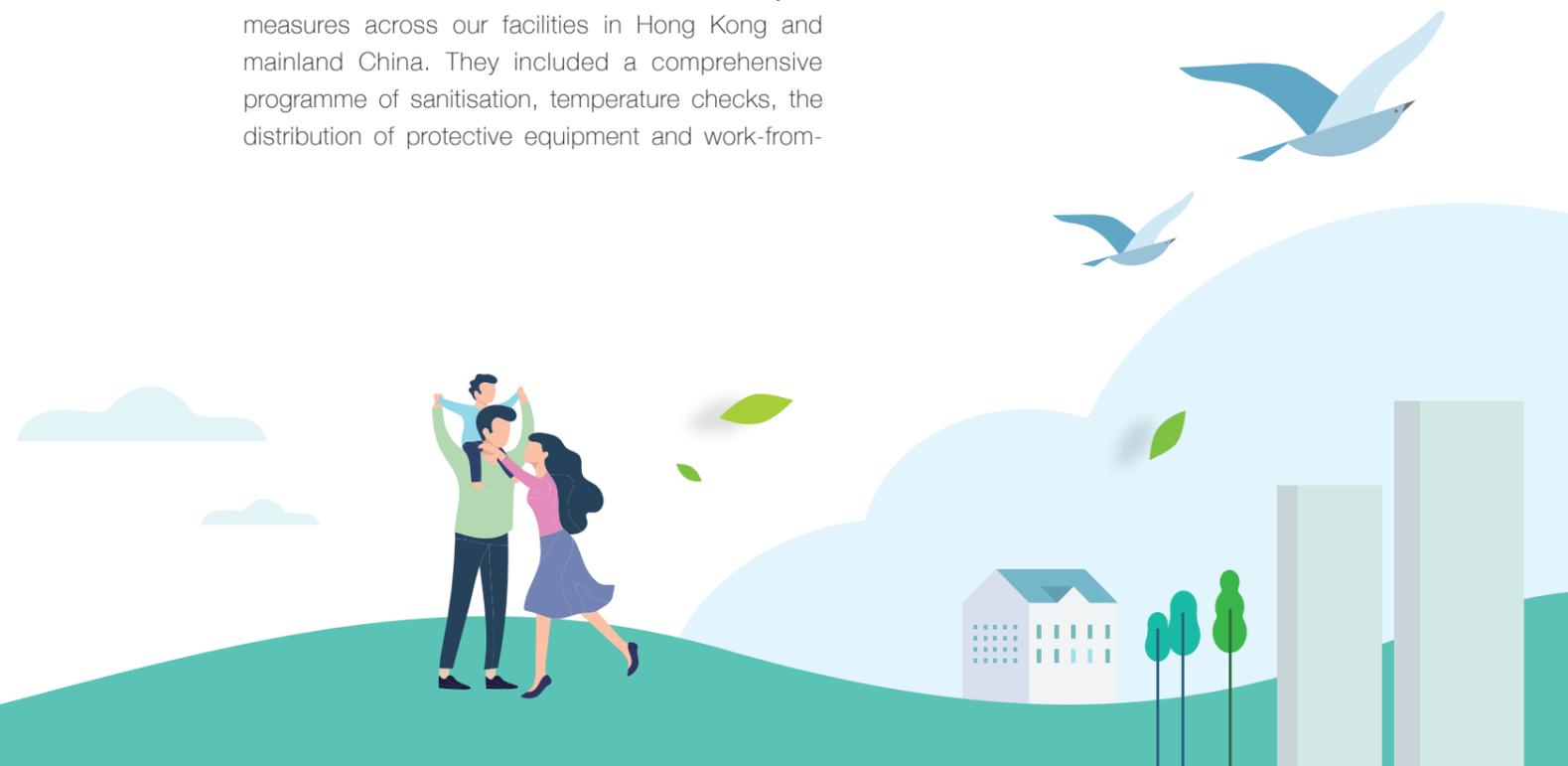
Response to COVID-19

The health and safety of our employees, and indeed all of our stakeholders, came under threat during the year because of the outbreak of COVID-19. We recognised the seriousness of this threat shortly after it emerged in early 2020 and took immediate steps to reduce the risk of infection among our staff and contractors.

After activating our Corporate Preparedness Plan for Infectious Diseases, we initiated a variety of measures across our facilities in Hong Kong and mainland China. They included a comprehensive programme of sanitisation, temperature checks, the distribution of protective equipment and work-from-

home arrangements. As a result of these and other measures, we were able to minimise the infection rate among our staff.

As a caring organisation, we also reached out to the community and offered help in the form of food relief, temporary jobs for the unemployed, and assistance to businesses in the catering sector, our valued partners and one of the industries most affected by the pandemic.



While embracing the new normal, we will continue to maintain our commitment to environmental, social and governance (ESG) development in terms of the safety of our operations, environmental performance, social good, corporate governance and diversity under our ESG Framework, with a focus on innovation. We believe this will drive not only our ESG performance but also our business development.

Preparing for a Climate Resilient Future

Resilience was critical not only in our response to COVID-19 but also to climate change – another impending crisis of great importance.

During the year, we continued to strengthen our emergency preparedness plans and modify our facilities so that they are capable of withstanding extreme weather conditions. As we understand that we must be prepared for different climate scenarios, we conducted a study on how transition risks could impact our energy-related business, both positively and negatively. This was in accordance with the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures. What we have learned from our study of transition risks and opportunities across our portfolio is helping us to develop plans to mitigate these climate-related risks and build resilience strategies.

As we head towards a low-carbon economy, we have been expanding our city-gas business, since natural gas is the cleanest fossil fuel and will likely continue to be a mainstream fuel source in the short-to-medium term in mainland China. In one of the most exciting developments of the year, we signed a strategic

partnership agreement with Shanghai Gas Company Limited in October 2020. This collaboration will enable us to capture more opportunities and promote the long-term growth of the natural gas industry.

Also underway were various waste-to-energy projects, such as utilising bio-grease and agricultural waste to produce advanced biofuels and converting food waste into natural gas. These and other related projects are contributing towards the transition to a circular economy.

Accelerating Innovation and Digital Transformation

One of the reasons we are considered a leader in ESG is our culture of innovation. It has played a key role in our success and will continue to be a main driver in the growth of our businesses.

In recent years, we have been using digital technology to underpin innovation. One example is our smart energy business which, in combination with big data, artificial intelligence and the Internet, can improve energy efficiency and reduce emissions for our customers in mainland China.

Another example is our cooking appliance with anti-scorch function, which is equipped with an intelligent temperature sensor. We have also developed our own digital technologies that improve our service efficiency and quality, such as our Riser Health Analytics System, which automatically analyses inspection videos and identifies corrosion on gas service pipes. In addition to these innovations, we added new enhancements to our online virtual assistant, Tinny, so that it is better able to handle customer enquiries.

Building a Workforce for the Future

As our workforce ages and our older workers near retirement, we have had to ensure their experience and skills are effectively passed on by developing our employees and attracting young people to our industry.

In 2020, we continued to organise talent development programmes for different levels of employees, from apprentice schemes for entry level positions to our Young Towngas Leadership Competencies Acceleration (YTLC+) Programme for staff with less than 10 years of work experience who show leadership potential. New programmes were also launched during the year for graduate trainees and staff with management potential to gain experience in our mainland China businesses. These programmes are intended to build a succession pipeline for our expanding business in mainland China.

Through other programmes such as Career in a Nutshell, as well as our collaborations with leading corporations and tertiary educational institutes, we are not only creating a sustainable supply of talent for Towngas, but also for the overall development of Hong Kong.

The Year Ahead

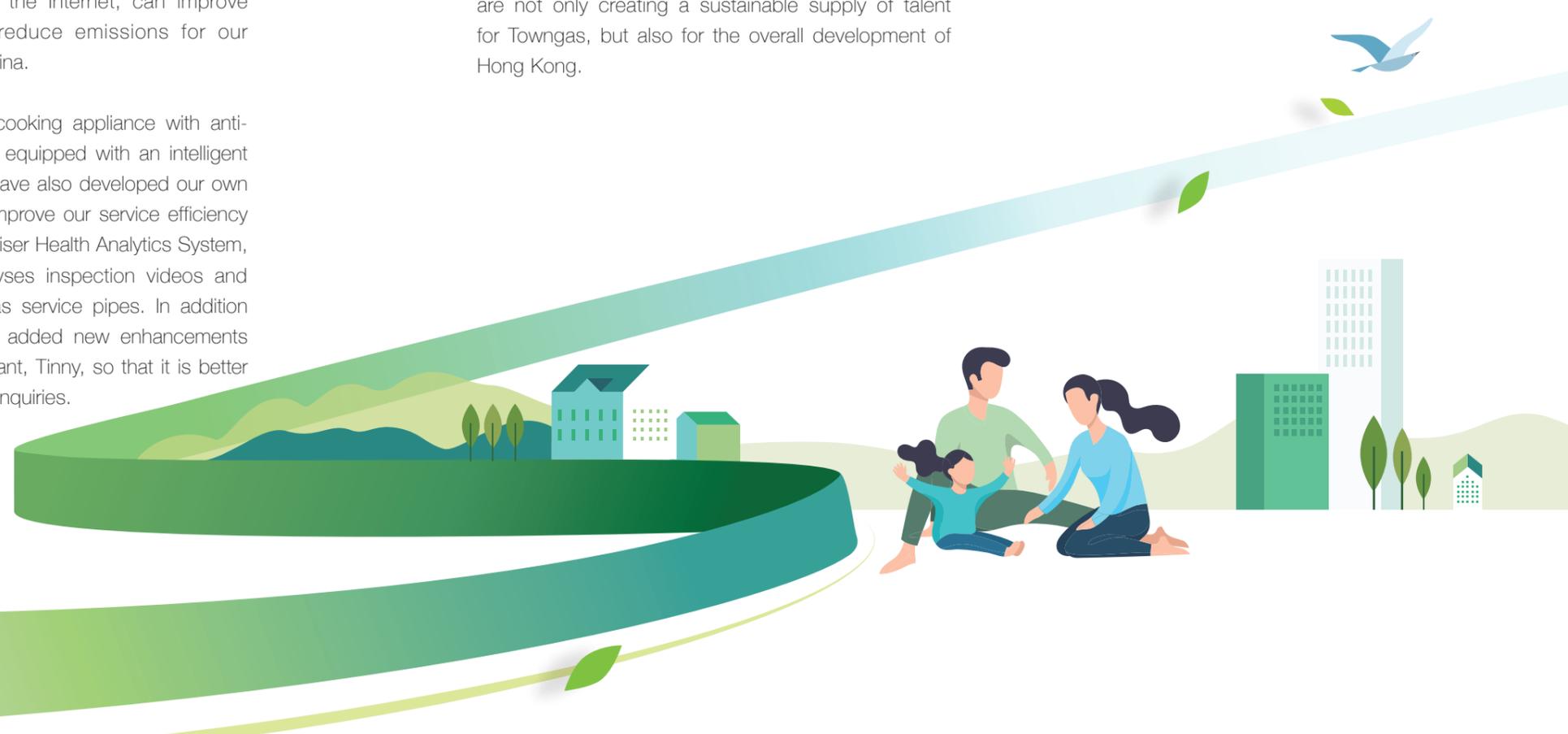
After the trials of the year just passed, we can reasonably expect a better year in 2021.

As the pandemic dies down, the economy in mainland China is expected to recover, and Hong Kong will return, albeit slowly, to GDP growth. At Towngas, we will continue to evaluate ways of improving both our business and ESG performance over the year ahead in our journey towards a more sustainable world.

I would like to thank our hard-working staff who remained dedicated to providing our customers with outstanding service during a difficult year, as well as our business partners and stakeholders in the community for their faith in us. I look forward to continuing our collaboration with stakeholders to create a better, greener future.

Alfred Chan Wing-kin

Managing Director



03 | BUILDING A BRIGHTER FUTURE AND A GREENER WORLD

The world today is facing an existential crisis of unprecedented proportions. As the challenge of environmental and climate change becomes increasingly severe, a growing number of people are recognising the urgent need to cut carbon emissions, reduce waste and use resources more responsibly.

How we cope with this challenge along with that of ageing populations across our world will define our future and the wellbeing of generations to come.

At Towngas, we have been monitoring and responding proactively to megatrends. We believe that resolving the challenges we face is within our capabilities, particularly through the use of innovation and technology. It is our hope that through the actions we are taking we can manage our risks and opportunities and contribute to sustainable development.



Climate Emergency



The Facts

- The world needs more energy to meet the needs of growing populations
- Average temperature increase must be limited to well below 2 degrees Celsius above pre-industrial levels, pursuing efforts to limit to 1.5 degrees Celsius, to avert environmental catastrophe
- The scarcity of resources is a growing concern



Risks and Opportunities

- The world is experiencing an increase in extreme weather events
- Countries are introducing new climate-related policies, regulations and environmental pledges, such as China's commitment to achieve carbon neutrality by 2060
- Taking on the challenge of sustainable energy presents opportunities for business growth



Towngas' Response

- Expand our waste-to-energy business to help create a circular economy
- Strengthen our emergency preparedness and modify our facilities to withstand extreme weather conditions
- Conducted a study to identify climate transition risks and opportunities under various scenarios and assessed Towngas' climate resilience



Digital Transformation



The Facts

- The world is becoming increasingly connected online
- 5G¹, artificial intelligence (AI), robotics, the Internet of Things (IoT) and big data are fundamentally transforming our world



Risks and Opportunities

- Companies must innovate to survive and meet customers' expectations
- Data privacy is a primary concern for customers; data leaks can damage corporate reputation
- Technology can help Towngas manage energy more efficiently and serve customers better



Towngas' Response

- Develop a smart energy business by harnessing digital technologies, such as big data, AI and the internet, to enhance energy efficiency for our customers
- Isolate sensitive customer information according to our dedicated Data Privacy Standing Committee
- Implement AI in areas such as maintenance work and processing customer inquiries to improve service efficiency and quality



Ageing Population



The Facts

- People aged 65 and above will comprise over 30% of the population of Hong Kong and mainland China by 2050



Risks and Opportunities

- An ageing workforce is a challenge for Towngas' succession plans and knowledge transfer
- Older customers have special needs on our service and products, especially with regard to safety
- Attract young people to retain essential skills



Towngas' Response

- Launched Career in a Nutshell programme to make a career in the gas industry more attractive to young people
- Develop new training programmes to build a sustainable talent pipeline
- Launched cooking appliances with an anti-scorch function for the elderly
- Introduce tailored community programmes that meet the needs of the elderly in the community

¹The fifth generation of wireless technology

04 | 2020 HIGHLIGHTS



Creating Business Opportunities

Financial Performance	Green Finance	Sustainable Business
<ul style="list-style-type: none"> Revenue HK\$40,927 million 437 projects outside Hong Kong Customer accounts: <ul style="list-style-type: none"> 1.94 million for town gas business (Hong Kong) 31.81 million for city-gas business (mainland China) 2.53 million for water business (mainland China) 	<ul style="list-style-type: none"> Towngas' HK\$734.4 million Green Bond continued to support four major waste-to-energy projects 	<ul style="list-style-type: none"> In the process of developing 2 pilot projects in Hebei province to convert agricultural waste into products such as furfural and/or cellulosic ethanol Developing a smart energy business, including solar photovoltaic power generation systems and energy storage facilities



Ensuring Health and Safety

Occupational Safety and Health	Customers and Public
<ul style="list-style-type: none"> Implemented Corporate Preparedness Plan for Infectious Diseases during COVID-19 to protect staff and contractors Accident frequency rate (Hong Kong) <ul style="list-style-type: none"> Employees : 0.32 Contractors : 0.25 accidents per 100,000 man-hours 	<ul style="list-style-type: none"> Customer-related emergency reports (Hong Kong) ↓ 35% in last five years Serious gas-related accidents (mainland China) ↓ 84% in last five years No major incidents at our chemical plants (mainland China)

Protecting the Environment



Climate Change	Resources
<ul style="list-style-type: none"> Carbon intensity of gas production (Hong Kong) <ul style="list-style-type: none"> 0.592 kg CO₂e/unit of town gas ↓ 23% compared with 2005 baseline Conducted a scenario analysis on climate-related transition risks and opportunities 	<ul style="list-style-type: none"> Electrical power consumption at Towngas' North Point Headquarters: ↓ 4.29% compared with 2019 Used Gas Appliance Recycling Programme: >1,600 tonnes of metal recovered

Contributing to Stakeholders



Employees	Customers	Community	Suppliers
<ul style="list-style-type: none"> Number of employees <ul style="list-style-type: none"> 2,495 (Hong Kong) 51,067 (outside Hong Kong) Average training hours per employee: <ul style="list-style-type: none"> 17.5 hours (Hong Kong) 	<ul style="list-style-type: none"> 99.99% supply reliability rate (Hong Kong) Set up a team of departmental data protection coordinators to enhance the effectiveness of the Privacy Management Programme 5,814 customer compliments received (Hong Kong) 	<ul style="list-style-type: none"> Volunteer service hours <ul style="list-style-type: none"> 16,633 hours (Hong Kong employees and customers) 714,300 hours (mainland utility employees) Love on Delivery programme distributed 30,000 fresh food packs to 1,000 underprivileged families 	<ul style="list-style-type: none"> Assessed over 170 major suppliers in Hong Kong and mainland China on their corporate social responsibility performance

Strengthening Corporate Governance



Risk Management	Business Ethics
<ul style="list-style-type: none"> Ensured the effectiveness of our risk management framework by continuously mitigating risks that may have a significant impact on our business 	<ul style="list-style-type: none"> Reinforced our culture of integrity and launched e-learning modules to further promote business ethics

Major Corporate Awards and Recognitions in 2020

The following awards are listed in alphabetical order. A complete list of the awards won by Towngas in 2020 is available on our [corporate website](#).

<p>Award for Excellence in Training and Development 2020 – Gold Award</p> <ul style="list-style-type: none"> • Best in Future Talent Development • HR Professionals' Favourite Campaign <p>by The Hong Kong Management Association</p> 	<p>Family Top Brand 2019</p> <ul style="list-style-type: none"> • Parents & Kids Activities – Parents & Kids Courses <p>by ESDlife</p>
<p>Caring Company</p> <p>by The Hong Kong Council of Social Service</p>	<p>Global 2000</p> <p>by Forbes</p>
<p>China IDC Industry 2020 Quality Service Award</p> <p>by China IDC Industry Annual Ceremony Organisation Committee</p> 	<p>Highest Service Hour Award 2019</p> <ul style="list-style-type: none"> • Private Organisations – Best Customers Participation – Honour • Private Organisations – Category 1 – Merit <p>by Social Welfare Department</p>
<p>Constituent Companies of the Hang Seng Corporate Sustainability Index Series</p> <ul style="list-style-type: none"> • Towngas • Towngas China <p>By Hang Seng Indexes Company Limited</p>	<p>Home Journal Best Brand Awards</p> <ul style="list-style-type: none"> • Best Kitchen Design <p>by Home Journal</p>
<p>Corporate Social Responsibility Award 2020</p> <p>by Capital Magazine</p>	<p>Hong Kong Customer Contact Association Award 2019</p> <ul style="list-style-type: none"> • Mystery Caller Assessment Award – Commerce and Public Utilities – Gold Award <p>by Hong Kong Customer Contact Association</p> 
<p>Customer Service Excellence Award 2019</p> <ul style="list-style-type: none"> • Grand Award – Silver Award • Digital Transformation Award –Gold Award • Team Award – Field & Special Service – Bronze Award <p>by Hong Kong Association for Customer Service Excellence</p> 	<p>Hong Kong Service Awards 2020</p> <ul style="list-style-type: none"> • Public Utilities <p>by East Week</p>
<p>Elite Awards 2019 – Star Cooking School Award</p> <p>by Ming Pao Weekly</p>	<p>HSBC Living Business Award</p> <ul style="list-style-type: none"> • Sustainable Supply Chain Leaders <p>by Business Environment Council</p> 
<p>Employer of Choice Award 2020</p> <ul style="list-style-type: none"> • Employer of Choice Award • Corporate Social Responsibility Award • Corporate Sustainability Award <p>by Job Market Publishing Limited</p>	<p>IFAPC Outstanding Listed Companies Award 2020</p> <p>by The Hong Kong Institute of Financial Analysts and Professional Commentators Limited</p> 
	<p>IFPHK Financial Education Leadership Award 2020</p> <ul style="list-style-type: none"> • Corporate Financial Education Leadership – Gold Award <p>by Institute of Financial Planners of Hong Kong</p>

<p>iMoney Brand Awards 2020</p> <ul style="list-style-type: none"> • Professional Culinary School Brand Award <p>by iMoney</p>	<p>The 8th ib Design Excellence & Remarkable Brand Awards</p> <ul style="list-style-type: none"> • Remarkable Brand – Mia Cucina <p>by Interior Beauté</p>
<p>Manpower Developer Award Scheme (2018 – 2020)</p> <ul style="list-style-type: none"> • Manpower Developer Grand Prize Award <p>by Employees Retraining Board</p> 	<p>The 19th Hong Kong Occupational Safety and Health Award</p> <ul style="list-style-type: none"> • Safety Management System Award – Gold • 5S Good House Keeping Best Practices Award – Gold • OSH Annual Report Award – Gold • Best Workspace Infection Control Measures Award – Silver • Safety Performance Award <ul style="list-style-type: none"> (i) The Hong Kong and China Gas Company Limited (ii) Towngas Telecommunications Company Limited (iii) U-Tech Engineering Company Limited (iv) P-Tech Engineering Company Limited <p>by Occupational Safety and Health Council</p> 
<p>Sing Tao Service Awards 2019</p> <ul style="list-style-type: none"> • After-sales Services Award <p>by Sing Tao Daily</p> 	<p>U Favourite Food Awards 2020</p> <ul style="list-style-type: none"> • U Favourite Great View Restaurant <p>by U Magazine</p>
<p>The 1st Greater Bay Area Business Sustainability Index</p> <ul style="list-style-type: none"> • Ranked First • Exemplar Level <p>by The Chinese University of Hong Kong</p> 	<p>2019 Hong Kong Awards for Environmental Excellence</p> <ul style="list-style-type: none"> • Public and Community Services – Gold Award <p>by Environmental Campaign Committee</p> 
<p>The 5th Hong Kong Business Sustainability Index -</p> <ul style="list-style-type: none"> • Ranked First • Exemplar Level <p>by The Chinese University of Hong Kong</p> 	<p>The 8th Hong Kong Volunteer Award</p> <ul style="list-style-type: none"> • Corporate Award <p>by Agency For Volunteer Service</p> 

Categories of Awards:

- Business and Service
- Environment
- Governance
- Health and Safety
- Social

05 | OUR ESG APPROACH

The Hong Kong and China Gas Company Limited (Towngas) is committed to putting environmental, social and governance (ESG) issues at the forefront of our business as part of our effort to create a sustainable world. This is reflected in our Vision and Mission, which guide us in our evolving ESG strategy for the benefit of future generations.

To articulate our ambition of creating a sustainable future, we developed an ESG Framework that is aligned with our Vision, Mission, Commitment and Responsibility. This framework has been endorsed by our ESG Committee.



VISION

- To be Asia's leading clean energy supplier and quality service provider, with a focus on innovation and environmental friendliness.



MISSION

- To provide our customers with a safe, reliable supply of energy and the caring, competent and efficient service they expect, while working to preserve, protect and improve our environment.



COMMITMENT

- To conduct ourselves in an ethical and transparent manner so that all stakeholders know we are accountable to them for the decisions and actions we take to become a sustainable business.



RESPONSIBILITY

- To recognise the importance of our employees and their contributions to the success of our business, and our responsibility to keep them safe, informed, engaged and equipped to undertake our mission.

ESG Framework

The ESG framework we have developed takes into consideration both our positive and negative impacts on stakeholders. It articulates five focus areas for sustainable development: creating business opportunities; ensuring health and safety; protecting the environment; contributing to stakeholders; and strengthening corporate governance.

Our framework centres on our philosophy of "Growth = innovation x implementation". Under this philosophy, we invest in innovation and creativity through research and development while also encouraging our employees to propose new ideas.

We will continue to focus on these five areas in order to achieve the long-term sustainability of our business and create shared value for our stakeholders.



Supporting the Sustainable Development Goals

As a responsible energy supplier, we support the United Nations Sustainable Development Goals (SDGs) so that we can help to overcome the global challenges we all face and achieve a better and more sustainable future.

Among these SDGs, we selected four that are most relevant to our operations and value chain and could make the greatest positive contribution. We also took into consideration any potential negative impacts on our operations, including our risks to people and the environment, and decided which of our products, services or investments would contribute most to the SDGs. In addition, we reviewed the impacts and contributions of all SDGs for our company at each stage of our value chain.

To help our staff understand Towngas' commitment to the four SDGs, we organised seminars on each SDG during the year.

How we are contributing to SDGs



Ensure availability and sustainable management of water and sanitation for all

Potential Impacts

- Deliver a safe and reliable supply of drinking water to our customers
- Production processes consume/generate significant amount of water/wastewater

Actions Taken/Achievement

- **2.53 million** customer accounts with drinking water up to national standard
- **3rd** reverse osmosis system to be installed at Tai Po Gas Production Plant



Ensure access to affordable, reliable, sustainable and modern energy for all

Potential Impacts

- Expedite our coverage of gas supply and promote fuel conversion to gas
- Develop a clean energy business
- Fossil fuels as the major raw materials of town gas production

Actions Taken/Achievement

- **1.94 million** town gas customer accounts in Hong Kong
- **31.81 million** city-gas customer accounts in mainland China
- Increased resources for town gas production – Landfill gas accounts for approximately **1%** of our fuel mix
- Continued to develop **distributed energy systems and smart energy** businesses
- **2** research facilities in Shanghai city and Suzhou city, with ongoing research for launch of biomass utilisation and sustainable aviation fuel in 2021



Make cities and human settlements inclusive, safe, resilient and sustainable

Potential Impacts

- Provide a safe and reliable supply of energy
- Promote recycle and reuse within our company's businesses and for customers
- Produce both hazardous and non-hazardous waste during business operations and along the value chain

Actions Taken/Achievement

- Town gas supply reliability: **99.99%**
- **84% reduction** of serious gas-related accidents (mainland China) in last five years
- In the process of developing **2** pilot projects in Hebei province to convert agricultural waste into products such as furfural, paper pulp and cellulosic ethanol
- Expanded hydro-treated vegetable oil (HVO) plant in Zhangjiagang city to convert inedible bio-grease feedstock into an advanced biofuel, bringing annual production capacity to **250,000 tonnes**
- **>1,600 tonnes** of metal recovered through Used Gas Appliance Recycling Programme



Take urgent action to combat climate change and its impacts

Potential Impacts

- Promote a low-carbon lifestyle along our value chain
- Physical and transition risks that affect our operations and businesses
- Generate greenhouse gas emissions that accelerate climate change

Actions Taken/Achievement

- Identified **climate-related transition risks and opportunities** under various scenarios, and assessed Towngas' climate resilience to align with Task Force on Climate-related Financial Disclosures (TCFD) recommendations
- Climate Change Risk Assessment extended from Hong Kong to mainland China
- **23% reduction** of carbon intensity in Hong Kong compared with the 2005 baseline
- Partnership with green groups to promote environmental protection and sustainable development



Managing ESG at Towngas

Towngas has established an ESG Committee that is responsible for overseeing the Company's ESG strategies, policies and practices. Headed by the Managing Director of the Company, Mr Alfred Chan Wing-kin, this Committee comprises eight Executive Committee members and two members of senior management. The Chairman, who is appointed by the Towngas Board of Directors, reports ESG matters to the Board.

Together, the ten members represent different areas of our business, including operations, finance, human resources, engineering, commercial, health, safety and the environment, and community engagement. The Committee is thus able to facilitate the decision-making of the Board and contribute to the sustainable growth of the Company.

The ESG Committee is responsible for identifying and reviewing ESG issues, risks and opportunities; tracking ESG performance and recommending strategies to improve it; reviewing and evaluating the annual ESG Report and recommending its endorsement by the Board/Executive Committee; and providing updates to the Board/Executive Committee on the latest relevant ESG matters.

In 2020, the ESG Committee met on two separate occasions.

Members of the ESG Committee

Mr Alfred Chan Wing-kin (Chairman)
Managing Director

Mr Peter Wong Wai-ye
Deputy Managing Director

Mr John Ho Hon-ming
Executive Director, Chief Financial Officer and Company Secretary

Mr Philip Siu Kam-shing
Chief Operating Officer – New Energy Business

Mr Simon Ngo Siu-hing
Head of Engineering – Hong Kong Utilities

Miss Fan Kit-ye
Head of Corporate Human Resources

Mr Daniel Fung Man-kit*
Head of Strategy & Innovation and Commercial – Hong Kong Utilities

Mr Martin Kee Wai-ngai*
Executive Vice President, Hong Kong and China Gas Investment Limited and Hua Yan Water

Mr Isaac Yeung Chung-kwan
Head of Corporate Affairs

Mr Victor Kwong Chiu-ling
General Manager – Corporate Sustainability

* New members (effective 1 July 2020)

Key ESG Topics Discussed by the ESG Committee



ESG Reporting

The Committee was briefed on the new requirements of the Hong Kong Stock Exchange's updated ESG Reporting Guide and discussed the approach that should be taken to meet the new requirements. The Chairman of the Committee reviewed the 2020 materiality assessment and acknowledged the changes in material issues from the 2019 materiality matrix.



ESG Enhancement

The Committee discussed the increasing interest in ESG issues among stakeholders and our approach for enhancing Towngas' ESG performance. Related preparation work, including the establishment of targets under the ESG framework, is continuing.



Climate Risks and Opportunities

The Committee was briefed on the ongoing work to align with the recommendations of the TCFD. The Committee acknowledged the key transition risks and opportunities, as well as the resilience of Towngas' assets and operations under different scenarios. For more details on the study, please refer to the **Climate Transition Risks and Resilience** section.



Community Investment

The Committee reviewed and supported the community initiatives undertaken by Towngas in 2020, in particular initiatives related to COVID-19. For more details on our community initiatives during the year, please refer to the **Community** section.

Stakeholder Engagement

We engage in ongoing dialogues with stakeholders in order to understand their expectations of Towngas with regard to our sustainability performance. From what we learned in these discussions, we are able to formulate an ESG strategy that answers their concerns, reduces our risks and aligns with their values.

Stakeholder Engagement Approach

Our key stakeholders comprise both internal and external stakeholders who are significantly affected by our operations, or are expected to be affected by our business, as summarised in the graphic below.

Regular Engagement Channels



Employees

- Employee surveys and meetings
- Feedback channels (e.g. suggestion boxes, Talk to MD)
- Internal publications (e.g. bulletins, newsletters)
- Intranet
- Ambassador programmes/activities
- Social media platforms (e.g. Yammer in Hong Kong, WeChat and Weibo in mainland China)



Customers

- Publications (e.g. newsletters and leaflets)
- Company websites, social media platforms and the Towngas App
- Regular maintenance visits, safety inspections and safety talks
- Customer Focus Team
- Surveys and focus groups
- Customer Service Hotline
- Customer centres



Contractors and Suppliers

- Seminars and workshops
- Supplier assessment system (e.g. factory audits)
- Management meetings and supplier conferences
- Site/factory visits



Local Communities

- District Council Focus Team
- Community programmes
- Working Committees
- Towngas Volunteer Service Team



NGOs

- Green partnerships and community programmes
- Meetings
- Questionnaires



Professional Bodies and Regulators

- Working groups and committees
- Seminars, visits and workshops



Investors

- Annual General Meeting
- Annual and interim reports
- Analyst and investor briefings for interim and annual results
- Company website (especially the "Investor Relations" Section's Announcements and Circulars and other correspondences) and publications
- Non-deal roadshows
- Investment conferences
- Investor meetings and telephone conferences
- Meetings and regular communications with credit rating agencies (S&P and Moody's)
- Site visits



Case Study

In 2020 we launched our ESG Enhancement Plan with the aim of improving our ESG performance and awareness. We also organised the first Group-wide Sustainability Award, which encourages our staff and project companies to create innovative, long-term sustainable development projects. Three awards were available:

 <p>Environmental Excellence Award to promote the use of advanced technologies in waste treatment, as well as continuous waste reduction and recycling</p>	 <p>Social Participation Award to recognise our joint ventures and departmental efforts to combat the COVID-19 pandemic through innovative measures, social participation and employee caring programmes</p>	 <p>Sustainability Award to acknowledge project continuity and influence</p>
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A series of ESG trainings and publications, as well as other ESG related activities, will be rolled out in 2021.

Materiality Assessment

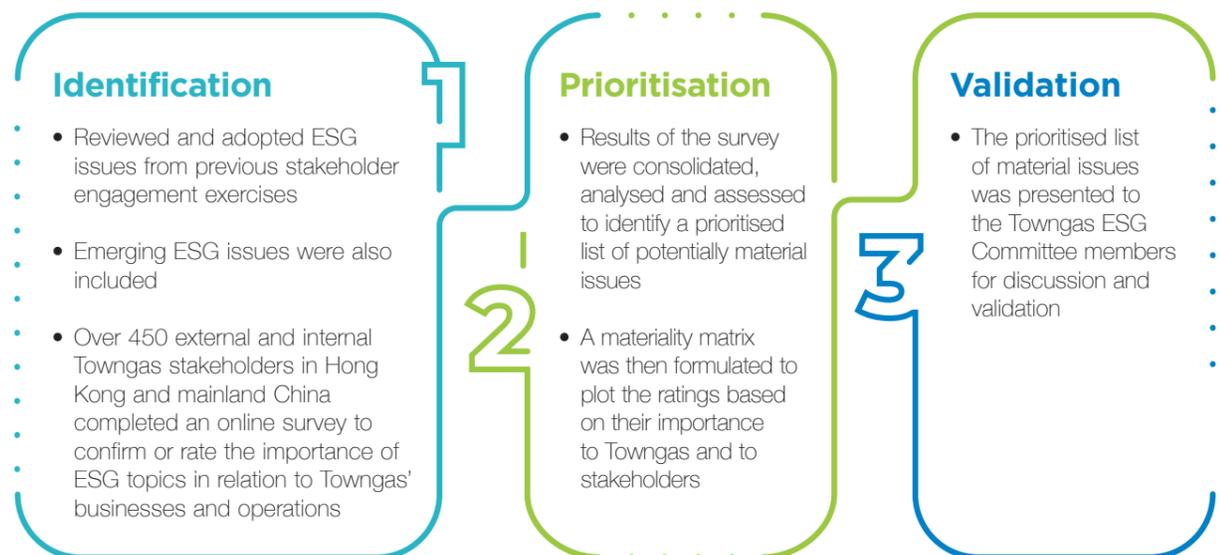
To ensure our ESG Report addresses topics that reflect Towngas' significant economic, environmental and social impacts, we conduct a series of stakeholder engagement activities every year.

In preparing our materiality assessment, we adopted the internationally recommended three-step process of Identification, Prioritisation and Validation.

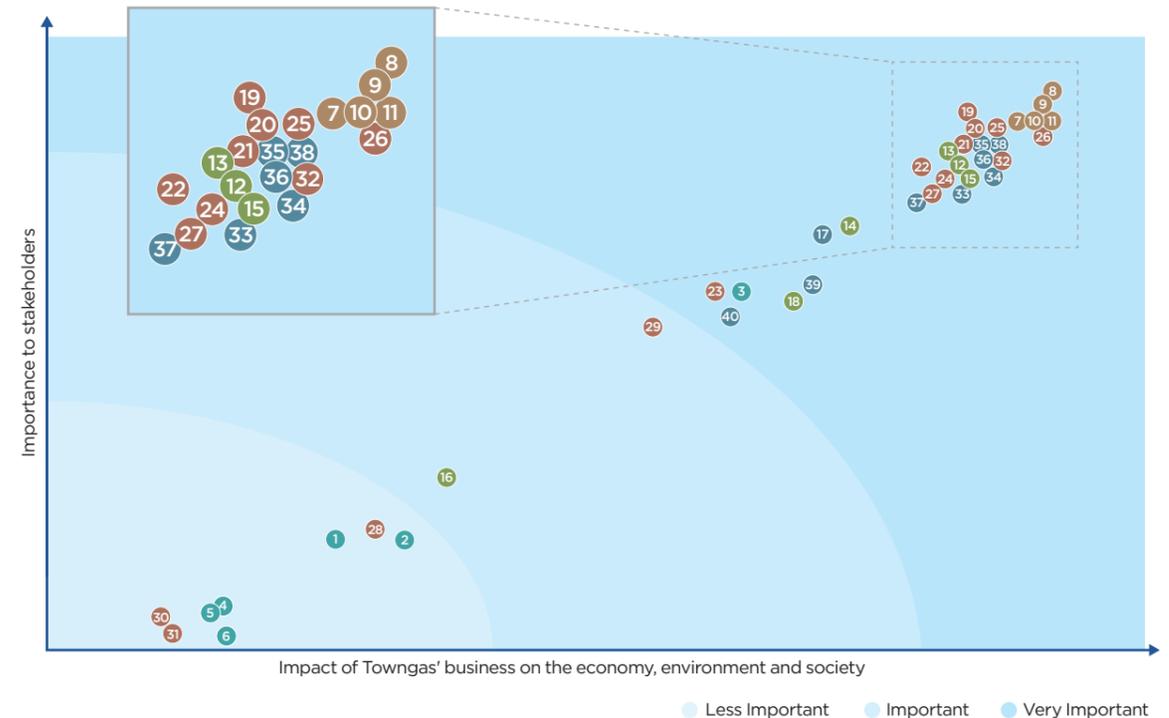
We mapped the materiality of 40 issues, with the most important issues listed at the top right quadrant of the matrix, while less important issues are found at the bottom left. Issues shown in the middle of the matrix are those we have identified as emerging in importance.

A total of 23 issues were prioritised as material for Towngas to address and report on.

The material issues identified remain similar to those of last year, with safety and customer privacy continuing to be the most important. Additionally, two emerging issues were identified as important: supply security and reliability, and a future-proof workforce. This indicated that our stakeholders are concerned with how we guarantee the supply of goods and services, as well as how we upskill employees and attract new talent with the skills needed to capture opportunities arising from emerging technologies, automation and digitalisation.



Towngas 2020 Materiality Matrix



Creating Business Opportunities

- 1 Direct economic value
- 2 Financial risks and opportunities associated with ESG issues
- 3 Direct economic contribution
- 4 Indirect economic impacts
- 5 Economic impacts of procurement practices
- 6 Reserves and production

Ensuring Health and Safety

- 7 A safe and healthy work environment
- 8 Asset integrity and process safety
- 9 Customer health and safety
- 10 Project/engineering quality assurance
- 11 Emergency preparedness

Protecting the Environment

- 12 Greenhouse gases and other air emissions
- 13 Water and effluents
- 14 Waste
- 15 Energy
- 16 Materials
- 17 Protection of ecosystem services
- 18 Fossil fuel substitutes

Contributing to Stakeholders

- 19 Employment management system
- 20 Employer-employee relations
- 21 Training and development
- 22 Diversity, equal opportunity and non-discrimination
- 23 Respect for the rights of association and collective bargaining
- 24 Responsible marketing communications
- 25 Quality management and after-sales service
- 26 Customer privacy and cybersecurity
- 27 Supplier environmental and social assessment
- 28 Community engagement, impact assessment and investment
- 29 Respect for indigenous rights
- 30 Involuntary resettlement
- 31 Participation in public policy
- 32 Future-proof workforce*
- 33 Supply security and reliability*
- 34 Accelerated digitalisation*
- 35 Provision of community crisis support*

Strengthening Corporate Governance

- 36 Anti-corruption
- 37 Prevention of anti-competitive practices
- 38 Prevention of child labour or forced labour
- 39 Respect for human rights
- 40 Protection of intellectual property rights

* Emerging issues

The table below prioritises the top 23 material issues for Towngas to address and report on in 2020 and their corresponding boundaries, where the impacts occur and Towngas' involvement in them.

Material Issues	Boundaries				Impacts
	Employees	Contractors and Suppliers	Customers	Community	
7. A safe and healthy work environment	🍃	🍃			Ensuring Health and Safety
8. Asset integrity and process safety	🍃	🍃	🍃	🍃	
9. Customer health and safety	🍃	🍃	🍃		
10. Project/engineering quality assurance	🍃	🍃	🍃	🍃	
11. Emergency preparedness	🍃	🍃	🍃	🍃	
12. Greenhouse gases and other air emissions	🍃	🍃	🍃	🍃	Protecting the Environment
13. Water and effluents	🍃	🍃	🍃	🍃	
15. Energy	🍃	🍃	🍃		
19. Employment management system	🍃	🍃			Contributing to Stakeholders
20. Employer-employee relations	🍃	🍃			
21. Training and development	🍃	🍃			
22. Diversity, equal opportunity and non-discrimination	🍃	🍃			
24. Responsible marketing communications	🍃	🍃	🍃		
25. Quality management and after-sales service	🍃	🍃	🍃		
26. Customer privacy and cybersecurity	🍃	🍃	🍃		
27. Supplier environmental and social assessment	🍃	🍃			
32. Future-proof workforce*	🍃	🍃			
33. Supply security and reliability*	🍃	🍃	🍃	🍃	
36. Anti-corruption	🍃	🍃	🍃	🍃	Strengthening Corporate Governance
37. Prevention of anti-competitive practices	🍃	🍃	🍃		
38. Prevention of child labour or forced labour	🍃	🍃			
39. Respect for human rights	🍃	🍃	🍃		
40. Protection of intellectual property rights	🍃	🍃			

* Emerging issues

Stakeholder Engagement Results and Our Response 🍃

In line with our annual arrangement, in 2020 we organised focus group sessions, telephone interviews and an online survey with our internal and external stakeholders. Through this exercise, we came to understand the key issues that are important to our stakeholders, such as exploring new business opportunities and further strengthening our health and safety measures during the pandemic. Recognising the importance of these issues to stakeholders allows us to focus on improving our performance.

The table below indicates the key issues and stakeholder feedback from the engagement process and our corresponding responses:



New Business Opportunities

Stakeholders' Feedback

“ Explore different renewable energy development or environmental protection business options in the market. ”

Our Response

We understand that we are heading towards a decarbonised world. Towngas has considered its business model and explored opportunities that may arise from this transition. As gas continues to play an important role as a lower-emissions fossil fuel for the transition, we are diversifying our portfolio to pursue a low-carbon and circular economy. Please refer to the **Transitioning to a Low-carbon Future** section for more details. ”



Innovation

Stakeholders' Feedback

“ Adopt further innovations to create business opportunities. ”

Our Response

Building a culture of innovation is important to our business development and for addressing sustainability challenges. We have established various platforms and initiatives to encourage creativity among our employees, instil an innovative mindset and promote the growth of our business. We will further expand our communication channels to share our innovation experiences across the value chain and spread related knowledge. Please refer to the **Innovation in Action** section for more details. ”



Pandemic Response

Stakeholders' Feedback

“ Ensure a safe and healthy environment for our stakeholders and support our community. ”

Our Response

A dedicated taskforce, led by our top management, has been established to provide comprehensive measures to protect our employees, contractors and customers. Please refer to the **Safety during the COVID-19 pandemic** section for more details. Various programmes were also launched to address the needs of the community; more details are available at the **Supporting people during COVID-19** section. ”

Innovation in Action

Innovation is an important element of our corporate culture at Towngas. To encourage new and innovative ideas that benefit our business, we have established a number of platforms and initiatives that inspire our staff and help them to acquire an innovative mindset.

The Innovation Funding programme we set up in Hong Kong in 2016 provides financial incentives for our staff to develop creative new proposals that support our business expansion in any part of the Company. In 2019, the Funding was extended to mainland China. So far, we have disbursed up to HK\$1.78 million in grants for 21 projects undertaken in both Hong Kong and mainland China. In 2020, four new projects were approved and under development.

We also share information about emerging technologies at Towngas and the industry through our publication, *Innovation Headlines*, as well as through seminars, company tours and social platforms such as Facebook, Yammer and WeChat.

Innovation Platforms at Towngas

Dream Zone

Dream Zone is a collaborative, relaxed venue conducive to creative thinking. It provides information on various innovation tools with a space reserved for brainstorming.

Towngas Hall of Innovation

This showcase of original concepts developed by colleagues features ideas that have enhanced Towngas' service and efficiency. It was relocated to a larger venue in 2020 in order to display more inventions in future.



G = i x i Lab

The G = i x i Lab, equipped with a 3D printer and scanner, is a place where staff can turn creative ideas into practical applications.

Key Innovation Projects

As an innovation-driven company, we are taking advantage of the trend in digital transformation to produce advanced new features that make our gas facilities safer and more convenient for customers. Many of the innovations developed at Towngas, including those that are part of our smart home concept, are created by our staff with financial assistance from our Innovation Funding programme.

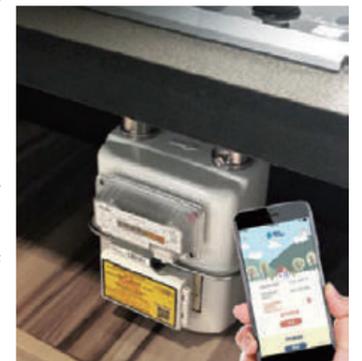
Optical Light Back Protection Device

This Optical Light Back Protection Device detects light instead of sensing temperatures inside a gas cooking appliance. As a result, the detection time is shortened, reducing the possibility of damage to the appliance while also contributing to better gas safety.

Smart Gas Meter

By adding an internal valve and intelligent control logic unit, our smart gas meters now include over-flow detection, continuous leakage detection and regular safety inspection alert functions. This ensures the gas supply is automatically cut off and that Towngas is notified if any abnormalities are detected.

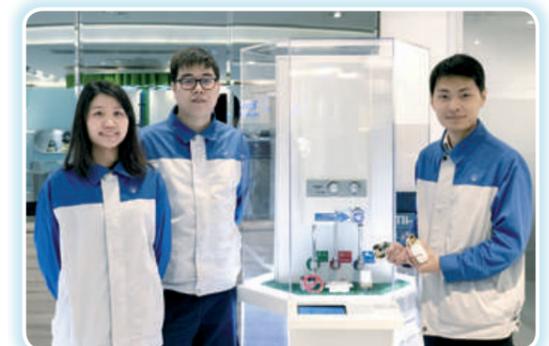
We also introduced a new device which was invented to upgrade the meters currently in use in older buildings. This device could be mounted easily onto the gas meter to automatically report the meter reading to our system via home Wi-Fi on a monthly basis, thus eliminating the tedious chore of taking meter readings manually while enhancing accuracy of meter reading.



“

Thanks to the Innovation Funding programme, we were able to develop the Water Heater Hydropower Generator Module, which converts the energy generated by flowing water into electricity for igniting an appliance. Batteries are no longer required.

From concept to development, the entire project took us nearly two years to complete, and installation of the module in existing water heaters is ongoing. The module not only adds convenience for our customers but also reduces the impact of discarded batteries on the environment.



”

06 | CREATING BUSINESS OPPORTUNITIES



Turning Promises into Action

Although global carbon emissions fell by a record 7 per cent in 2020 because of the COVID-19 pandemic, this was only a temporary respite from issues associated with the worldwide climate emergency. At Towngas, we have the resources, expertise and determination to take on the challenges of climate change through the innovative research we do in green technologies and the investments we make in green businesses. With these and the other measures we have undertaken, we are well positioned to make a significant contribution towards a more sustainable future for our stakeholders and the world at large.

Management Approach

In line with our vision to be Asia's leading supplier of clean energy, we have been developing more sustainable forms of energy that will substantially transform our business in years to come.

We recognise that the global energy transition currently under way poses not a challenge to our business of supplying gas in Hong Kong and mainland China, but an opportunity. By diversifying into related businesses such as clean energy and smart energy, we can play a leading role in this transition.

Beyond developing new forms of energy, we will also continue to capture business opportunities in sectors such as waste treatment, water supply and telecommunications. By taking advantage of these opportunities, we can remain commercially competitive and thrive under the new green economy.

Progress Areas

Growth of Our Business

Towngas is a limited liability company incorporated and headquartered in Hong Kong and listed on The Stock Exchange of Hong Kong Limited (Stock Code: 3). Founded in 1862, Towngas was Hong Kong's first public utility. Today, we are one of the largest energy suppliers in Hong Kong, operating with world-class corporate management and leading-edge business practices. For the past years, Towngas has evolved from the simple gas company supplying fuel for street lamps to our current leading position in the energy industry of mainland China and beyond.

In addition to our Hong Kong operations, Towngas today has a portfolio that includes 436 projects¹ in 27 provinces, autonomous regions and municipalities in mainland China, as well as one in Thailand.

For details on the changes in our business portfolio during the year, please refer to our **Annual Report 2020**.

Business Profile in 2020

HONG KONG



- Town gas
- Sales of branded gas appliances

Town gas sales:
27,947 million MJ

Customer accounts served:
>1.94 million

Sales of gas appliances:
>250,000 units

MAINLAND UTILITIES



- City-gas
- Midstream facilities
- Water supply and wastewater treatment
- Sales of gas appliances and kitchen furnishings
- Smart energy projects

Gas sales:
26.9 billion m³

Number of city-gas customer accounts:
31.81 million

Sales of gas appliances:
>800,000 units

Water sales:
917 million tonnes

Number of water customer accounts:
2.53 million

¹. 2019 year end: 406 projects, inclusive of city-gas projects re-invested by the Group's companies

NEW ENERGY AND DIVERSIFIED BUSINESSES



- Green energy
- Telecommunications
- Information technology
- Civil and building services engineering
- Manufacture of gas-related products

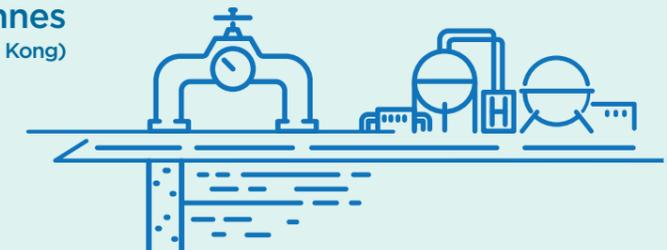


Vehicle fuel:
5 LPG refilling stations
(Hong Kong)

>40 LNG/CNG refilling stations
in operation or under construction
(mainland China)



Aviation fuel:
approximately
3.3 million tonnes
(Hong Kong)



Coalbed methane ▶▶ LNG:
approximately
180,000 tonnes
(mainland China)

Coal ▶▶ Methanol:
>254,000 tonnes
(mainland China)

Waste oil ▶▶ HVO:
approximately
88,000 tonnes
(mainland China)

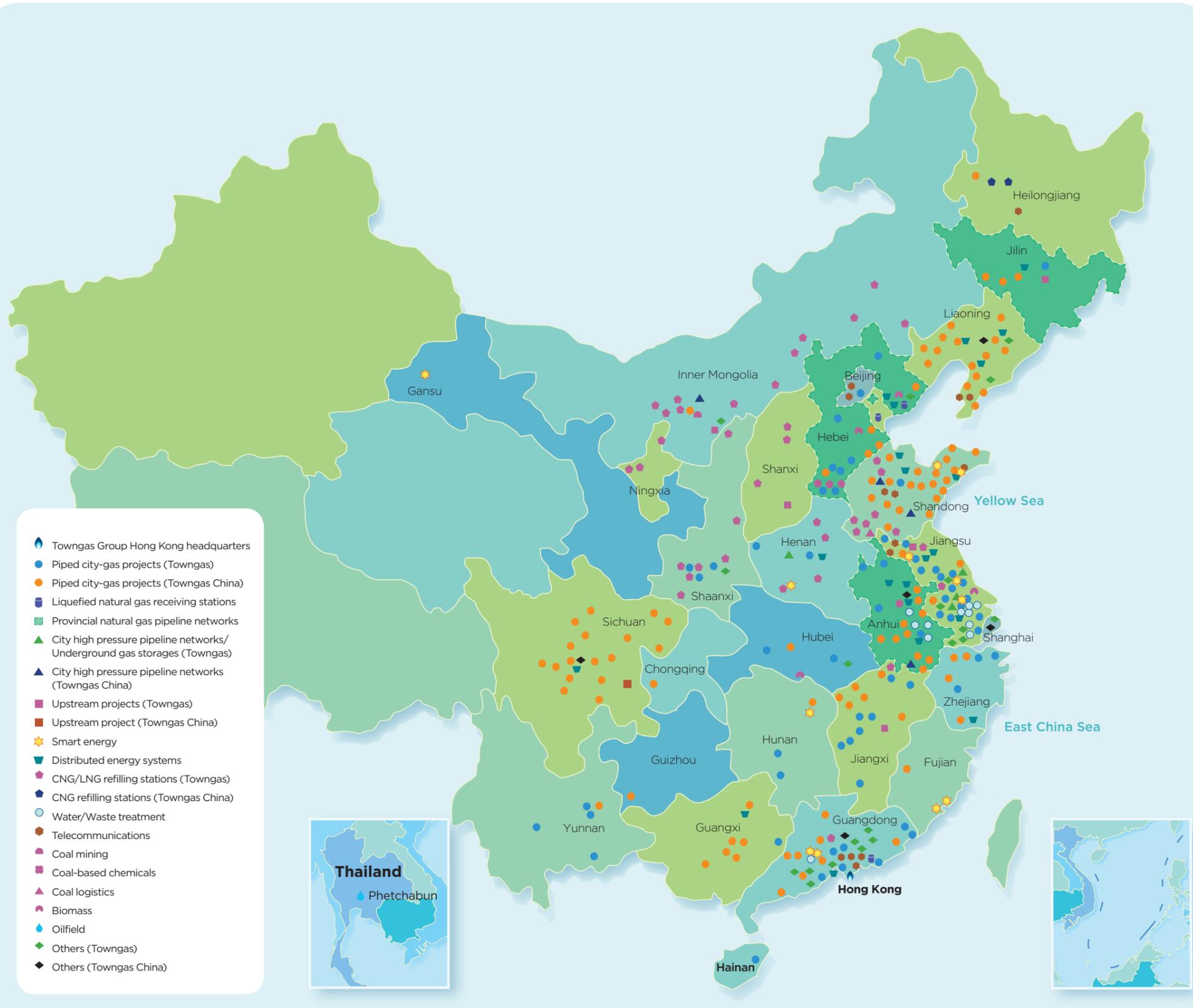
Coal ▶▶ Ethylene glycol:
approximately
30,000 tonnes
(mainland China)

Data centres:
7 in Hong Kong and mainland China,
accommodating up to **16,000**
server racks



For a full summary of Towngas' roles and services, please refer to the **Appendix I: Our Roles and Services** section.

Business Coverage in 2020



Financial Analysis



Revenue
HK\$40,927 million

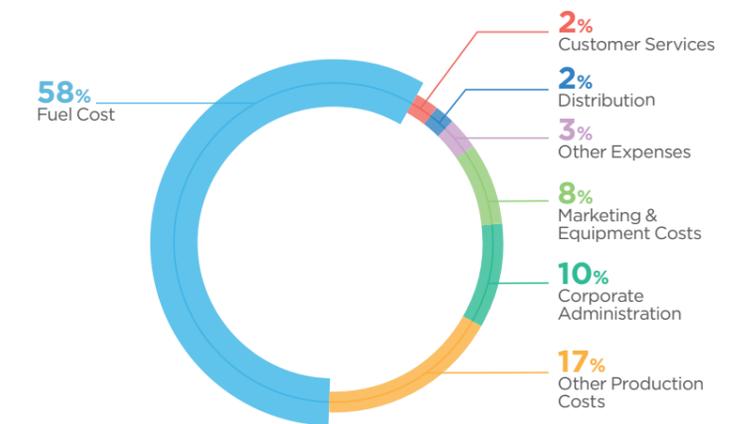


Capital Expenditure
HK\$7,295 million

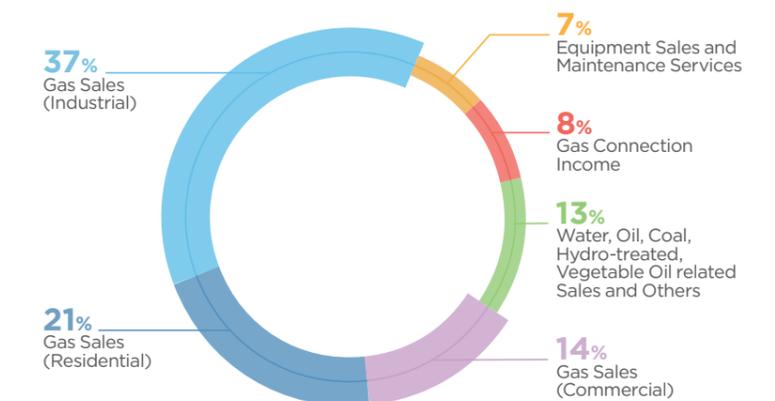


Manpower Costs
HK\$3,284 million

Analysis of Expenditures



Analysis of Revenue



Green Financing

Our green initiatives are financed according to our Towngas Green Bond Framework. In late 2017, we became the first energy utility in Hong Kong to issue green bonds. We obtain post-issuance stage certification from the Hong Kong Quality Assurance Agency (HKQAA) under its Green Finance Certification Scheme in order to reinforce investor confidence.

More information about our Green Bond Framework is available on our [corporate website](#).

Use of Proceeds

Our Green Bond was issued through a HK\$600 million (ISIN HK0000375300) and a JPY2 billion (ISIN XS1720566790) transaction under the Medium-Term Note Programme. Proceeds from the green bond of HK\$734.4 million have been allocated to the following four waste-to-energy projects:

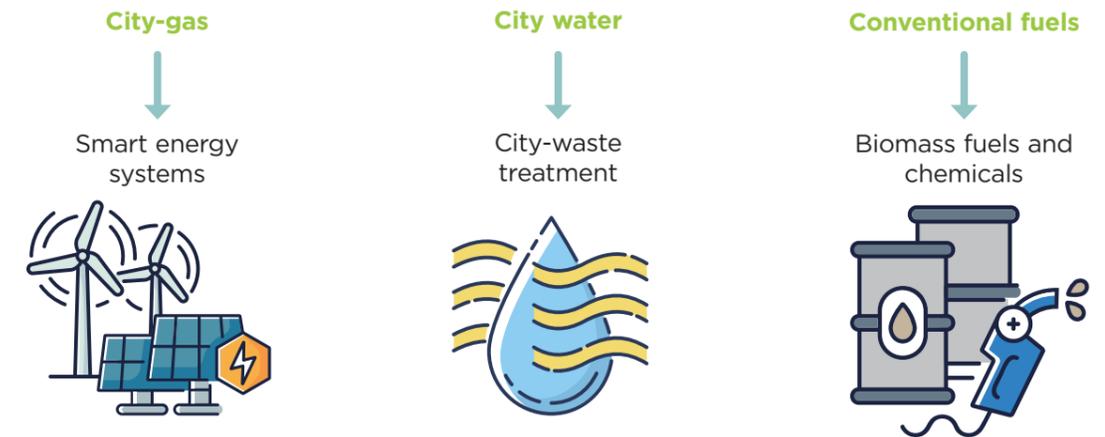
Project Category	Location	Equity	Estimated Project Cost (millions)	Amount and Ratio Allocated (HK\$ millions)	
				ISIN HK0000375300	ISIN XS1720566790
Landfill Gas Utilisation	Tseung Kwan O, Hong Kong	100%	HK\$350	145.0 (24.3%)	35.0 (25.4%)
Kitchen Waste Processing (Waste to Energy)	Suzhou city, Jiangsu province	55%	RMB220	23.0 (3.9%)	24.0 (17.5%)
Hydro-treated Vegetable Oil (Waste to Energy)	Zhangjiagang city, Jiangsu province	100%	RMB935	400.0 (67.0%)	56.0 (40.7%)
Agricultural Waste to Green Chemicals and Paper Pulp	Tangshan city, Hubei province	100%	RMB355.5	28.9 (4.8%)	22.5 (16.4%)

Project Update

Project Category	Estimated GHG reduction (tCO ₂ e/yr)	Project Progress
Landfill Gas Utilisation	12,200	<ul style="list-style-type: none"> In full operation in 2020 Sent out 191TJ equivalent synthetic natural gas to town gas network in 2020
Kitchen Waste Processing (Waste to Energy)	5,900	<ul style="list-style-type: none"> Officially commissioned in September 2020 Handled 92,000 tonnes of wastes in 2020
Hydro-treated Vegetable Oil (Waste to Energy)	259,000	<ul style="list-style-type: none"> Officially commissioned in Q3 2020 Produced 88,000 tonnes of HVO in 2020 Received International Sustainability and Carbon Certification for the fourth year
Agricultural Waste to Green Chemicals and Paper Pulp	120,000	<ul style="list-style-type: none"> In partial trial production and is expected to commence full-scale trial production in Q2 2021 Expected to be commissioned in Q3 2021

Transitioning to a Low-carbon Future

Towngas is helping to fulfil the demand for the energy required to power economic growth as well as reduce emissions contributing to climate change. The challenge of sustainable energy presents an opportunity for the growth of our businesses, as we transition to a more sustainable business model:



The Role of Natural Gas in Energy Transition

As a leading energy supplier in Hong Kong and mainland China, we see natural gas as a critical component in the transition from fossil fuels to renewables.

Towngas has been working closely with commercial and industrial customers, such as hotels, hospitals and commercial laundries, to switch from coal/diesel to gas. We are also promoting the use of gas-powered desiccant dehumidifiers to improve indoor air quality and reduce energy consumption, thereby lowering carbon emissions. In 2020, we worked with Hong Kong Baptist Hospital to install the first integrated desiccant system for hospital wards in Hong Kong. Having proved the greater effectiveness of these dehumidifiers over traditional versions, we are planning to introduce them in mainland China, especially in hospitals and hotels.

In 2020, we extended our city-gas business in mainland China to 23 provinces, autonomous regions and municipalities, and served approximately 31.81 million customer accounts. A new agreement was recently signed with Shanghai Gas Company Limited (Shanghai Gas) to strengthen our business growth, profit potential and assets size, and promote the long-term growth of the natural gas industry. Shanghai Gas is the major energy supplier to the city of Shanghai, with a share of more than 90 per cent of the local natural gas market.

We are also expanding our own gas storage capacity on the mainland with the construction of a natural gas storage facility in underground salt caverns in Jintan district, Changzhou city, Jiangsu province. Construction of this project is proceeding in phases. Total storage capacity will eventually reach 1.1 billion cubic metres, enabling the Group to supplement gas supplies in eastern China during the peak winter period.

In addition, we are developing a smart energy business that includes solar photovoltaic power generation systems and energy storage facilities. Coupled with the application of big data, artificial intelligence and the Internet to enhance energy utilisation and dispatch efficiency, Towngas is helping to conserve energy and reduce emissions, while also generating economic benefit.

Development of New Energy and Unconventional Energy

In the process of bringing about the transition to cleaner fuels, we have identified several opportunities that are playing an increasingly important role in our business development.

One example is the research and development we have been carrying out on biomass utilisation through our wholly owned subsidiary, ECO Environmental Investments Limited (ECO), the business platform we founded 20 years ago for pursuing opportunities in new energy. It has developed proprietary technologies for converting inedible bio-grease and agricultural waste into high-value products, which have been implemented in a number of projects.

Towngas will continue to invest resources on environmentally-friendly innovative technologies to create a better future.



High-value Products from Low-grade Feedstock



Liquefied Natural Gas
Conversion of coalbed methane in Shanxi province



Ethylene Glycol and Methanol
Clean coal chemical plant in Inner Mongolia



Hydro-treated Vegetable Oil
Upgrade of inedible waste oil in Zhangjiagang city



Natural gas
Organic waste resource utilisation in Suzhou city and Tongling city



Cellulosic ethanol and/or green chemicals such as furfural and paper pulp
Conversion of agricultural waste in Hebei province

Utilisation of Agricultural Waste



Towngas has developed a new technology that utilises agricultural waste such as straws and corn cobs for the production of cellulosic ethanol, an advanced biofuel, as well as paper pulp and furfural, a chemical that can be used as a building block for renewable fuels. Two pilot projects in Hebei province, which will each process 240,000 tonnes of agricultural waste annually, are expected to commence trial production in 2021.

Feedstock for these plants is available in abundance as mainland China produces massive amounts of agricultural waste each year, giving this renewable resource a valuable role to play in the replacement of non-renewable resources such as crude oil.



HVO from Inedible Bio-grease

In Zhangjiagang city, Jiangsu province, we established our first hydro-treated vegetable oil (HVO) plant for converting inedible bio-grease feedstock into advanced biofuels with International Sustainability & Carbon Certification (ISCC). These fuels offer a significant reduction in greenhouse gas (GHG) emissions as compared with traditional fossil diesel. Construction of the plant's second phase was completed in 2020, increasing total production capacity to 250,000 tonnes per year.

In 2020, the HVO facility produced around 88,000 tonnes of HVO, of which 90 per cent was sold to Europe. The production of HVO saved around 259,000 tonnes of carbon emissions. We are now exploring other markets such as North America for this product.

We are also planning to put into trial production sustainable aviation fuel using biofuels in 2021.

Since our HVO processing technology has proven to be so successful, we are now exploring possible sites for new plants in other areas.



Organic Waste Resource Utilisation



We established our first organic waste resource utilisation project in Suzhou Industrial Park, Suzhou city, Jiangsu province. Currently, this organic waste resource utilisation plant can process up to 500 tonnes daily of organic wastes for conversion into natural gas. In 2020, it processed 92,000 tonnes of organic wastes from nearby catering businesses that helped our downstream customers to reduce 5,900 tonnes of carbon emissions. When construction of the second phase of this plant is completed in 2021, daily processing capacity will increase to 800 tonnes.

Another food resource waste utilisation project is located in Tongling city, Anhui province with a daily processing capacity of 100 tonnes of food waste. When the second phase of this project goes into operation in 2021, the plant's food waste processing capacity will be doubled.

Towngas is also exploring additional food waste treatment projects in other cities.

07 | ENSURING HEALTH AND SAFETY



Turning Promises into Action

The safety of all our stakeholders is of paramount importance to Towngas. Our target is to achieve zero accidents among our staff and contractors and to continue providing customers with a safe and reliable supply of energy, while also maintaining a high standard of safety at our facilities.

In accordance with our commitment to safety, we organise occupational safety and health (OSH) programmes for our staff and contractors. We also develop smart appliances with safety features that address the needs of an ageing society and introduce advanced technologies such as artificial intelligence (AI) and big data analytics to further improve the safe operation of our network.

Occupational Safety and Health

2020 Performance Highlights	Future Actions and Targets
 <p>Established a dedicated taskforce to implement comprehensive measures in response to COVID-19</p>	 <p>Keep zero accidents as our target for health and safety</p>
 <p>Accident frequency rate (Hong Kong): Employees: 0.32 Contractors: 0.25 accidents per 100,000 man-hours</p>	 <p>Extend ISO 45001 certification to subsidiaries</p>
 <p>11,676 safety training hours (Hong Kong) 1,158,454 safety training hours (mainland China)</p>	 <p>Organise Safety Supervision Technique Workshops for frontline supervisors</p>
	 <p>Instill a safety culture among our mainland employees</p>

Management Approach

We are committed to protecting our staff, contractors, customers and the general public against health and safety risks. This commitment and our approach to safety management are clearly outlined in our **Corporate Health, Safety and Environment (HSE) Policy**.

Towngas aims for a record of zero accidents and fully complies with all relevant health and safety legislation. This goal is supported by an OSH management system, which is established in accordance with international standards such as ISO 45001. The system comprises a comprehensive register of risks to identify work-related hazards through risk analysis and risk evaluation, as well as control measures for continual improvement. In the event of an accident, we will conduct an investigation to determine the cause and identify ways to prevent its recurrence under a hierarchy of control framework.

A Corporate Health and Safety Manual is also in place to outline the framework of the OSH management system, with standard operating procedures and detailed guidelines. These documents are regularly reviewed and updated to ensure our practices comply with the latest industrial practices and government regulations.

In mainland China, we have helped our joint venture (JV) partners to establish in-house corporate safety standards and provided guidelines for improving safety management.

Monitoring and Reporting

The health and safety performance of the Company is monitored by the Corporate Sustainability Department as well as the Corporate Safety and Quality Management Steering Committee. We have 11 HSE Committees to provide opportunities for two-way communication on safety and health issues. Management, supervisory staff, non-managerial staff and contractors are invited to participate in the

regular meetings of these committees. The details of our HSE management structure are available on our **corporate website**.

Various reporting channels and promotion schemes, such as our HSE Suggestion Scheme, Near-miss Reporting Programme and Instant Messaging HSE Reporting Channel, have been set up so that employees and contractors can report work-related hazards and near-miss cases for rectification and improvement. To encourage reporting, we reward workers who flag cases and provide incentive schemes to contractors who demonstrate responsibility, awareness and a high level of safety performance.

Training and Awareness

A standard training procedure has been established that enables us to determine the needs of our workers and assess their competence, knowledge and ability to understand the hazards, risks and control measures associated with their work.

To help our staff and contractors deepen their understanding of our safety culture, we organise training courses, workshops and activities. A Towngas HSE and Caring Programme is also in place to provide mentorship and HSE training for new joiners. Additionally, we make the Towngas Contractor Safety Handbook available to our contractors and provide free safety briefings to their staff operating in various roles. Examples include safety for work above ground and in confined spaces, as well as excavation work close to our gas pipelines.

In our training programmes and before a new project begins, we inform workers about any associated safety and health concerns there might be and the emergency handling procedures they should take. Health and safety messages are disseminated through communication channels such as Towngas publications, emails and online library.

Progress Areas

Enhancing Safety Performance and Awareness

During the year, we continued to work ceaselessly to improve our safety performance across Towngas. We carried out 168 safety/loss prevention inspections to ensure safety measures were in place and to maintain a safe and healthy work environment.

In 2020, no fatalities occurred among our employees and contractors as a result of an accident.

Since obtaining ISO 45001 certification in 2019, we have been assisting our subsidiaries, including ECO and U-Tech Engineering Company Limited (U-tech), to become ISO certified. In 2020, both subsidiaries successfully received certification.

The following graphics show the safety performance of our employees and contractors in Hong Kong in 2020.

Reportable Accidents¹

	2020
Employees	18
Contractors	11

¹Accidents that result in incapacity for more than three days

Accident Frequency Rate²

	2020
Employees	0.32
Contractors	0.25

²Number of accidents per 100,000 man-hours

Our accident frequency rate increased in 2020 because of a number of incidents in Hong Kong, including one in December 2020 when six employees were injured in an industrial accident caused by a third-party gas pipe damage in Wan Chai. In order to prevent the recurrence of a similar accident, a thorough investigation was conducted to identify the root causes and key learnings from this case. Drawing on what we learned, we conducted a comprehensive review of the relevant operating procedures, as well as our emergency preparedness and response. We will advise our employees about the enhanced procedures recommended in our review on handling specific types of gas emergencies.

In 2020, we held a series of Seasonal Occupational Safety and Health Promotion training sessions. Provided every quarter, the training covers topics such as infectious disease control, prevention of heat stroke, and work stress management. When training programmes could not be taught in a face-to-face setting, as was the case during the COVID-19 pandemic, we made extensive use of electronic platforms and webinars to deliver programme materials.

We also organised a number of OSH programmes for contractors, including a training session and the Safe Foreman Award event, to promote accident prevention and OSH supervision.

Due to the COVID-19 pandemic, our annual joint safety programme organised with our mainland China JVs — the HSE Walk — was cancelled this year. Nevertheless, we continued to help our mainland China operations catch up with currently recognised OSH standards and standardise their OSH management.

Enhancing Employee Wellbeing

We understand that the wellbeing of our employees, including their physical and mental health, is essential for maintaining a happy and productive workforce.



To ensure our employees can enjoy a friendly, supportive and stress-free work environment, we provide free clinical medical services, fitness facilities and a mother care room in our North Point headquarters. In 2020, we replaced face-to-face activities with online programmes, including home fitness classes with yoga and Pilates, cooking classes, health tips and health talks by medical practitioners. We also shouldered the cost of seasonal influenza vaccinations for our staff.

Unlike in past years, fewer activities for our staff and their families were held in 2020 because of the COVID-19 pandemic. These activities, which are designed to promote work-life balance and build team spirit, will resume when COVID-19 subsides.



Case Study

Safety during the COVID-19 pandemic

Soon after the first appearance of the novel coronavirus in December 2019, Towngas took immediate steps to minimise the risk of infection among our staff, contractors, customers and business partners.

We also activated our Corporate Preparedness Plan for Infectious Diseases and set up a taskforce to coordinate our response. Top management held regular meetings to facilitate decision making and ensure the timely implementation of COVID-19 measures.

Our safety measures included the following:

Effective Communication

We issued new policies and guidelines that included Home Quarantine and COVID-19 Testing Requirements, Special Work Arrangement, Health Declaration, Face Mask Wearing, and Personal Protective Equipment (PPE) guidelines. All were designed to provide clear guidance on actions to be taken to minimise the risk of infection.



Given the rapid changes in the COVID-19 situation, we provided to our staff up-to-date information on the latest pandemic developments and corresponding government legislation, as well as infection control information through various channels. These included the corporate intranet, webinars, posters, videos, emails, mobile text messages and screensavers. Beyond this, we set up a 24-hour HSE hotline for staff to report or inquire about COVID-19 issues and developed a smartphone app for consolidating and delivering information on the pandemic.

Preventive Measures

At Towngas premises, including corporate offices and gas production plants, automatic body temperature scanners were set up in order to detect potential cases of infection. We also applied and distributed nano photocatalytic long-acting disinfectant spray in our workplaces and high traffic areas, and developed our own ultraviolet-C disinfection device to sanitise areas such as conference rooms and elevators. In many areas, we adjusted the floor layout, erected partitions to reduce face-to-face contact and increase social distancing, and set up disinfection stations. The fresh air flow rate of our headquarters in North Point was also adjusted to maximum level. To avoid overcrowding, we implemented crowd control measures for our lifts and lift lobbies. Additionally, Quick Response (QR) codes were placed in meeting rooms to encourage staff to record their presence for contact tracing purposes.

Protective Supplies

We set up a Protective Equipment Procurement Response Team for sourcing sufficient stock of PPE supplies (e.g. surgical masks, hand sanitisers and face shields) for our staff and contractors, and closely monitored existing stocks to ensure a stable supply.

Care for Employees

Flexible working hours, as well as team splitting and work-from-home arrangements, were introduced to reinforce social distancing. All face-to-face contact by our staff on different shift operations was eliminated and virtual meetings with internal and external parties were encouraged. Other

measures to minimise the risk of infection included special arrangements for service staff visiting customer premises in buildings with confirmed cases and guidelines advising technicians to wear advanced PPE when providing services at customers' premises. Health seminars and educational activities related to COVID-19 were also organised.

Customer Protection

While implementing measures to safeguard the health of our customers and staff, we continued to provide high quality customer service in 2020. All Towngas Customer Centres remained open and were treated with a nano photocatalytic long-acting disinfectant spray. Although our maintenance and checking services remained unchanged, we had to temporarily suspend our on-site meter reading service and regular safety inspections (RSIs) during part of the year. Staff delivering necessary on-site service were equipped with masks and protective goggles, and provided with gloves and shoe covers for use when necessary. Staff members were also required to clean their hands with an alcohol-based hand-rub before and after maintenance work.



Customer Safety

2020 Performance Highlights	Future Actions and Targets
 <p>675,087 RSIs (Hong Kong)</p>	 <p>Continue to provide RSIs and community safety talks</p>
 <p>Customer-related emergency reports ↓ 35% in last 5 years</p>	 <p>Develop smart sensors and remote control systems for cooking appliances</p>
 <p>Launched an anti-scorch built-in hob to enhance cooking safety</p>	

Management Approach

As product and service safety are essential for our customers, we ensure every procedure is carried out according to our internal guidelines, which also comply with laws and regulations. These guidelines cover the installation, replacement and maintenance of gas appliances and gas meters as well as gas pipes and fittings installed for our customers. When developing new products, we follow strict safety and quality control systems that govern the way we source raw materials, and produce and deliver end products. Our suppliers are also required to comply with our product safety requirements.

Product Development

- Gas appliances are equipped with innovative safety features such as anti-scorch protection, timer controls and flame failure devices

Quality Assurance

- Compliance checks are conducted to ensure consistently high standards across all our product lines
- All gas appliances are tested according to rigorous quality control systems



Product Labelling

- All gas appliances come with operating instructions on their safe and proper use

Customer Service

- RSIs are conducted to check all gas installations and external service risers, as well as to test installation pipes
 - every 18 months in Hong Kong
 - every 12 to 24 months in mainland China
- 24-hour Emergency Hotline with a team dedicated to handling all gas emergency incidents and carrying out investigation
- Manual of Remedial Measures, with established remedial actions to ensure domestic gas appliances are safe for public use

Customer Engagement

- Safety exhibitions and talks, customer surveys and focus groups, as well as Customer Focus Team visits to raise safety awareness and understand customer needs
- Safety messages are also provided through leaflets, videos, posters and the corporate website
- Bi-monthly customer satisfaction surveys conducted by an independent research company

Progress Areas

Protecting Customer Safety

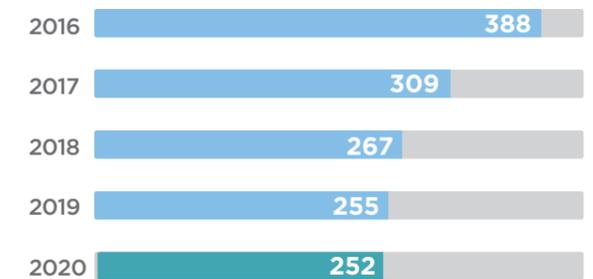
Towngas proactively contacts customers in order to raise awareness of potential gas safety problems before they occur. In 2020, we conducted 675,087 RSIs and organised eight safety exhibitions. While accessed RSI services to individual customers' premises were suspended for six months due to the pandemic, RSIs on gas service pipes in the common areas of buildings were carried out as usual. This reflects Towngas' commitment to ensure the safety of our customers in every way possible, even in unfavourable circumstances.



To further improve our service efficiency, service quality and gas safety, we have been applying advanced technologies, such as a Drone Riser Inspector and Long Range Camera with Laser Methane Gun, to inspect the condition of gas service pipes and detect gas leakage. In 2020, we also introduced a Riser Health Analytics System researched and developed in-house that uses AI to automatically analyse inspection videos and identify the location and severity of corrosion in our gas service pipes. This AI system not only enhances operational efficiency and accuracy, but also reduces eye strain among our staff.

Through these efforts, we have achieved a decline in customer-related emergency reports.

Customer-related Emergency Reports



Towngas' timely response to emergencies has achieved a world-class standard of promptness.

Emergency Team's average arrival time

Target	2020 Results
Arrive on site within 25 minutes	Arrived within 21.57 minutes on average

Developing Safe Appliances

One of the trends we have identified is the ageing of our population. In response to the safety concerns of our elderly customers, we launched a new built-in hob equipped with an exclusive anti-scorch protection feature, which is able to detect abnormal temperatures and automatically shut off the appliance if it is inadvertently left on.

The Internet of Things (IoT) is another area we are exploring for enhancing safety, including appliances with a variety of smart functions. For example, customers can use their smartphone to monitor the status of an appliance remotely and shut it off in case of an emergency, or receive an alert message if the condition of the appliance is unsafe, such as when a flame is left on after leaving home or when appliances have defects.

More smart features will be gradually introduced in other new appliances, such as hotplates, built-in hobs, range hoods and water heaters.



Public Safety

2020 Performance Highlights	Future Actions and Targets
 <p>Gas incidents reported by the public per 10 km of gas pipes ↓ 49% in last five years (Hong Kong)</p>	 <p>Upgrade, verify and maintain the Safety Instrumented System (SIS) of all major facilities with potential hazards</p>
 <p>Serious gas-related accidents (mainland China) ↓ 84% in last five years</p>	 <p>Develop an in-house Hazard and Operability (HAZOP) Studies Talent Pool across chemical plants</p>
 <p>No major incidents at our chemical plants (mainland China)</p>	

Management Approach

Towngas adheres to well-established design, engineering and operating principles to maintain the safety of our facilities and equipment. By combining these principles with a rigorous maintenance regime, we are able to ensure our processes and assets are safe, reliable and in good working order.

Our gas production plants and transmission and distribution network have all been certified to the ISO 55001 Asset Management standard. A Process Safety Management (PSM) system is also in place for our chemical plants in Hong Kong and mainland China, which allows us to identify and record critical hazards and develop measures to control and mitigate risks.

Emergency and Crisis Management

Towngas has a robust Corporate Crisis Management Plan in place, with a three-tiered approach for recovering from an emergency situation in a timely and effective manner, while ensuring disruptions to the public are kept to a minimum.



Regular training exercises and drills on crisis management are conducted for staff for better emergency preparedness. We also conduct regular table-top exercises to further enhance our management team's ability to handle emergency situations.

Comprehensive Monitoring

We continuously monitor our facilities in order to identify potential hazards and mitigate risks while looking for ways to make improvements.

From our 24-hour Grid Control Centre at our North Point headquarters in Hong Kong, we are able to monitor our network in real time. We also conduct a gas pipe leakage survey at least once a year and carry out regular trench inspections of our gas pipes and other facilities.

In mainland China, the general managers of mainland utility business JVs conduct a safety inspection every month to identify and address any issues that may arise. Safety and risk management audits of our utility JV partners are conducted once every two years, while PSM audits for our chemical plants are conducted annually.

In addition, regular safety and risk management workshops are organised to improve safety management practices and safety awareness.

Community and Industrial Relations

We connect with stakeholders to enhance their safety awareness and build trust. We also work closely with the government authorities to formulate strategic plans, such as a facilities utilisation framework and preventive maintenance index, to ensure optimal safety.

In order to maintain a high standard of safety not just within Towngas but across the industry, we share our safety experience and standards with corporations, contractors and professional organisations.

In mainland China, we have taken part in the compilation and revision of relevant standards and specifications on both the national and industry levels. We have also shared our experience to promote the development of the gas industry in mainland China.

Progress Areas

Safety Performance

Hong Kong

Throughout the year, we conducted 141,427 trench inspections at 8,866 active sites and surveyed 6,662 km of pipeline in order to reduce gas incidents.

Gas incidents reported by the public per 10 km of gas pipes



In 2020, Towngas kept third party damage to its gas pipes to a relatively low level. The number of third party damage incidents in 2020 was seven.

To reduce the risk of mechanical joint leakage and corrosion, we decommissioned 17 km of aged metal pipes in our network. In addition, our replacement of corroded risers project launched in 2019 is expected to be completed by 2022.

To enhance operational resilience, we renovated and upgraded the back-up Corporate Crisis Control Centre and Grid Control Centre.

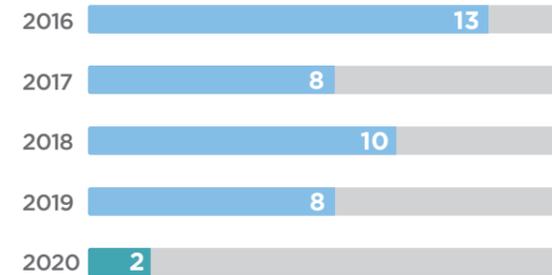
Mainland Utilities

In 2020, 37 safety and risk management audits were undertaken; the safety performance of our JVs have been steadily improving since the implementation of our audits.

During the pandemic, the general manager of each JV increased safety inspections to twice a month and added an item on "Special Inspection for the Prevention and Control of COVID-19" to ensure all JVs were implemented the specified sanitation and anti-viral measures.

As a result of our efforts, serious gas-related accidents have decreased 84 per cent in last five years.

Serious gas-related accidents



New Energy

In 2020, we conducted safety inspections for all our chemical plants in mainland China that were either in operation or under construction and organised six safety audits of our ECO gas filling stations.

Three comprehensive safety inspection programmes were specially organised across major JVs to assess COVID-19 safety measures, as well as lessons learned from the 2020 Beirut port explosion and other major incidents in mainland China.

By adhering to best practices in PSM, such as following inherent safety designs and conducting in-depth HAZOP studies and Bowtie Analysis, there were no major incidents at our chemical plants in 2020.

Training and Awareness

In 2020, many training activities were moved online in mainland China in response to the social distancing measures implemented during the pandemic.

These included the e-learning platforms that we launched for self-learning and self-assessment by our staff. Web-based Safety and Risk Management Workshops were also organised to share experiences on gas pipe safety, PSM and good engineering practices. Other online activities included a Gas Engineering Knowledge Competition to enhance gas engineering knowledge and strengthen operational safety.

To build on the process risk assessment skills of our staff, we have been developing a HAZOP Studies Talent Pool and organised a two-day HAZOP Practical Tournament. A total of 26 staff members started the certification process and are expected to obtain HAZOP Professional Certification by the China Chemical Safety Association in 2021.

Safer Operations through Technology

At Towngas, harnessing new technology allows us to ensure our facilities are safe and operating properly, in keeping with our philosophy of "Growth = innovation x implementation".

In 2020, we applied AI to monitor third party construction works near our network to reduce the risk of pipe damage. The AI system can identify heavy machinery that may endanger our pipelines and trigger visual and audio alarms at sites and send alert messages or emails to our site staff for instant follow-up.



For our pipeline asset records, we adopted an innovative photogrammetry methodology. By taking photographic images on site, a three-dimensional (3D) as-built model of the pipeline can be generated to record and store information on our pipeline assets accurately and efficiently. This approach also eliminates tedious traditional manual work.

08 | PROTECTING THE ENVIRONMENT



Turning Promises into Action

We are preparing for the growing challenge of climate change to create a more sustainable future.

During the year, we continued to improve our climate resilience with ongoing physical risk assessments to strengthen our emergency preparedness and modified our facilities to withstand extreme weather and sea level rise. We also assessed how transition risks could impact Towngas under various climate change scenarios and identified opportunities that could help us develop a resilience strategy.



Environmental Management



Management Approach

Our **Corporate Health, Safety and Environment (HSE) Policy** outlines our approach for managing the environmental impacts arising from our operations. It guides us in how we protect the environment, use resources, reduce the emissions and waste we generate, and mitigate our impact on biodiversity. To supplement our HSE Policy, we have established a **Towngas Sustainable Purchasing Policy** to ensure the use of environmentally friendly products and services.

A Corporate Environmental Manual is also in place, setting out the standards, procedures and guidelines for environmental protection of the Company. We also have a Green Office Practice Guide and Green Event Practical Guide to provide guidance and improve environmental awareness among our staff.

In all of the jurisdictions where we operate, we fully comply with all regulatory requirements and benchmark our operations against the highest international standards and codes of practice. Every new project we undertake will begin with an environmental impact assessment (EIA), according to the local legal requirements.

In Hong Kong, our gas production facilities at Tai Po have been certified to the ISO 14001 standard since 1999 to reduce our environmental impacts and drive continuous improvement. We have also been helping our joint ventures (JVs) in mainland China achieve the same standard.

Monitoring and Reporting

The Environmental, Social and Governance (ESG) Committee coordinates and steers our environmental initiatives as well as monitors our environmental performance, with the support of the Environmental Working Committee and Corporate Sustainability Department. In addition, we have 12 Environmental Sub-committees and green ambassadors from different functional departments. They support our mobilisation of resources and implementation of environmental projects and convey environmental messages to our stakeholders. Details of our ESG Committee and HSE management structure are available under the **Managing ESG at Towngas** section and our **corporate website**.

We conduct regular audits and inspections of our facilities to confirm compliance with all relevant environmental standards and identify areas for improvement. In mainland China, we have been performing annual environmental audits of our gas projects since 2011. The audits cover areas such as energy conservation, waste and wastewater management practices, as well as noise control measures.

Engaging Stakeholders

To raise awareness and build capacity, we organise training sessions, seminars, site visits and a range of other activities with our stakeholders, including employees, contractors and customers. We also set aside funds dedicated to our environmental protection initiatives and have set up a Green Creativity Fund to encourage innovative environmental initiatives put forward by our employees.

We also share knowledge, exchange ideas and seek partnerships with government authorities, industry practitioners, green groups and others so that we can remain up-to-date on issues of environmental concern and drive improvement.

Climate Change and Air Quality

2020 Performance Highlights	Future Actions and Targets
 <p>Hong Kong gas production carbon intensity was 0.592 kg CO₂e/unit of town gas, ↓ 23% as compared with 2005</p>	 <p>Establish medium- to long-term carbon reduction targets</p>
 <p>First public utility in Hong Kong to be verified its carbon inventory against ISO14064-1:2018 (Hong Kong gas production)</p>	 <p>Increase biogas usage</p>
 <p>Conducted a scenario analysis on climate-related transition risks and opportunities</p>	 <p>Supply waste heat from Tai Po Gas Production Plant to a neighbouring food factory</p>
	 <p>Advance our climate change risk assessment covering long-term risks and opportunities</p>
	 <p>Keep abreast of the latest carbon reduction policies in Hong Kong and mainland China</p>

Management Approach

As mentioned in our HSE Policy, we are committed to managing and minimising our climate change impact and reducing air pollution.

Our air emissions primarily result from the combustion of fuels used to generate energy. These emissions, which include carbon dioxide (CO₂), nitrogen oxide (NO_x), sulphur oxide (SO_x) and respirable suspended particulates (RSP), are controlled and monitored to ensure our plants comply with local regulations.

We mitigate the impact of climate change by reducing or avoiding greenhouse gas (GHG) emissions and adapt by upgrading our infrastructure and strengthening crisis management. Through these measures, we believe we can become more resilient against the impact of climate change.

Climate Risks and Opportunities

Physical risks, such as rising temperatures and sea levels, drought and extreme weather events, could have a negative effect on our operations. What's more, transition risks, including policy changes, reputational impact and shifts in market preferences, could also have a significant impact on our businesses. These risks, however, also come with opportunities arising from the development of new technologies, products and services associated with climate change.

In 2015, we commissioned a comprehensive climate risk assessment for our Hong Kong operations to increase our resilience under extreme weather events. It involved conducting corporate emergency table-top exercises and establishing an adverse weather preparedness plan, which is reviewed regularly. We also review and update our climate-related risks on at least an annual basis to ensure we are sufficiently resilient against this emerging risk.

In mainland China, we visit the project sites of our JVs to understand their regional climate-related risks. We also work closely with our JVs to prepare them for adverse weather events by advising them on the mitigation and resilience measures they can adopt and by providing training on climate change awareness.

Carbon Management

We are committed to continuously monitoring and reducing our direct and indirect GHG emissions. Therefore, we have established Carbon Inventory Accounting Procedures based on international standards such as the GHG Protocol and local guidelines. In Hong Kong, GHG verifications aligned with ISO 14064-1 are regularly conducted, which allow us to identify areas for continual improvement.

To reduce emissions from our operations, we use low-carbon, renewable energy sources such as natural gas and landfill gas, employ energy-efficient equipment and improve our production processes. We also take the responsibility of reducing GHG emissions on the customer side.

Progress Areas

We acknowledge the urgency of addressing climate change and are taking every possible step to manage and reduce our climate risks while also identifying related business opportunities. Furthermore, we closely monitor regional and international efforts towards decarbonisation. These include Hong Kong and mainland China's goals of carbon neutrality, as well as the outcome of the 26th United Nations Climate Change Conference of the Parties (COP26) in November 2021 to guide our low-carbon roadmap.

Climate-related Financial Disclosures

Many more stakeholders today, including investors, are examining how companies are reducing their climate impacts. At Towngas, our implementation of the **Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)** helps us become more climate resilient and increase transparency for our stakeholders.

In 2019, we began a study on how to align ourselves with the Recommendations of the TCFD and carried out a gap analysis to examine Towngas' current practices against these recommendations. We have since disclosed relevant information according to the four thematic areas outlined in the TCFD.

- 

Governance

 - Managing ESG at Towngas
- 

Strategy

 - Transitioning to a Low-carbon Future
 - Climate Change and Air Quality
- 

Risk Management

 - Climate Risks and Opportunities
 - Risk Management
- 

Metrics and Targets

 - Our Carbon Footprint
 - Carbon Emissions along Our Value Chain

Climate Physical Risks and Resilience

We conduct ongoing physical risk assessments and management exercises to ensure we will remain resilient in years to come. In 2019, we conducted a study on flooding hazards related to sea level rises that could affect critical facilities, including the switch room, generator room and fuel tank room at our North Point headquarters. Flood gates were installed

at these facilities in 2020 as a follow-up measure. These enhancements are designed to withstand the worst case scenario (based on IPCC Representative Concentration Pathway 8.5) for flooding in this century.

We also renovated and upgraded the back-up Corporate Crisis Control Centre to strengthen Towngas' emergency preparedness against adverse weather. We are also planning to initiate another in-depth physical risk assessment to better understand climate risks.



Climate Transition Risks and Resilience

According to the Recommendations of the TCFD, companies are advised to carry out a detailed analysis of various climate-related scenarios to determine their risk exposure and stress test their climate resilience strategies under such scenarios.

During 2020, we conducted a comprehensive assessment of the transition risks and opportunities across our energy-related businesses in Hong Kong and mainland China under various climate scenarios. By deepening our understanding of how policy changes, developments in technology, reputational impacts and shifts in market preferences could have a significant impact on our businesses, both positively and negatively, we are able to develop plans to mitigate risks and build resilience strategies.

Scenario Development

In our assessment, we referenced the scenarios presented by the International Energy Agency's (IEA) World Energy Outlook 2019. We also factored in the pace of technological development and adoption, as well as the stringency of new policy implementations, in order to identify four scenarios as shown in the table below:

Scenario	Description
1. Best of Both Worlds (rise well below 2°C)	<p>Similar to the IEA's Sustainable Development Scenario (SDS).</p> <p>Bold emissions reduction targets are met through 1) new/alternative technologies, 2) efficiency improvements, 3) government policies.</p> <p>Demand for natural gas peaks around 2035. In 2040, renewables replace coal as the main source of energy in mainland China: renewables (34%), coal (28%), oil (14%), natural gas (13%), nuclear (11%).</p>
2. Marathon to Compliance	<p>Similar to IEA's SDS, but with a less optimistic assumption for technological development and adoption.</p> <p>Governments take the lead and consider meeting climate and environmental goals to be the highest priority in their policy making process. Consumer choices are limited; business and industrial activities are taxed and regulated.</p>
3. Climate is Business	<p>Similar to IEA's Stated Policies Scenario (STEPS).</p> <p>Governments take a back seat in climate and environmental policies. Carbon emissions slow down due to some uptake in renewables and efficiency gains, but there is no peak in global energy-related carbon emissions.</p>
4. Hothouse Earth (rise of 4°C, business-as-usual scenario)	<p>Similar to IEA's Current Policies Scenario (CPS).</p> <p>Governments do not follow up on climate-related commitments; fossil fuel subsidies continue, hampering the uptake of renewable energy.</p> <p>Demand for natural gas increases by over 140% in 2040 as compared with 2018. Coal continues as the main source of energy (46%) in 2040, followed by oil (20%), renewables (15%), natural gas (13%) and nuclear (6%).</p>

Impact Analysis and Strategic Resilience

By acknowledging the Best of Both Worlds and Marathon to Compliance as possible scenarios towards a low-carbon economy, we have identified transition risks for Towngas according to TCFD’s risk categorisations: market risk, technology risk, policy and legal risk, and reputation risk. The tables to the right summarises the potential risks and opportunities, impacts and resilience strategies for Towngas’ portfolio across different time horizons.

Although the study shows the resilience of our portfolio, there are still areas of improvement in our portfolio and strategy. To further enhance our climate resilience, Towngas will keep up with policy developments and watch for any early warning signals to ensure we are well prepared. We will also drive sustainability-related consumer education and brand messaging to communicate Towngas’ position in the transition to a low-carbon economy, as well as develop a strategic plan with investments in innovative green technology that helps us to gradually transform into a sustainable energy company.

Policy and Legal Risk



Short to Medium Term 2020-2030

- Hong Kong and mainland China’s 2050 and 2060 goals of carbon neutrality are expected to accelerate the transition towards a low-carbon future; increasingly stringent climate and environmental policies mean that carbon intensive operations, products and services will be heavily regulated.
- This may have a negative financial impact on Towngas (e.g. higher compliance costs, reduced gas sales revenue).
- Potential for revenue from low-carbon products and services (e.g. biofuels).

Market Risk



Medium to Long Term 2025-2040

- Demand for natural gas increases in the short and medium term as a transition fuel, and may drop over the long term.
- Increasing risk that town gas and natural gas will be replaced with low or zero carbon alternatives; revenue from gas sales will increase in the short and medium term but may fall over the long term.
- Development of new products and services will increase Towngas’ competitiveness, resulting in increased revenues.

Technology Risk



Medium to Long Term 2025-2040

- Replacing existing technologies and processes leads to higher capital and operating costs.
- Low or zero carbon technologies are substituted for existing products and services, affecting our gas-related businesses.
- Development of waste-to-energy products and smart energy projects present opportunities.

Reputation Risk



Long Term 2030-2040

- Shareholders are likely to divest from fossil fuels.
- Open and transparent communication/disclosure on issues of climate change will benefit us in terms of increased capital availability, especially for Towngas’ green businesses.



Towngas’ Climate Resilience Roadmap



Align with government policies

Mainland China’s environmental policies have been driving a faster uptake of natural gas to replace relatively more polluting forms of fuel, especially coal, as a source of energy.

Towngas is well positioned for the short and medium term, as we have a large market share in Hong Kong and an expanding gas network in mainland China for natural gas. We also support commercial and industrial customers to switch from coal/diesel to natural gas/landfill gas.

We will continue to develop a portfolio of innovative projects in areas such as energy storage, biofuels, distributed energy systems, and waste-to-energy projects to mitigate our risks in these markets.

For more details, please refer to the **Transitioning to a Low-carbon Future** section.



Reduce direct GHG emissions

Towngas has been focusing on reducing emissions from its operations by utilising low-carbon sources of energy and improving energy efficiency. We will continue to explore opportunities for increasing the use of biogas in the production of town gas.

For more details, please refer to the **Our Carbon Footprint** section.



Explore low-carbon business opportunities

Diversification has helped Towngas gradually transform into a multi-business corporation focused on environmentally friendly energy ventures, which reduces our exposure to transition risks.

For example, Towngas is developing smart energy and waste-to-energy businesses.

For more details, please refer to the **Supporting Customers with Low-carbon Solutions** section.



Support research and development (R&D)

Towngas has research and development centres in Shanghai city and Suzhou city, where we are developing clean energy technologies, including self-developed patented technologies that are being utilised in different projects. We are now applying these technologies commercially, which will contribute to our ongoing business growth.

Reducing Emissions in Cities

Today at Towngas, we make extensive use of low-carbon/renewable energy sources. By switching our town gas production feedstock from coal and heavy oil to naphtha, natural gas and landfill gas, we have significantly reduced air pollutants and GHG emissions in Hong Kong. Our air emissions have now fallen well below the regulatory limits (more details can be found in the **Key Statistics** section). Additional information on clean gas production at Towngas is available on our **corporate website**.

2020 energy savings at our gas production plants¹



¹ Remarks: As compared with the data of a reference year before implementing the respective environmental initiative.



Case Study

Support for Hong Kong's long-term decarbonisation

We installed photovoltaic (PV) systems at our Tai Po Gas Production Plant, as well as at six of our offtake and pigging stations. The total power generated was over 180,000 kWh in 2020. The rooftop of Towngas' North Point Headquarters and the second phase of the offtake and pigging stations are scheduled for completion in early 2021. We are also incorporating innovative technologies into the design of the second phase installation, such as flexible panels to increase the number of installation locations, sun trackers and bifacial solar panels to capture more solar energy. After they are completed, our solar PV systems will ultimately generate more than 300,000 kWh of clean energy per annum.

Fuel Mix for Town Gas Production



As one of the pioneers in the use of landfill gas, the amount of landfill gas used in our town gas production was 124,985 GJ in 2020. We remain committed to continually increasing the proportion of natural gas and biogas used.

In mainland China, we have been expanding our city-gas network, which is replacing coal and hence reducing emissions. In 2020, we served approximately 31.81 million customer accounts.



Our Carbon Footprint

The Group's largest source of carbon emissions is Scope 1 emissions from fuel consumption in our production processes. In 2020, the Group's total carbon emissions (scope 1 and 2) were 1,406,000 tCO₂e, a similar level to that of last year. More details can be found in the **Key Statistics** section.

During the year, we conducted an internal carbon audit of the top six emitters in mainland China, during which we reviewed their data integrity and discussed opportunities to reduce their carbon footprint. The lessons learned from this audit were shared with other JVs to enhance the completeness and quality of their data. We are now working on setting medium- to long-term reduction targets for both our Hong Kong and mainland China portfolios, in support of Hong Kong's 2050 and mainland China's 2060 goals of carbon neutrality. We also signed the Business Environment Council's **Low Carbon Charter** to underscore our commitment to tackling climate change.

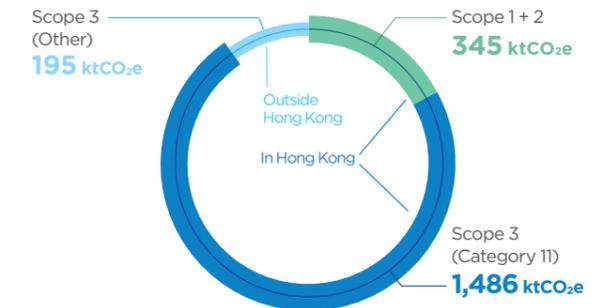
Hong Kong Gas Production Carbon Intensity

The carbon intensity of our Hong Kong gas production in 2020 was 0.592 kgCO₂e per unit of town gas, which dropped 23 per cent as compared with our 2005 baseline. Due to maintenance work at the Northeast New Territories Landfill, we fell short of our target to achieve a 30 per cent decrease in carbon intensity for 2020. We will, however, strive to meet this target in future.

Carbon Emissions along Our Value Chain

We understand that our emissions along the value chain could be material and, in 2020, conducted a comprehensive review of our Scope 3 emissions for gas production in Hong Kong. The most significant contributions to Scope 3 emissions in our value chain came from combustion of town gas (Category 11), which accounted for over 70 per cent of the total emissions of our gas production.

2020 Hong Kong Gas Production GHG Emissions



Scope 1 emissions are direct emissions from owned or controlled sources.
Scope 2 emissions are indirect emissions from the generation of purchased energy.
Scope 3 are all other indirect emissions that occur in the value chain.

Supporting Customers with Low-carbon Solutions

To create a low-carbon future, we understand it is important not only to reduce the GHG emissions generated within our operations, but also to reduce them for customers. We have been supporting our customers' emission reduction efforts by expanding the distribution of gas and promoting fuel conversion to gas. We have also been developing low-carbon and energy efficient products, ranging from gas appliances to advanced biofuels, and provide a smart energy service. To help our customers conserve town gas, we provide the relevant information and energy saving/green cooking tips via bill inserts, newsletters and our **Low Carbon Action!** website.

We shall also supply waste heat from our Tai Po Gas Production Plant to a neighbouring food factory in the form of hot water, which will help reduce the latter's conventional energy consumption and carbon emissions. This would reduce heat dissipation to the surrounding environment, and thus lower the heat island effect. This innovative environmental project will be completed in 2022.

For details, please refer to the **Transitioning to a Low-carbon Future** section.

Resources Management

2020 Performance Highlights



Electrical power consumption at Towngas' North Point Headquarters: **↓ 4.29%** compared with 2019



117,822m³ water conserved through the reverse osmosis systems at Tai Po Gas Production Plant



>1,600 tonnes of metal recovered under the Used Gas Appliance Recycling Programme

Future Actions and Targets



Obtain **ISO 50001** Energy Management System certification and renew Building Environmental Assessment Method (BEAM) Plus status for Towngas' North Point Headquarters building



Install the **3rd reverse osmosis system** at our Tai Po Gas Production Plant

Management Approach

At Towngas, we make every effort to conserve natural resources in our production plants, distribution network and office operations, and also encourage our contractors, suppliers and customers to do the same.

Energy

Our buildings and other physical assets are designed to make the most efficient use of the energy we consume. Our North Point Headquarters building has attained green building standards such as BEAM Plus, while our data centres in Hong Kong and mainland China are Leadership in Energy and Environmental Design (LEED) certified.

To help our residential customers save energy, we have developed a wide range of energy-efficient appliances with eco-friendly features and add new models every year to our product range of more than 200 appliance models. All eligible water heaters and cooking appliances bear the Electrical and Mechanical Services Department's Voluntary Energy Labelling Scheme label in Hong Kong, to assist end users in making smart buying decisions.

Water and Effluents

We make a concerted effort to use the water we consume more efficiently in our operations. It is utilised as a raw material, for cooling and heating and for domestic use in our offices, customer centres and natural gas stations. The water we consume comes mainly from local municipal water suppliers; in mainland China, we also use surface water in our water supply business.

Water is discharged to municipal wastewater treatment plants or into the sea after it has been treated in accordance with local regulations. Some of the water we consume is also recycled and reused.

To conserve water, we employ new technologies and enhance production processes to reuse and recycle water. Surveys and inspections of our water pipe network are carried out to identify leakage. In our offices and customer centres, we have installed water-saving devices such as dual flush toilets and automatic faucets.

Our mainland China water supply and wastewater treatment business, Hong Kong and China Water Limited, also hosts various activities, such as tours of its water plant facilities, to educate the public on the need to protect and conserve water resources.

Waste

Our waste management approach is underpinned by the "5R" principle of Replace, Reduce, Reuse, Recover and Recycle, not only within our operations but also for our customers. We strive to reduce both the hazardous and non-hazardous waste we generate, and reuse or recycle whenever possible.

In Hong Kong, the excavated materials and waste generated during construction and pipeline works are managed through the Government-regulated trip ticket system for proper disposal. All chemical waste is properly stored and disposed by a waste collector licensed by the Environmental Protection Department and in compliance with the Waste Disposal Ordinance.

Progress Areas

Data of our energy and water consumption, as well as effluent and waste generation, can be found in the **Key Statistics** section.

Effective Energy Management

Our cloud-based energy management system in Hong Kong enables us to monitor and analyse our power consumption automatically in order to visualise usage patterns. The data obtained through this system helps us to explore more energy saving opportunities.

In 2020, we implemented various energy saving projects at our North Point Headquarters building, including a freight lift system upgrade, chiller optimisation, light-emitting diode (LED) lighting replacement and Building Management System optimisation. The total energy intensity of our North Point Headquarters building was 0.79GJ/m².



Electricity saved in 2020 at Towngas' North Point Headquarters and Ma Tau Kok office: 20,796 GJ

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



We plan to achieve ISO 50001 energy management system certification as well as BEAM Plus 2.0 certification for our North Point Headquarters building in 2021.

Responsible Water Management

At our Tai Po Gas Production Plant, we use a reverse osmosis system that helped us conserve 117,822 cubic metres of water in 2020. The installation of a third reverse osmosis plant at Tai Po to replace the remaining water treatment system and further reduce effluent will be completed in early 2021.

All effluent from our town gas production plants is processed in compliance with existing regulatory discharge standards. In 2020, there were no reportable effluent spills in any of our operations.

In mainland China, we have adopted the Zero Liquid Discharge system at our hydro-treated vegetable oil (HVO) production facility in Zhangjiagang city, which processes all effluent so that water can be reused and recycled.

Enhanced Waste Management

Towngas has received a Wastewi\$e Certificate at the Excellence Level for the past 19 consecutive years, with more than 30 waste reduction and recycling targets completed to date.

We continued to collect more than 20 types of waste for reuse/recycling throughout the year in Hong Kong and organised various programmes to encourage waste reduction and foster a recycling culture among our staff. In 2020, we collected coffee grounds and beverage cartons for recycling, and organised a seminar on reducing



disposable umbrella bags. The food waste composter at our North Point Headquarters was also widely used during the COVID-19 pandemic, when more employees regularly had lunch in the building.

In our pipeline work, we employ trenchless technology to significantly reduce the amount of waste generated. Hazardous waste such as metal chemical drums, plastic chemical drums, spent catalysts and used polyethylene (PE) pipes are either recycled or reused.

Waste Reduction for Customers

To help customers reduce waste, we have been offering a Used Gas Appliance Recycling Programme since 2003. Through this programme, unwanted appliances are collected from customer premises and sold to recycling contractors, with all proceeds going towards environmental activities carried out within the Company or by our contractors and other green partners. In 2020, we recovered over 1,600 tonnes of metal from used gas appliances, bringing the total amount of metal we have recovered since 2003 to around 20,000 tonnes.

As a company with more than 1.94 million customer accounts in Hong Kong, we understand that our gas bills use a significant amount of paper. To reduce paper consumption, we have been encouraging customers to switch to our eBilling service.

Biodiversity

Management Approach

In alignment with our HSE Policy, we make a strong effort to limit our impact on biodiversity, since our gas processing and distribution operations can disturb the land and wildlife habitats.

In mitigation, we follow four principles:

Avoid Areas Rich in Biodiversity

We avoid areas rich in biodiversity in the planning stage of our projects. We will carry out a site-specific EIA, in accordance with local governmental requirements, to address the impacts of development on wildlife and ecosystems.

Mitigate our Impacts through Innovation

We take preventive and corrective measures to minimise the possible impact of our works, including construction work, effluent discharge, and pipeline maintenance, on habitats and species of flora and fauna.

Use Mitigation and Offset Measures during Construction

We implement a variety of mitigation and offset measures for our construction activities, which help to reduce pollution and the loss of topsoil.

We also coordinate with local government bodies to preserve the greenery around our industrial sites and stations.

Promote Biodiversity Awareness

We organise activities, such as visits to organic farms and eco tours, for employees and customers.

Progress Areas

Our biodiversity efforts across the Group have been ongoing.

To minimise the need for digging on public roads, we continued to adopt trenchless technology during pipeline construction and maintenance works to reduce the environmental impact of excavation. We also make use of Glass-In-Gas (GIG) and Glass-Along-Gas (GAG) technology to install optical fibre within gas pipes to reduce road work or to lay telecommunications pipelines simultaneously with gas pipes.

To prevent gas leakage, we use specialised technology and our own pipeworks and fittings that make our gas network accident rate among the lowest in the world.

We also follow environmentally responsible forest management practices by using Forest Stewardship Council (FSC) approved timber.

We continued to sponsor The Green Earth's five-year Plantation Enrichment Project, which aims at increasing biodiversity in country parks. We also have an organic farm in Yuen Long as well as a rooftop organic farm at our North Point Headquarters to promote the biodiversity benefits of organic farming.



09 | CONTRIBUTING TO STAKEHOLDERS



Turning Promises into Action

In our role as a socially responsible company, we contribute to the betterment of society and create value for our stakeholders. Within our own operations, we are responding to the challenge of an ageing population by developing a sustainable talent pipeline through the expansion of our recruitment efforts to attract young people to the gas industry and the provision of training to our staff. We also develop community programmes for the elderly.

In the process of digital transformation, we adopt new technologies to deliver training, enhance our operational performance, create new products and services, and manage our suppliers.

Our Workforce

2020 Performance Highlights



Launched **new training programmes** to build a succession pipeline for our expanding business in mainland China



Developed various channels and platforms to **attract young talent** to the gas industry



Total new recruits:
203 (Hong Kong)
1,493 (outside Hong Kong)



Average training hours per employee: **17.5** (Hong Kong)



Introduced **e-learning platforms** to promote online training/continued learning during the pandemic

Future Actions and Targets



Continue to broaden/expand our recruitment practices and engage the younger generation to create a **sustainable talent pipeline**



Develop **new training programmes** to transform our businesses and succession planning



Continue to **upgrade and increase** training facilities to meet future training needs

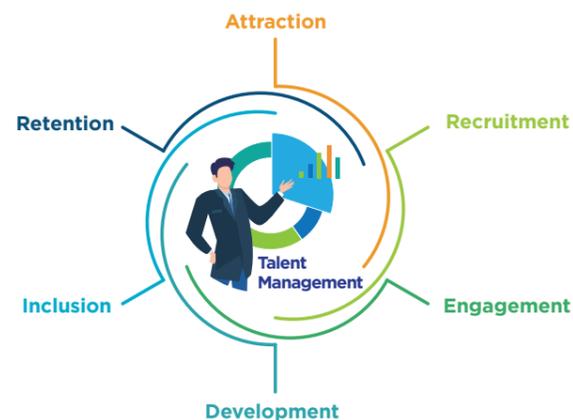
Management Approach

We are committed to providing an inclusive and rewarding work environment that leads to high engagement and enables our staff to grow and develop their potential in their careers with us.

All human resources matters at Towngas are overseen by our Corporate Human Resources Department and handled according to the Towngas Human Resources Policy Manual and Employee Handbook. We comply with local laws and regulations in relation to recruitment and promotion, compensation and dismissal, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and the provision of other benefits and welfare.

Our **Code of Conduct** outlines the expectations we set on our people, their responsibilities and all relevant policies and procedures our employees should follow in their everyday work duties, including behaving ethically in their business practices, promoting equal opportunities and eliminating acts of discrimination. Any employee found to be in violation of the Towngas Code of Conduct, Equal Opportunities Policy or relevant ordinance will be subject to disciplinary action.

In managing our people, we take a systematic approach that spans their entire career lifecycle at Towngas.



Attracting and Retaining Staff

We have developed and instituted a wide range of employment practices, including family-friendly policies and competitive remuneration packages well above the regulatory minimum, in order to make Towngas a rewarding and attractive place to work.

Benefits for full-time employees include maternity and paternity leave, medical and dental insurance, group life insurance, town gas allowances, education allowances and performance-based bonuses in Hong Kong. We also provide a maternity allowance and counselling for managing emotional issues. Subject to eligibility, the children of our staff can take advantage of an education allowance and scholarship for attending overseas exchange programmes and local universities. To help our staff balance their work and family responsibilities, we have established a variety of family-friendly practices. These include flexible working hours and special provisions for taking time off for family reasons, such as marriage, compassionate and casual leave.

Our remuneration packages are periodically reviewed and adjusted according to trends in the labour market.

The retirement benefits we offer include the defined contribution schemes and Mandatory Provident Fund schemes in Hong Kong. In mainland China, staff participate in social security plans organised by the relevant municipal and provincial governments.

We also collaborate with various education institutions to provide training programmes that not only create a pipeline of future workers for Towngas, but also contribute to the dissemination of gas knowledge and advancement of the gas industry.

Employee Engagement

We recognise that close communication with our staff is critical for maintaining a harmonious and productive work environment. To keep our employees engaged and informed, we provide multiple two-way communication channels.

Our employees are also guaranteed freedom of association in the workplace and may join the organisations and professional bodies of their choice. Members of associations are also allowed to participate in association activities during working hours, reflecting the high degree of freedom they enjoy at Towngas.

Although Hong Kong has no regulatory requirement with regard to collective bargaining, we consult our staff on a range of employment issues through our internal communication channels. We send a formal notice at least two to four weeks ahead of time to all employees when significant operational changes are about to be implemented. In mainland China, we comply with applicable legal obligations concerning freedom of association and collective bargaining.

While the labour unions of our joint ventures (JVs) have not entered into any collective bargaining agreements, we continue to maintain open communication with union representatives on staff-related matters.

Training and Development

Training our people and developing their skills and competencies are essential for our long-term success as a company.

Training and development programmes, including competency and skills based courses, are organised and delivered internally through our Learning & Development function and the Towngas Engineering Academy (TEA) in Hong Kong. We also have five training bases in mainland China, as well as partnerships with education institutions.

Our training begins with our new joiners, who during their orientation with us become familiarised with Towngas, our corporate culture, policies and business processes. Recognising that individual employees have different learning needs, we identify and provide a wide range of training and development opportunities for our general and technical staff as well as our management colleagues.



Apart from technical and engineering subjects as well as non-technical subjects such as leadership development and interpersonal skills, we also identify emerging areas, such as innovation, digitalisation and climate change, to help staff develop new skills or refresh their knowledge. To equip potential employees with management skills and build a sustainable leadership pipeline, we offer a variety of career advancement programmes. Delivery channels include classroom training, e-learning, Virtual Reality (VR) training, frontline attachments, workshops and site visits.

We also encourage our employees to supplement their development through external courses, seminars, visits and conferences, according to identified training needs. Subsidies are provided for staff who pursue further education related to their job duties, according to the Towngas Human Resources Policy Manual.



Diversity, Equal Opportunity and Non-discrimination

We firmly believe in promoting equal opportunities and eliminating discrimination in all aspects of our employment practices. We adhere to the anti-discrimination ordinances of all the jurisdictions where we operate, including recruitment, remuneration, compensation and benefits, promotions, transfers, training, and termination. We have absolutely no tolerance for employment discrimination on the basis of age, gender, sexual orientation, race, colour, religious or political beliefs, marital status, ethnic background or social origin.

We value diversity within our ranks and make a strong effort to attract women to our industry as well to develop and retain them. Additionally, we are proactive with respect to providing employment opportunities and support for people with disabilities and older workers.

In support of a harmonious workplace, we have established procedures and a fair and independent process for investigating complaints about discrimination, with assurance that the confidentiality of all parties will be respected.

Progress Areas

In 2020, we enhanced our medical benefits and launched flexible work hours to provide more flexibility and better work-life balance for our employees in Hong Kong. In mainland China, the Company provided additional insurance coverage related to the coronavirus outbreak.

Developing a Sustainable Talent Pipeline

To build a sustainable talent pipeline, we continued to organise talent development programmes for different staff levels:



We are also making an effort to raise young people's awareness of the gas industry and to build the Towngas brand with the objective of attracting potential recruits.



in gas engineering at the City University of Hong Kong and for the Professional Diploma in Gas Engineering with the Vocational Training Council (VTC). The courses had a total enrolment of around 100 students in 2020.

We also provided university students with internship opportunities to obtain work experience with Towngas. A total of 70 summer interns and 25 Co-op Trainees were hired during the year.

TEA is one of the founding members of the Corporate Tech Academy Network (CTAN), whose aim is to consolidate the industry's attempts to develop a sustainable and skilled professional/technical workforce in Hong Kong. During the year, a Vocational and Professional Education and Training (VPET) Promotion Competition was held, in which secondary school students were invited to come up with creative ideas on how to attract young people to VPET and become skilled workers or professionals. TEA also participated in the E&M Go! activity for apprentices who recently joined the industry through Towngas and other organisations to promote the electrical and mechanical industry.

Other student engagement activities include the Career in a Nutshell programme and Club Youngas, which offer career related activities to bridge the gap between study and work. Due to the pandemic, activities were moved online, published in the member newsletter and carried out through other media in order to sustain our relationships with the students. We also offered summer internships for Club Youngas members to introduce them to the workplace.

In collaboration with The University of Hong Kong, we co-organised a first year gas engineering elective course in 2020 as part of a master's degree in mechanical engineering. Additionally, there was a second intake for an elective course

In order to build our brand as a preferred employer through social media, a Facebook page called **Towngas People** was launched during the year to host news about Towngas, our employees, as well as recruitment activities to attract potential candidates.

Employee Distribution, New Recruitment and Turnover Rate



Innovative Training Approaches

In 2020, we launched new e-learning platforms in Hong Kong and mainland China which allow learning to take place through a computer or mobile device. Many training programmes were conducted through video conferencing or online courses uploaded on the e-learning platforms, which was particularly useful during the pandemic. Over 350 courses are currently offered on these platforms, covering topics including engineering, customer service, safety risks and human resources. More than 17,000 people participated in the course for over 215,000 learning hours in 2020.

For frontline staff, contractors and apprentices, m-learning courseware on refresher training was specifically prepared to ensure their competencies when face-to-face training could not be held. To

continue instilling the essence of MasterCraft culture in these technicians, we uploaded innovative tools developed by colleagues on our **MasterCraft Culture website**, prepared m-learning courseware and organised a MasterCraft Christmas e-card design competition.

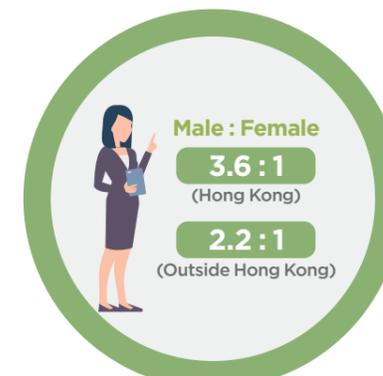
We also held special training in 2020 on dealing with the economic downturn due to COVID-19, with talks designed to reinforce positive thinking and find inspiration. Another programme, which was especially relevant during COVID-19, focused on professional and personal challenges faced by managers in a changing world.

New Training Programmes

- Potential General Managers Programme:** a programme designed to attract talent with management potential to our mainland utility businesses. After rotating attachments in Hong Kong and various business units, regional offices or JVs in mainland China, the participants will become general managers in our mainland utility businesses.
 
- Graduate Trainee Programme for Mainland Utility Businesses:** a 12-month attachment with our businesses in mainland China. The objective of this programme is to build a succession pipeline for our expanding businesses in mainland China. Four trainees were recruited.
 
- Towngas Management Programme (TMP):** a programme to enhance the management skills of our team leaders and managers. It covers 27 topics, including business skills, leadership and execution. The first series was launched in mainland China and attended by 645 participants, of which 43 will become trainers for similar programmes in their JVs. TMP was extended to Hong Kong in 2020.
 
- The NewGen Programme:** the first-of-its-kind cross-corporate talent development programme co-organised by Towngas, New World Development Company Limited, Fung Group and McDonald's Hong Kong. This programme helps young professionals become more intrapreneurial, innovative, inquisitive and impactful through a series of workshops, visits and business case presentations.
 

Diversity, Equal Opportunity and Non-Discrimination

As an equal opportunity employer, we value diversity at the workplace and support anti-discrimination and the fair treatment of all staff. In 2020, there were no incidents of discrimination reported at Towngas.



Empowering Women

The nature of our business is such that our workforce has traditionally tilted towards male employees. We are attempting to redress this imbalance by taking steps to attract more women to our industry. We will continue to make a strong effort to hire, develop and retain women within our ranks.



Hiring the Disabled

We seek to employ the disabled and are working with four non-governmental organisations (NGOs) in Hong Kong to support disability hiring. Special facilities for accommodating people with disabilities in our workplace include automatic doors, adjustable office desks and washrooms for wheelchair users. We have also implemented specialised emergency evacuation procedures and improvements to the fire alarm system. In 2020, we had 13 people with disabilities working in various roles, including a customer service officer and an assistant engineer.



Rehiring Retired Employees/ Hiring Older Workers

Recognising that older workers have knowledge and skills that are valuable to Towngas, we approach employees nearing retirement to see if they are willing to continue working after retirement age. We also support the Post-50 Internship Programme organised by the Employees Retraining Board and offered six internship opportunities. Three candidates of the group were hired as permanent part-time assistants because of their outstanding performance.

Customers

2020 Performance Highlights



Set up a team of **departmental data protection coordinators** to enhance the effectiveness of the Privacy Management Programme



Service quality efficiency: **9.0***
Exceeded target



Courteous and friendly attitude: **8.98***
Exceeded target

** Our target was to exceed a score of 8.5 out of 10*

Future Actions and Targets



Develop policies and processes to enhance and streamline **data protection measures**



Further develop the existing **Privacy Management Programme**



Continue to explore the needs of our customers to launch **new products/services**

Management Approach

We are committed to providing our customers with a safe, reliable supply of energy and the caring, competent and efficient service they expect. Various internal policies, programmes and targets are in place to ensure customers receive excellent service.

Customer Privacy and Cyber Security

At Towngas, we understand the importance of customer privacy and take every step necessary to protect our customers' data in all our communications with them. To that end, we have established a **Privacy Policy Statement** that sets out our standards for handling customer information.

The Company's Data Privacy Standing Committee reviews strategies for handling personal data and, together with the Data Protection Officer and the Departmental Data Protection Coordinators, deals with personal data situations. Every department is required to make a declaration to the Company about any data protection matters that might have arisen during the year.

Aside from reviewing strategies on handling personal data, the Data Privacy Standing Committee focuses on managing potential data breaches. If a data breach does occur, the Committee will conduct an interim assessment on the risk of harm and decide whether the incident will be escalated to top management for their attention. The Committee will also suggest solutions for resolving the incident.

Cyber security has also become a key concern of stakeholders. To mitigate the risks of data leakages and maintain the trust of our customers, we make it possible to wipe the data contained in all mobile devices carried by our gas technicians and other frontline staff remotely, in case these devices are lost. We also isolate sensitive information from our customer relationship management system, in order to minimise the possibility of hacking incidents.

To guard against cyberattacks, we have commissioned a third-party consultant to monitor cyber incidents around the clock. Five response playbooks covering the top five cyber security incidents have been prepared, with actionable, consistent processes developed for responding to and recovering from various cyber

incident scenarios that would have a severe impact on our business processes. In the event of a suspected cyberattack, our Cyber Security Committee will trigger the incident response process, contain the data leakage and then contact the Cyber Security Centre of the Hong Kong Police Force and other security experts. We also conduct regular phishing simulations targeting our employees to heighten their awareness of cyber security risks.

The key to customer privacy is our employees. If our employees lack the necessary awareness, mishandle customer information or are unaware of cyber security risks, the potential for a customer information leakage incident can be high. To avert this possibility, we have undertaken various initiatives, including seminar training and the provision of information security tips. We also host an annual Information Security Week to keep employees up-to-date on personal data protection matters as well as cyber security knowledge.

Quality Management and Customer Service

Total Quality Management (TQM) motivates employees in their pursuit of excellence, according to the three pillars of Courtesy, Craftsmanship and Integrity.

Our Superior Quality Service (SQS) programme has helped us build our customer-centric culture and sparked innovative ideas across Hong Kong and mainland China. Implemented in 1992, the SQS programme is held under a different theme each year to encourage staff to initiate new projects that help improve our operations, save costs or generate new revenue.

We also have a Towngas Service Pledge as part of our commitment to provide a safe and reliable supply of gas to our customers as well as friendly, competent and efficient service. To ensure our customers are receiving the highest standard of service, we are continuously working towards improving our service and setting higher targets.

In addition, we organise various training exercises and activities to enhance customer service quality, such as our Three Courtesies (manners, etiquette and politeness) culture in Hong Kong and mainland China.

Responsible Communication

The wide range of communication channels we provide allows customers to access information on our products and services in a quick and efficient manner. These channels also enable us to collect customer feedback and better understand their needs.



Online platforms, customer centres, and 24-hour Customer Service Hotline

For customers to make enquiries, manage their accounts and make appointments for maintenance and installation



Customer satisfaction surveys

Conducted bi-monthly by an independent company, with low score cases followed up to ensure remedial actions are taken



Customer surveys and focus groups

To learn about customers' views on and experience with new products or services



Customer Focus Team

Visits to housing estates to collect customer comments and handle any potential issues such as gas safety, bill payments and gas appliances

A growing number of customers are becoming aware of the positive and negative environmental and social impacts of the products and services they consume. For this reason, we make every effort to ensure our marketing materials are accurate and based on substantiated information. We also follow fair and responsible communication practices and remain committed to ensuring that our marketing and communication materials comply with all relevant government regulations and industry guidelines. In addition to our marketing materials, customers can also access information on Towngas' products and services through our websites, leaflets, social platforms, and other publications.



Progress Areas

Improving our Customer Services

Our SQS programme continued to be a highlight of our corporate philosophy of "Growth = innovation x implementation". Over the past 28 years, our employees have completed over 1,700 SQS projects, which have helped to raise customer satisfaction levels and save approximately HK\$584 million.

In our Towngas Service Pledge, we set quantitative targets across six key performance areas, which are updated annually. In 2020, all our targets were achieved.

In 2020, Towngas complied with all regulatory requirements and received no substantiated customer complaints about any data loss or breaches of data privacy in Hong Kong. No incidents of non-compliance were reported with respect to regulations and/or voluntary codes concerning product and service information and labelling, or our marketing communications. We have an internal procedure that requires an acknowledgement of customer complaints within three working days and a formal reply letter to be provided within two weeks. The 13 cases of customer complaints received during the year were investigated thoroughly and resolved. Regular meetings are also conducted to review complaints received with senior management.

2020 Towngas Service Pledge

Area	Results	Area	Results
Reliability <ul style="list-style-type: none"> Uninterrupted gas supply (over 99.99%) In case of supply interruption on account of maintenance or engineering work: Customer notification 3 days in advance Restoration of gas supply within 12 hours 	99.99% 100% 99.99%	Speed and Convenience <ul style="list-style-type: none"> Customer Service Hotline: Calls answered within 4 rings Connect or disconnect gas supply within 1 working day Deposit refunded at Customer Centres: 2 hours after disconnection of gas supply* 	96.10% 100% 100%
Safety <ul style="list-style-type: none"> Emergency teams arrive within 25 minutes 	Arrived in 21.57 minutes on average	Service Quality <ul style="list-style-type: none"> Efficiency* Courteous and friendly attitude* 	9.0 8.98
Appointments <ul style="list-style-type: none"> Availability of maintenance and installation services within 2 working days 	1.21 working days	Handling Suggestions <ul style="list-style-type: none"> Written comments or suggestions: Reply within 3 working days Resolution, or a statement of how and when the matter will be resolved, within 2 weeks 	100% 100%

* To enjoy this service, residential customers are advised to inform us of their requests for refunds at the time of making cap-off service appointment and the maximum refund amount is HK\$2,000.

* Our target was to exceed a score of 8.5 out of 10

For more details on our customer service performance results and 2021 targets, please refer to our [corporate website](#).

Improving Accessibility for All

We are committed to improving access to our products and services for all customer groups in Hong Kong.

Ethnic Minorities

Our customer service hotline is available in English, Cantonese, Putonghua, Tagalog and Indonesian

Visually impaired

Bills and gas appliances with Braille instructions are provided to assist those who are visually impaired

Disabled

Wheelchair access is provided in customer centres

Disadvantaged Groups

Towngas Concession Schemes are available to people in need

In 2020, over 45,000 households benefited from concessions totalling HK\$26 million.

To further improve our service efficiency and quality, we have been applying advanced technologies in various areas, including our maintenance works and handling of customer enquiries. Since the launch of our online virtual assistant Tinny in 2018, accuracy in responding to customer enquiries has been improving as a result of machine learning and big data. To date, Tinny has handled over 115,000 enquiries.

Providing an Affordable and Reliable Energy Supply

Our town gas supply reliability remained at the high level of over 99.99 per cent during the year.

In large part, this was made possible by our dual feed of natural gas and naphtha that reduces our reliance on a single fuel source to make town gas.

To keep our gas supply functioning at a highly reliable level, we have modified our gas production plants so that they are capable of handling increases in gas demand. We also installed a backup export gas line at our Tai Po Gas Production Plant. What's more, we plan to upgrade the consoles at the Tai Po Gas Production Plant in order to enhance cyber security and plant control system reliability.



Community

2020 Performance Highlights

Donated **HK\$7.9 million** towards community activities

Volunteer service hours: **16,633** (Hong Kong) **714,300** (Mainland utility businesses)

Love on Delivery programme distributed **30,000** fresh food packs to **1,000** underprivileged families

Future Actions and Targets

Develop a systematic process of **community investment** (from collecting feedback to making decisions)

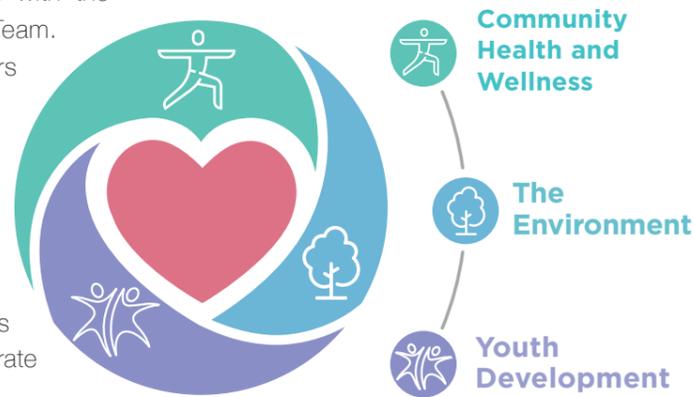
Continue **supporting NGOs** and identifying community programmes that benefit society

Management Approach

As a caring, socially responsible company, Towngas believes in contributing to the communities we serve and creating long-lasting value for society.

To understand the needs of the local communities in which we operate, we engage in ongoing conversations with NGOs and government officials to identify appropriate programmes. One of our major outreach vehicles in Hong Kong for promoting stronger links with the community is our District Council Focus Team. It liaises directly with all District Councillors and works with them and other local representatives to prioritise needs and formulate effective solutions that make the greatest possible impact.

Our community initiatives focus on three areas covering many of the social issues faced by the communities in which we operate (please refer to the diagram on the right).



In addition to providing financial aid and in-kind contributions, we also express our encouragement and support for our employees to get involved in community and voluntary work in line with our Code of Conduct. The Towngas Volunteer Service Team and Towngas Customer Volunteer Team further extend our connections with the community by enabling our staff, their families and customers to become involved in meaningful community activities.

We also participate in lectures, seminars and conferences on topics such as sustainability, safety, climate change, water conservation and career development. Through these activities, we are able to share our management expertise with the public as well as our professional and technical knowledge. This, in turn, promotes awareness of these issues and encourages greater collaboration on resolving the environmental, social and governance (ESG) challenges we face.

Progress Areas

In 2020, the Towngas Volunteer Service Team in Hong Kong had 785 staff members while Towngas Customer Volunteer Team had 241 customers registered. A total of 16,633 volunteer service hours were contributed for 347,526 beneficiaries.

We are also developing a formal mechanism for collecting feedback from local communities and creating a process that enables us to better review the feedback we collect on our volunteer services as the basis for future decision-making.

Community Health and Wellness

As an extension of our warm and caring culture and in response to the issues associated with an ageing society, we are focusing more on programmes for people in need and the elderly.

In 2020, it was much more challenging to take our activities into the community because of the COVID-19 pandemic. Social distancing hindered us from providing our services at a time when the underprivileged needed it most. Many community activities were cancelled, postponed or changed to an online format in order to prevent the spread of the coronavirus.

Despite the challenges of the year, we were able to raise a total of HK\$260,000 through our internal Mad Dog Café fund-raising programme, which was established to improve the living standards of the elderly and people with disabilities. Funds raised during the campaign were used to purchase air purifiers, in addition to the electric washlets and thermo ventilators donated in past years, in order to maintain good airflow in elderly care homes. A total of 75 air purifiers were donated to more than 50 care homes during this year's campaign.

2020 Community Activities (Hong Kong)

Activity	Objective	Progress
Love on Delivery Programme	To assist families with decreased income as a result of job loss or underemployment since the outbreak of COVID-19	30,000 fresh food packs were distributed to 1,000 families
Soup to Warm the Heart Campaign, Rice Dumplings for the Community and Mooncakes for the Community	To show our care for the elderly and people in need	47,180 servings of soup distributed 154,300 rice dumplings donated 130,500 mooncakes delivered
Farming for Charity	To donate vegetables to people in need through volunteer work on an organic farm	3,570 cabbages of vegetables donated to 7,140 people in need

In mainland China, we organise a Rice Dumplings for the Community programme similar to the annual event we hold in Hong Kong. In 2020, more than 80 project companies within the Group participated in this programme to wrap and distribute more than 30,000 rice dumplings for welfare groups and people in need. Festive gifts valued at over RMB300,000 were also handed out at the same time, benefiting close to 7,900 people.





Case Study

Supporting people during COVID-19

As a socially responsible company, we met the challenge of COVID-19 by extending our caring culture from inside Towngas to focus on external stakeholders. Our response was to explore new and different ways of supporting those in need in the community.

Photocatalytic Disinfectant Spray for Restaurants

To assist food and beverage (F&B) businesses affected by the pandemic, we offered to apply nano photocatalytic long-acting disinfectant spray and distributed bottle-size nanospray free of charge. This was done not only to curb the spread of the novel coronavirus but also to strengthen the public's confidence in the hygiene of these businesses and show our support to the catering industry. During the programme, we distributed tens of thousands of bottles of nanospray free of charge to businesses ranging in size from small street-side diners to large F&B chains in the city.



Supporting F&B and the Economy Programme

With this programme, our aim was to help revive the restaurant and catering sector, which has been suffering tremendously because of the pandemic, as well as the economy as a whole. The campaign included an online shopping loyalty programme to give away food and beverage coupons to encourage public support for the catering industry and create a positive impact in the community. Also offered was an interest-free kitchen equipment rental and purchase scheme to make it easier for those interested to join the catering industry.



Love on Delivery Programme

In partnership with the Christian Family Service Centre (CFSC), we launched the Love on Delivery programme to assist families with decreased income as a result of job loss or underemployment since the outbreak of COVID-19. A total of 30,000 fresh food packs were distributed to 1,000 families who needed immediate help with daily necessities and food expenses.

A new Facebook page, **Love on Delivery**, was also launched to organise online activities, share gas safety tips and cooking videos to further connect with these families. Through this channel, instead of meeting beneficiaries in person, Towngas volunteers were able to transform into volunteers online (VOL) to help those in need under the "new normal".



New Job Opportunities for the Unemployed

To assist those who have recently become unemployed, Towngas provided short-term job placements during the year as part of our Unemployment Support Programme. New openings were created and nearly 60 people were hired under the programme, which aims to alleviate economic pressures on job-seekers during this difficult time. It also helped to enrich their work experience for their future career development. Upon the completion of their temporary employment with us, we offered a one-year contract to selected candidates.



Youth Development

In 2019 Towngas joined St. James' Settlement to organise the Green Flame Project – Upcycling for a Greener Home programme to instil the principle of turning waste into treasure in the next generation. Eight outstanding participating students were awarded through the programme in 2020 and went on a three-day local educational tour sponsored by Towngas to broaden their horizons and learn about gas unitisation in the two major local theme parks in Hong Kong.



We also supported activities such as Project YOL (Youth Opinion Leader), organised by the Chinese YMCA of Hong Kong to teach media production skills to students from underprivileged families. Staff from Towngas were among the interviewees who shared their insights on sustainability. Examples of the students' video production work are available **online**.

In 2020, TEA launched its first **YouTube channel** featuring career and STEM-related videos as a learning platform for young people to acquire soft skills and gas knowledge. Other STEM educational materials focusing on gas knowledge and safety will also be produced for students.

In mainland China, the Gentle Breeze Movement was launched in 2013 to improve the learning environment in schools across the country. To date, the Group has donated educational materials worth over RMB4.3 million to 42 schools in the provinces/autonomous regions of Jiangxi, Anhui, Jiangsu, Shandong, Guizhou, Shaanxi, Liaoning, Guangdong, Hubei, Fujian, Inner Mongolia, Sichuan, Heilongjiang

and Chongqing. This programme was extended in 2020 to Chongqing city and Qingyuan city, Guangdong province. We also built Towngas China Charity Libraries and refurbished school facilities.

The Environment

Towngas held the Towngas Governors Beautification Project, in which gas governors throughout the city were decorated with artwork depicting the theme of innovation and green living. A total of 23 gas governors were decorated across the city.

To promote public awareness of and support for used clothes recycling, we launched a programme in 2020 with Friends of the Earth (HK), the Used Clothes Recycling Bin Design Competition for primary and secondary school students in Hong Kong. More than 400 works of art were received from students.

Towngas also supported a parent-child reading campaign to communicate the importance of green living to the younger generation. Towngas collaborated with parent-child reading expert Auntie Choi to create a cartoon series, *the Towngas x Auntie Choi Reading Journey*, which explores environmental protection in daily life. The four-part series is now available **online**.



Supplier Relationship

2020 Performance Highlights	Future Actions and Targets
 <p>Assessed over 170 major suppliers in Hong Kong and mainland China on their CSR performance</p>	 <p>Work with suppliers to improve their ESG performance</p>
 <p>Extended Life-cycle Costing (LCC) methodology from vehicle purchases to light-emitting diode (LED) lighting</p>	 <p>Promote the ISO 45001 standard among our suppliers</p>

Management Approach

We are committed to building long-term business relationships with partners and suppliers for our mutual benefit and prosperity. The **Towngas Purchasing Policy** ensures that our suppliers can participate in a fair, equitable and competitive market. Five key principles have been established as the foundation of responsible supply chain management at Towngas. Details of the principles can be found in the graph below.

Supply Chain Assessment

When selecting suppliers, we consider a wide range of criteria, including a company's background, quality, price, delivery of service and corporate social responsibility (CSR) performance. Preference is given to companies holding related ISO certificates and other documents pertaining to quality. An annual review is conducted to ensure suppliers on the approved list are performing at a satisfactory level.



Managing Environmental and Social Risks

The **CSR Code of Practice for Suppliers** sets out the CSR requirements every Towngas supplier must follow. They are assessed on their CSR performance according to the following criteria:



Apart from a self-assessment survey to understand how suppliers align with our CSR Code of Practice for Suppliers, selected key suppliers are evaluated through site visits. Additionally, they are provided with improvement plans in the spirit of working together to identify opportunities for improving ESG performance.

At Towngas, we are committed to following 6S¹ management principles for a safe and efficient workplace. We also promote 6S practices among our suppliers and support those who follow this methodology for improving efficiency, productivity and product quality, as well as reducing the risk of industrial accidents.

¹ 6S refers to the Japanese words *Seiri, Seiton, Seiso, Seiketsu, Shitsuke* (which mean Sort, Set in order, Shine, Standardise, Sustain) and Safety

Building a Sustainable Supply Chain

Our **Towngas Sustainable Purchasing Policy** spells out the environmental considerations that should be taken into account in every purchasing decision, including the process of procuring services and evaluating product specifications.

We are one of the founding members of the Sustainable Procurement Charter launched by the Green Council, and our procurement decisions and processes are in compliance with the ISO 20400 Sustainable Procurement Guidance as verified by the British Standard Institution (BSI). Making reference to ISO 20400, we have adopted the Life-cycle Costing (LCC) methodology to ensure that the products and services we purchase achieve value for money, with the lowest negative environmental impact and most positive social results. The total costs of the goods and services we procure are estimated over their lifespan, rather than just their capital costs. We also take into consideration future costs such as energy use and maintenance costs.

Training in sustainable procurement is provided to our procurement staff in order to build up their capabilities and knowledge in this area.

Supplier Engagement

We treat our suppliers as partners and regularly engage them in pursuit of our shared values for sustainable development. To that end, we maintain continuous dialogue with our suppliers and invite them to participate in forums, seminars and site visits so we can benchmark their performance and share best practices.

Progress Areas

Supplier Performance and Engagement

In 2020, over 90 per cent of our key suppliers in Hong Kong and mainland utilities (based on total purchase value) completed a CSR self-assessment. It found that no key suppliers had a significant negative impact, actual or potential, on our business ethics or environmental, human rights and labour practices during the year. We will continue to monitor our suppliers and ensure their activities have no negative environmental or social impacts.

Requirements on our suppliers have also been tightened, and they are now obligated to provide relevant certifications on ISO standards such as ISO 9001 and ISO 14001 on the e-Tendering System (eTS) platform when they register as our vendors. The agreed specifications of the products and/or services are written into their legally binding contract agreements with us. We also plan to encourage more suppliers to obtain ISO 14001 and to promote ISO 45001 certifications as we will eventually include these standards in our tender assessment process.

In 2020, we held our Online Joint Purchase Supplier Management Meeting in mainland China to keep our major suppliers updated on our group standards, quality management experiences, and new system applications.

Sustainable Procurement

How we manage our sustainable supply chain involves the complete supply chain life-cycle, from product design to disposal. We have been sourcing more sustainable products such as feedstock (natural gas and landfill gas), pipelines for town gas/natural gas distribution, and environmentally friendly office supplies and equipment, including energy-efficient lighting and Forest Stewardship Council (FSC) certified products.

We also work closely with our suppliers to develop efficient delivery of gas appliances, affix energy labels to water heaters and reduce the use of plastic packaging, among other considerations. Additionally, we provide support for the recycling industry through the long-term partnerships we have established with recyclers at EcoPark in Hong Kong.

During the year, LCC methodology was extended from vehicle purchases to light-emitting diode (LED) lighting. We will continue to extend this method to other categories of products and services for further savings in other procurement categories.

To ensure that our staff are familiar with the new ISO 20400 standard, we organised a Sustainable Procurement Awareness sharing session for all purchasing staff in Hong Kong in 2020.

We will continue to work closely with our suppliers to ensure that they are adopting sustainable business practices and will help them comply with our sustainable procurement policy.

In our Hong Kong operation, over 80% of our suppliers have achieved ISO 14001 certification.*

Suppliers' profile by geographical location (Hong Kong business)	
Hong Kong	89.1%
Mainland China	3.1%
Others	7.8%

*Based on total purchase value of product and material

10 | STRENGTHENING CORPORATE GOVERNANCE



Turning Promises into Action

A high standard of corporate governance is a signal to stakeholders, including investors, that a company is well managed, ethical and transparent. At Towngas, we maintain corporate policies and guidelines to ensure good corporate governance, with relevant whistleblowing channels in place for reporting improprieties. We have also implemented a robust risk management framework in preparation for any contingency in the ever-changing business environment.

To embed our corporate culture of integrity and ethics into the mindset of our staff, we provide comprehensive mandatory training for all new joiners, as well as regular refresher training and promotion campaigns to ensure their knowledge is up-to-date.

2020 Performance Highlights



Reinforced our **culture of integrity** and launched e-learning modules to further promote business ethics



Ensured the **effectiveness of our risk management framework** by continuously mitigating risks that may have a significant impact on our business

Future Actions and Targets



Launch diversified campaigns for all levels of employees to reinforce our corporate culture of **Courtesy, Craftsmanship and Integrity**



Promote **business ethics and compliance** by regularly reviewing relevant policies and guidelines, and carrying out training and internal audits



Review the effectiveness of our **risk management framework** to keep abreast of the changing business environment



Corporate Governance



Management Approach

At Towngas, the high standard of corporate governance that we maintain helps to assure shareholders that their rights and interests are well protected. For other stakeholders, including customers, employees, suppliers and members of the community, our adherence to good corporate governance principles and practices is a clear demonstration of our commitment to fulfilling our social responsibilities.

The Board of Directors of Towngas (the Board) is the Group's highest governing body. It is responsible for enforcing corporate governance and risk management through effective internal controls that enhance transparency and accountability.



Progress Areas

As at 31 December 2020, the Board comprised nine members: three executive directors and six non-executive directors, three of whom are independent. The Board is ultimately accountable for the Group's activities, strategies and financial performance. For details about the Board, its composition, operation and committees, please refer to our **corporate website** or our **Annual Report 2020**.



Risk Management



Management Approach

We consider risk governance to be among our top priorities at Towngas and have established a robust system of risk management and internal control. This contributes to our future success and helps to increase our value to key stakeholders over the long term.

Our risk management process covers all business units in the organisation and concerns all our people. As an ongoing process, risk management has become an intrinsic aspect of our day-to-day operations and part of the culture at Towngas. The Board has the overall responsibility to oversee risk management and evaluate and determine the nature and extent of the risks it is willing to take in a manner consistent with its strategic business drivers. To ensure proper risk reporting channels are in place, the Group Risk Management Committee recommends the risks and corresponding controls to the Executive Risk Management Committee and reports them to the Board for its endorsement.



Progress Areas

As part of our ongoing risk management efforts, the Board reviewed the effectiveness of our risk management framework, as well as key risks impacting our business and their corresponding controls, during the bi-annual risk assessment. For further information about risk management at Towngas, please refer to our **Annual Report 2020**.



Ethical Business



Management Approach

At Towngas, we comply fully with all local laws and regulations in every jurisdiction where we operate.

Our reputation as a trusted service provider and business partner depends on our staff operating ethically and with integrity. The **Code of Conduct** of the Group provides guidelines on how to handle issues related to equal opportunity, fair practice, freedom of association, whistleblowing, conflicts of interest and corruption. All staff members are expected to adhere fully to the principles set out in the Code of Conduct and will be subject to disciplinary action if they contravene those principles. We also require our suppliers to maintain an equally high standard of ethics as stipulated in our **CSR Code of Practice for Suppliers**.

Prevention of Bribery, Extortion, Fraud and Money Laundering

According to the Prevention of Bribery Ordinance, Towngas is a public body. We therefore insist that our staff and business partners adhere to both the letter and the spirit of the law during the course of business. All our employees are strictly forbidden from giving or accepting bribes and must never offer an advantage to, or ask for an advantage from, customers, suppliers, contractors, regulators and legislators, authorities or other business partners.

The Code of Conduct and an **Anti-fraud Policy** promote integrity as a core company value. Both help us to continuously enhance our anti-fraud controls and organisational behaviour to be consistent with our ethical culture. Under the Code of Conduct and Anti-fraud Policy, we are committed to preventing, detecting and reporting any actual or suspected case

of fraud, irregularity, misconduct or malpractice, with zero tolerance for any case of corruption or related malpractice.

Reporting and Monitoring

We have a **Whistleblowing Policy** that encourages employees and stakeholders to raise concerns about any misconduct, malpractice or irregularity, particularly in relation to violations of our Code of Conduct or our business ethics and principles. It provides a formal channel and guidance on reporting possible improprieties. We also have a dedicated panel for dealing with such cases, while staff grievances are handled by the Corporate Human Resources Department. A summary of reported whistleblowing cases is sent to the Board Audit and Risk Committee twice annually.

Training and Awareness

Training in anti-corruption and the Code of Conduct is mandatory for all staff, and is included in our induction course when they first join the Company. All employees are required to confirm on an annual basis that they have read and understood the Code of Conduct, which includes our anti-bribery practices; directors also receive such relevant materials.

We promote the Code of Conduct, as well as our Whistleblowing Policy, among our staff and refresh their understanding of its principles on a regular basis to ensure business practices remain compliant.

Prevention of Anti-competitive Practices

In our Code of Conduct, we set out our commitment to comply with the laws and regulations pertaining to anti-competitive practices, in line with the Company's nine core values. The Code also provides guidance for all staff on understanding the requirements and importance of compliance, as well as the disciplinary action and possible liabilities they will be subject to in cases of non-compliance.

Additionally, we closely monitor the Competition Ordinance and report to the management on any developments that could have a significant impact on Towngas.

Protecting Intellectual Property Rights

All employees must respect, and not infringe, copyrighted work and comply with all applicable laws and regulations. We also require our suppliers to respect intellectual property. In any case of infringement of intellectual property rights by our suppliers, they will have the responsibility to defend and indemnify Towngas.

Respect for Human Rights

Prevention of Child Labour or Forced Labour

In accordance with our adherence to human rights principles, we strictly prohibit child labour and forced labour in our operations. To ensure we are legally compliant with local laws and regulations in our recruitment, we check applicants' identity including, but not limited to, their age and eligibility for employment. We also ensure that employees are given rest days and are compensated for any overtime work, as required by local regulators.

We have extended the concept of fair labour throughout our entire supply chain and require our suppliers to comply with our policies on child labour and forced labour, as stipulated in our CSR Code of Practice for Suppliers. Child labour and forced labour are two of our critical assessment criteria when we conduct an on-site corporate social responsibility (CSR) audit of our suppliers. For more details, please refer to the **Supplier Relationship** section.

Security

Towngas is committed to minimising potential security threats to the Company's facilities and its employees. We have a Corporate Security Policy in place to protect employees and company assets

from harm or loss. To reduce security risks, we have implemented appropriate security measures. Security surveys and audits are conducted to assess possible threats or risks to our major facilities. We also work with governments and our partners to safeguard our assets and provide our employees and contractors with a secure work environment.

While our security team does its utmost to protect our people and physical assets, it must also respect human rights in the discharge of its duties. We ensure that all security personnel are kept abreast of legislation concerning human rights and the rule of law and that they treat people in an appropriate and respectful manner. New security personnel receive training in anti-corruption and non-discrimination during their induction and are required to comply with our Code of Conduct.

Progress Areas

Legal Compliance

Towngas complies with all major local laws and regulations, as the basic requirement for how we operate.

Business ethics

• Anti-corruption	No reportable cases
• Anti-competitive behaviour	No reportable cases
• Labour standards (child and forced labour)	No reportable cases

Health and Safety

• Occupational health and safety	No reportable cases
• Customers and the public	No reportable cases

Employees

• Employment practices ¹	No reportable cases
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Customers

• Customer privacy	No reportable cases
• Product and service information and labelling, and marketing information	No reportable cases

The Environment

No reportable cases

¹ Employment practices related to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.

Promoting an Ethical Culture

In 2020, we provided 156 hours of anti-corruption training for our employees and reinforced our culture of integrity. Due to the COVID-19 pandemic, we replaced our face-to-face teaching sessions with e-learning modules on topics such as integrity and anti-fraud.

Following the relevant successful drawing and short film competitions held in Hong Kong last year, we printed the award-winning drawings on stationery and distributed them to all employees of the Company to raise awareness of the need for ethical behaviour at work and in everyday life. We also broadcast the award-winning short films on Towngas' internal communication channels.

In mainland China, we organised training based on our Total Quality Management (TQM) theme of overcoming challenges, which showed how employees can live up to a culture of Courtesy, Craftsmanship and Integrity even in difficult times. In addition to the training we provided, we organised a short film competition to share best practice case studies on the principles of our Courtesy, Craftsmanship and Integrity culture to overcome challenges at work.

The issue of human rights was a concern raised by our stakeholders. We are examining ways to prevent and mitigate any human rights violations. We will also look at the training needs of our workers so that they are better equipped to address any human rights issues that might arise in the course of their work.



11 | DATA AND REPORTING

Approach to Reporting

Towngas is an organisation that listens and responds to stakeholders' concerns, including but not limited to the social and environmental challenges we face.

We have been reporting on our environmental, social and governance (ESG) performance on an annual basis for over a decade. In this report, we cover our approach to ESG, which is based on our Towngas ESG Framework, disclose our achievements in five key areas, and acknowledge where further improvements can be made.

For this year's report, we have established a more formal structure for easier reading. It includes a management approach (commitment, policies, systems and practices) and progress areas (key initiatives, focus areas, targets and performance, and future plans).

Reporting Scope and Boundary

This report examines the material topics that arose at Towngas and its subsidiaries (the Group) during the period from 1 January 2020 to 31 December 2020, unless otherwise stated.

Information on our ESG performance covers the principal activities of the Group, which include the production, distribution and marketing of gas, water supply and emerging environmentally friendly energy businesses in Hong Kong and mainland China. Our financial performance is discussed in the **Creating Business Opportunities** section, while more comprehensive information on our financial data and businesses is available in the **Annual Report 2020**.

For more information on the ESG performance of our mainland operations – including case studies and key performance indicators – please refer to the Towngas China Company Limited's **Environmental, Social and Governance Report 2020** and Hong Kong and China Water Limited's **Corporate Social Responsibility Report 2020**.

Reporting Guidelines

This report was prepared in accordance with the Global Reporting Initiative (GRI) Standards: Core Option, with reference to the GRI G4 Oil and Gas Sector Disclosures. It also fulfils the mandatory disclosure requirements and "comply or explain" provisions of the latest ESG Reporting Guide (ESG Guide) under Appendix 27 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (SEHK).

Please refer to the **GRI Content Index** and the **ESG Guide Content Index** for more details.

Reporting Principles

In developing the report content, we have adhered to the principles of the GRI Standards and ESG Guide, including but not limited to the following:

Materiality: A description of our materiality assessment process can be found in the **Materiality Assessment** section. It outlines the way we identify, prioritise and validate material topics, including how we take key stakeholders' views into account.

Quantitative: The details of how we quantify our data, including standards, methodologies, assumptions and conversion factors, can be found in the **Key Statistics** section.

Balance: This ESG Report aims to provide a balanced presentation of the Group's ESG management approach and performance during the Reporting Period. In particular, we have presented the content of this report to reflect the impacts of the validated material ESG issues that have been identified as well as our initiatives and efforts to address these impacts.

Consistency: Consistent methodologies are employed for a meaningful comparison, using year-on-year data. Where our methodologies have changed, these are noted in the **Key Statistics** section.

Independent Verification

This report has been verified by an independent third party, Hong Kong Quality Assurance Agency, to ensure its accuracy and completeness, and to verify its adherence to the reporting guidelines. Please refer to the **Verification Statement**.

Acknowledgement

Compiling this report was made possible with the support of the Towngas ESG Committee, the senior management of the Company, and our many departments. We are sincerely grateful to everyone who contributed their time, knowledge and insights towards the preparation of this report. We also thank our staff, partners, customers and other stakeholders who share our vision of enhanced business sustainability.

Your Feedback

The full version of this report is published on the **Towngas website** and the **website of SEHK**.

We welcome comments on this report, as well as any opinions on our future ESG strategy. We invite you to provide your feedback on our ESG performance and reporting methods by completing the **online questionnaire** or emailing us at **cad@towngas.com**.



Key Statistics

This section presents an overview of the 2020 key performance of the Group, with a focus on economic, safety, environmental, employee and social aspects. These quantitative data have been selected in accordance with the GRI Standards, the ESG Guide of SEHK, and other key performance indicators.

Economic Performance

	Unit	2020	2019	2018	2017	2016
Operating						
Customers (Hong Kong gas business)	Million	1.94	1.93	1.91	1.88	1.86
Customers (City-gas business)	Million	31.8	29.8	27.5	25.4	23.1
Customers (Water business)	Million	2.53	2.38	2.24	1.24	1.19
Town gas sales (Hong Kong)	Million MJ	27,947	28,712	29,550	29,049	28,814
Gas sales (Mainland China)	Billion m ³	26.9	25.6	23.0	19.5	17.1
Water sales (Mainland China)	Million tonnes	917	926	610	467	455
Financial						
Revenue	HK\$ million	40,927	40,628	39,073	32,477	28,557
Manpower costs	HK\$ million	3,284	3,485	3,295	3,035	2,955
Capital expenditure	HK\$ million	7,295	7,053	6,746	6,141	6,257
Taxation	HK\$ million	1,713	2,290	1,908	1,750	1,576
Dividends	HK\$ million	6,220	5,924	5,385	4,896	4,451
Profit attributable to shareholders	HK\$ million	6,007	6,966	9,313	8,225	7,341

Hong Kong

Safety Performance

	Unit	2020	2019	2018	2017	2016
Employees¹						
Accidents – all industrial injuries	Number	21	12	10	10	13
Reportable accidents	Number	18	9	7	10	12
Accident frequency rate	Number of accidents per 100,000 man-hours	0.32	0.18	0.15	0.15	0.19
Occupational diseases rate	Number of incidents per 100,000 man-hours	0	0	0	0	0
Accident incidence rate	Number of reportable accidents per 1,000 employees	6.1	3.1	2.4	3.4	4.1
Traffic accident injury rate	Number of traffic accident injuries per 100 vehicles	1.46	1.05	2.31	2.31	3.36
Industrial injury man-days lost	Number of man-days	386	244	201	496	576
Fatal accidents	Number	0	0	0	0	0
Contractors						
Reportable accidents	Number	11	6	9	12	N/A
Fatal accidents	Number	0	0	0	0	N/A
Accident frequency rate	Number of accidents per 100,000 man-hours	0.25	0.14	0.22	0.30	N/A

1. Towngas employees and the employees of its subsidiaries only.

Employees

	Unit	2020	2019	2018	2017	2016
Total Headcount						
Hong Kong gas business	Number	2,130	2,096	2,052	2,022	2,019
<i>All Hong Kong staff¹</i>						
Full-time	Number	2,495	2,474	2,418	2,388	2,392
Part-time	Number	140	118	112	94	116
<i>By gender</i>						
Male	Number	1,950	1,943	1,908	1,877	1,887
Female	Number	545	531	510	511	505
Ratio of male to female – Senior management	Ratio	3.1:1	3.3:1	3.4:1	3.4:1	3.4:1
Ratio of male to female – Middle management	Ratio	3.0:1	3.1:1	3.0:1	3.0:1	3.2:1
Ratio of male to female – General staff	Ratio	4.2:1	4.3:1	4.5:1	4.4:1	4.3:1
<i>By age group</i>						
≤25	Number	147	139	124	123	126
26-35	Number	465	444	400	395	372
36-45	Number	480	486	496	475	487
46-55	Number	750	787	823	861	909
≥56	Number	653	618	575	534	498
<i>By employee category</i>						
Senior management	Number	267	265	251	236	239
Middle management	Number	918	925	889	843	831
General staff	Number	1,310	1,284	1,278	1,309	1,322

Turnover Rate

Average turnover of workforce (Hong Kong gas business)	%	3.9	5.7	6.8	5.7	5.8
Average turnover of workforce (all Hong Kong staff)	%	5.0	5.7	8.7	6.4	6.7
<i>By gender</i>						
Male	%	4.2	4.6	7.0	5.6	6.0
Female	%	7.6	9.8	15.1	9.3	9.0
<i>By age group</i>						
≤25	%	4.9	12.2	16.2	19.3	21.3
26-35	%	9.2	10.9	20.4	13.0	14.8
36-45	%	4.3	7.3	9.9	7.1	6.1
46-55	%	2.7	2.5	4.4	2.6	3.4
≥56	%	5.0	3.7	4.1	4.1	3.4

1. A revised scope was adopted in 2016. The scope includes the employees of companies with business in Hong Kong (i.e. Towngas, Towngas Enterprise Limited, ECO Stations, TGT and U-Tech). The figures have been adjusted accordingly.

	Unit	2020	2019	2018	2017	2016
New Recruitment						
Total	Number	203	250	270	198	200
<i>By gender</i>						
Male	Number	141	173	194	148	144
Female	Number	62	77	76	50	56
<i>By age group</i>						
≤25	Number	50	51	44	53	56
26-35	Number	72	102	95	74	71
36-45	Number	39	52	79	42	34
46-55	Number	19	27	33	15	22
≥56	Number	23	18	19	14	17

Percentage of Staff Who Underwent Performance and Career Reviews

	%	2020	2019	2018	2017	2016
Total	%	84.6	82.8	83.4	85.2	85.6
<i>By gender</i>						
Male	%	85.9	83.9	84.5	86.4	87.1
Female	%	80.0	78.9	79.0	80.8	79.8
<i>By employee category</i>						
Senior management	%	83.1	79.6	80.5	85.2	82.0
Middle management	%	91.4	89.4	89.8	82.9	92.4
General staff	%	80.2	78.7	79.4	80.2	81.9

Training Hours¹

	Hours	2020	2019	2018	2017	2016
Total	Hours	51,865	65,679	82,996	27,907	15,753
Average (per employee)	Hours	17.5	22.4	28.6	10.5	6.6
Anti-corruption	Hours	156.4	4,649.2	661.5	187.8	200

By gender (Average training hours and percentage of employees who received training)

	Hours	2020	2019	2018	2017	2016
Male	Hours	19.1	25.6	31.2	11.2	5.8
	(%)	(63.4)	(93.7)	(88.9)	(53.3)	(43.3)
Female	Hours	12.4	12.3	20.2	7.8	9.6
	(%)	(58.0)	(87.1)	(82.3)	(61.5)	(70.3)

By employee category (Average training hours and percentage of employees who received training)

	Hours (%)	2020	2019	2018	2017	2016
Senior management	Hours (%)	7.4	9.8	17.1	5.9	9.5
	(%)	(73.5)	(85.0)	(85.0)	(50.0)	(73.2)
Middle management	Hours (%)	8.3	13.7	22.9	7.9	10.7
	(%)	(70.4)	(96.8)	(89.8)	(60.1)	(63.4)
General staff	Hours (%)	25.3	30.5	34.3	13.2	3.5
	(%)	(54.6)	(90.7)	(86.3)	(53.0)	(35.6)

1. From 2018, the figures included all training sessions conducted by internal departments and external organisations. Prior to 2018, the figures included training sessions mainly conducted by the Corporate Human Resources Department and Towngas Engineering Academy, while other training hours, such as HSE and its related CPD, were reported separately.

Environmental Performance

	Unit	2020	2019	2018	2017	2016
Energy Consumption¹						
<i>Towngas Headquarters</i>						
Electricity	GJ	19,384	20,252	20,350	20,921	21,383
Town gas	GJ	1,392	2,258	2,104	2,020	2,217
<i>Gas production process</i>						
Indirect: Electricity	GJ	165,304	164,242	148,134	137,142	150,251
Direct: Naphtha	GJ	665,811	720,641	671,808	628,760	616,538
Natural gas	GJ	5,178,927	5,383,668	5,287,475	5,033,398	5,069,673
Synthetic natural gas and landfill gas	GJ	124,985	42,038	325,950	584,126	481,963
Town gas	GJ	175,038	172,701	172,617	160,011	168,086
Diesel	GJ	1,300	1,537	1,480	1,373	1,365
Total energy consumption	GJ	6,487,876	6,544,810	6,607,464	6,484,827	6,311,365
<i>Vehicle fleet²</i>						
Unleaded petrol	GJ	8,797	10,231	11,500	12,679	14,518
Diesel	GJ	11,810	12,017	11,429	11,316	10,172

Packaging Material Use

	Tonnes	2020	2019	2018	2017	2016
Carton	Tonnes	842	946	942	889	822
Wood	Tonnes	15.5	17.7	19.8	18	29
Plastic	Tonnes	1.41	0.88	0.45	0.7	0.9

Emissions

		2020	2019	2018	2017	2016
Carbon Dioxide (CO ₂)	Daily average in metric tonnes (Metric tonnes per million MJ of town gas)	884	912	928	915	907
	(%)	(11.90)	(11.90)	(11.70)	(11.64)	(11.55)
Nitrogen Oxides (NO _x)	Daily average in kg (kg per million MJ of town gas)	298	308	317	311	314
	(%)	(4.0)	(4.00)	(4.00)	(4.00)	(4.00)
Sulphur Oxides (SO _x)	Daily average in kg (kg per million MJ of town gas)	1.0	1.0	1.4	1.9	1.4
	(%)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)
Greenhouse gases (production equipment) ³	Tonnes CO ₂ e	344,549	357,060	347,489	329,741	333,841

Water Consumption and Discharge (Gas Production)⁴

		2020	2019	2018	2017	2016
Water consumption	m ³	982,034	995,239	988,981	1,094,363	1,162,611
	(m ³ per million MJ of town gas)	(35.9)	(35.3)	(34.0)	(38.1)	(40.5)
Total wastewater discharged	Daily average in m ³ (m ³ per million MJ of town gas)	270	306	308	319	321
	(%)	(3.50)	(3.90)	(3.90)	(4.10)	(4.10)
Treated wastewater discharged to marine water bodies	Daily average in m ³	37	45	52	62	79
Wastewater discharged to sewage	Daily average in m ³	232	261	257	258	241

1. The following conversion factors are used to standardise the units to gigajoules (GJ): Town gas (0.048GJ/unit), electricity (0.0036GJ/kWh), petrol (0.033GJ/L), diesel (0.036GJ/L). The conversion of naphtha and landfill gas to energy is calculated by multiplying individual monthly fuel volumetric data by their corresponding monthly average calorific value.

2. Tankers and ECO Aviation Fuel Services (EAFS) vehicles are excluded.

3. GHG inventory covers seven types of GHGs specified in the Kyoto Protocol. The global warming potential rates were from the IPCC Fifth Assessment Report (2014).

Emission factors of GHG emissions due to electricity consumption are obtained from two local electricity companies, while other emission factors were obtained from local governments and authorities, or other recognised sources.

Scope 1 GHG emissions were adjusted to reflect the biogenic nature of landfill gas and its associated carbon emissions during use.

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

Unit	2020	2019	2018	2017	2016	
Waste Management						
<i>Non-hazardous waste</i>						
Non-hazardous waste landfilled ¹	Tonnes	169.0	179.4	173.2	176.9	150.4
Non-hazardous waste recycled ²	Tonnes	135.4	179.5	236.3	199.4	125.7
<i>Hazardous waste³</i>						
Chemical waste generated	Daily average in kg (kg per million MJ of town gas)	145	238	38	193	167
Spent catalyst collected for metal recovery	Tonnes	(2.00)	(3.10)	(0.50)	(2.50)	(2.10)
Spent lube oil recycled	Tonnes	0	27.4	9.1	11.4	18.5
Spent lube oil recycled	Tonnes	44	64.5	3.4	44.8	45.6
<i>Others</i>						
Scrap metal recycled – from used gas appliances	Tonnes	1,626	1,678	1,785	1,803	1,218
Scrap metal recycled – from construction and maintenance of plant and pipelines	Tonnes	62	82	153	92	34
Polyethylene (PE) pipes recycled	Tonnes	24.1	22.5	25.8	24.8	30.9
Gas appliances polyfoam packaging materials avoided	Tonnes	1.10	1.38	1.50	1.46	1.56

Social Performance

Customer Service⁴

Unit	2020	2019	2018	2017	2016	
Customer compliments	Number	5,814	5,924	5,912	5,637 [#]	6,474 [#]
Customer complaints	Number	13	7	12	8 [#]	12 [#]

[#] The data have been adjusted to include written records only

Community Involvement

Unit	2020	2019	2018	2017	2016	
Charitable donations made by the Group	HK\$ million	7.9	7.2	4.8	5.1	7.1
Employees participating in voluntary services	Number	785	799	909	852	830
Voluntary service hours (including employees and customers)	Hours	16,633	87,557	91,628	86,455	75,588
Beneficiaries	Number	347,526	593,131	709,766	655,876	488,755

1. "Non-hazardous waste landfilled" refers to the refuse, wood pallets and construction waste collected from Towngas Headquarters and the Tai Po Gas Production Plant.
2. "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 red packets and cartridges, on a regular basis.
3. All chemical waste handling procedures comply with the Waste Disposal Ordinance (Cap. 354) of the Laws of Hong Kong. We also collect other hazardous waste, such as rechargeable batteries, fluorescent tubes and obsolete electronic products, and deliver them to licensed recyclers on a regular basis.
4. Written records are included.

Outside Hong Kong

Safety Performance¹

Unit	2020	2019	2018	2017	2016	
Safety training	Hour	1,158,454	864,759	836,813	979,628	906,691
Serious gas-related accidents	Number	2	8	10	8	13
Fatal accidents	Number	0	0	0	2	2
Industrial injury man-days lost	Number of man-days	955	1,265	1,667	2,153	3,654

Environmental Performance²

Unit	2020	2019	2018	2017	2016	
Energy and Water Consumption³						
Diesel	GJ	85,499	101,709	79,479	71,848	82,204
Natural gas	GJ	473,302	396,348	320,536	324,522	465,110
Unleaded petrol	GJ	101,924	105,700	103,980	74,936	68,430
Electricity	GJ	2,726,131	2,696,294	2,155,279	1,600,126	1,567,187
Others	GJ	10,464,435	10,590,575	9,591,164	9,104,091	9,737,518
Water	m ³	5,234,424	4,827,702	4,204,432	4,078,327	3,731,565

Emissions

Total Greenhouse gases (GHG) ⁴	Tonnes CO ₂ e	1,406,000	1,439,000	1,262,000	1,245,000	1,233,000
Scope 1 emissions ⁵	Tonnes CO ₂ e	818,000	843,000	807,000	822,000	834,000
Scope 2 emissions ⁶	Tonnes CO ₂ e	588,000	596,000	455,000	423,000	399,000
Nitrogen oxides (NO _x) ⁷	Tonnes	223.7	296.1	223.7	123.7	149.8
Sulphur dioxides (SO ₂) ⁷	Tonnes	258.0	422.0	392.9	89.2	98.4
Respirable suspended particulates (PM10) ⁸	Tonnes	2.34	2.99	2.35	0.31	0.27

Effluent and Waste⁹

Hazardous waste (Solid)	Tonnes	1,006	1,099	1,125	1,026	1,134
Hazardous waste (Liquid)	Litres	86,645	46,192	39,131	42,857	28,600
Non-hazardous waste (Solid)	Tonnes	252,542	239,050	215,425	202,047	220,180
Non-hazardous waste (Liquid)	Litres	45,683	50,427	54,912	69,999	65,677
Wastewater discharged to sewage	m ³	1,204,411	1,355,985	1,090,574	1,847,850	2,088,830

1. Employees only. The scope includes mainland utility businesses, new energy and diversified businesses that are majority owned by Towngas.
2. The scope includes mainland utility businesses, new energy and diversified businesses that are majority owned by Towngas.
3. The following conversion factors are used to standardise the units to gigajoules (GJ): electricity (0.0036GJ/kWh), petrol (0.033GJ/L), diesel (0.036GJ/L) and natural gas (0.04GJ/m³).
4. The reported GHG emission data cover the operations within (around 30%) and outside Hong Kong (around 70%). Data are consolidated on an equity basis. GHG emissions inventory covers seven types of GHGs specified in the Kyoto Protocol. The global warming potential rates were from the IPCC Fifth Assessment Report (2014). Regional grid emission factors were used for GHG emissions due to electricity consumption, while other emission factors were obtained from local governments and authorities, or other recognised sources.
5. Scope 1 emissions – Direct emissions including fuel consumption of production plants, vehicle fleets etc. Scope 1 GHG emissions were adjusted to reflect the biogenic nature of landfill gas and its associated carbon emissions during use.
6. Scope 2 emissions – Electricity consumption of production plants, offices, customer centres, gas refilling stations, data centres, etc.
7. From fuel combustion and vehicle emissions.
8. From vehicle emissions.
9. All hazardous waste and wastewater handling procedures comply with the national regulations.

Employees¹

Unit	2020	2019	2018	2017	2016	
Total Headcounts						
Employees	Number	51,074	50,352	49,489	46,772	46,803
<i>By employment types</i>						
Full-time	Number	51,067	50,342	49,478	46,758	46,789
Part-time	Number	7	10	11	14	14
<i>By gender</i>						
Male	Number	34,876	34,069	33,331	31,386	31,945
Female	Number	16,191	16,273	16,147	15,372	14,844
<i>By age group</i>						
≤25	Number	3,809	3,989	4,065	4,114	4,656
26-35	Number	18,181	16,574	16,733	16,527	16,468
36-45	Number	14,858	15,151	15,024	14,249	13,964
46-55	Number	11,876	12,225	11,572	10,124	9,961
≥56	Number	2,343	2,403	2,084	1,744	1,740
<i>By employee category</i>						
Senior management	Number	1,082	1,003	1,002	971	929
Middle management	Number	5,013	5,750	5,074	4,506	4,485
General staff	Number	44,972	43,589	43,402	41,281	41,375
Turnover Rate						
Average turnover	%	2.0	2.8	4.1	4.1	2.3
<i>By gender</i>						
Male	%	2.1	2.9	4.8	4.7	2.5
Female	%	1.7	2.6	2.5	2.8	1.9
<i>By age group</i>						
≤25	%	4.5	6.2	7.7	4.6	3.5
26-35	%	2.9	4.0	7.2	6.4	2.7
36-45	%	1.5	2.1	2.0	2.5	1.9
46-55	%	0.7	1.3	0.8	2.3	1.7
≥56	%	0.8	1.3	2.6	3.5	1.8

1. Includes all people employed by the Group, its subsidiaries, associates and joint ventures outside Hong Kong.

Unit	2020	2019	2018	2017	2016	
New Recruitment						
Total	Number	1,493	2,736	3,558	1,196	1,853
<i>By gender</i>						
Male	Number	1,123	1,864	2,418	910	1,352
Female	Number	370	872	1,140	286	501
<i>By age group</i>						
≤25	Number	392	766	1,186	216	320
26-35	Number	735	1,201	1,743	513	766
36-45	Number	281	590	487	285	465
46-55	Number	73	152	121	155	260
≥56	Number	12	27	21	27	42

Social Performance

Community Involvement

Unit	2020	2019	2018	2017	2016	
Employees participating in voluntary services (Mainland utility businesses)	Number	11,176	11,487	11,154	8,013	9,016
Voluntary service hours (Mainland utility businesses)	Hours	714,300	264,440	238,000	135,154	93,701

12 | GRI & ESG CONTENT INDEX

Global Reporting Initiative (GRI) Content Index

This report was compiled in accordance with the Core Option of the GRI Standards, and with reference to the GRI G4 Oil and Gas Sector Disclosures.

GRI Standards/ Material Topics	Disclosures	Cross Reference/ Information	External Assurance	
102: General Disclosures 2016				
Organisational Profile	102-1	Name of the organisation	Our ESG Approach (p.14)	•
	102-2	Activities, brands, products, and services	Creating Business Opportunities (p.28-29) Appendices (p.112)	•
	102-3	Location of headquarters	Creating Business Opportunities (p.28)	•
	102-4	Location of operations	Creating Business Opportunities (p.30)	•
	102-5	Ownership and legal form	Creating Business Opportunities (p.28)	•
	102-6	Markets served	Creating Business Opportunities (p.28-30)	•
	102-7	Scale of the organisation	Creating Business Opportunities (p.28-30) Contributing to Stakeholders (p.67) Key Statistics (p.90, 91, 96)	•
	102-8	Information on employees and other workers	Key Statistic (p.91-92, 96-97)	•
	102-9	Supply chain	Contributing to Stakeholders (p.79-81)	•
	102-10	Significant changes to the organisation and its supply chain	Creating Business Opportunities (p.26-35) Contributing to Stakeholders (p.81) Data and Reporting (p.88-89)	•
	102-11	Precautionary Principle or approach	Strengthening Corporate Governance (p.84)	•
	102-12	External initiatives	Appendices (p.113)	•
	102-13	Membership of associations	Appendices (p.113)	•
Strategy	102-14	Statement from senior decision-maker	Managing Director's Message (p.5-7)	•
	102-15	Key impacts, risks and opportunities	Our ESG Approach (p.14-25) Creating Business Opportunities (p.26-35) Protecting the Environment (p.52-55)	•

GRI Standards/ Material Topics	Disclosures	Cross Reference/ Information	External Assurance	
Ethics and Integrity	102-16	Values, principles, standards, and norms of behaviour	Our ESG Approach (p.14-15)	•
Governance	102-18	Governance structure	Board Statement (p.3) Our ESG Approach (p.18) Strengthening Corporate Governance (p.83-84)	•
Stakeholder Engagement	102-40	List of stakeholder groups	Our ESG Approach (p.19)	•
	102-41	Collective bargaining agreements	Contributing to Stakeholders (p.64-65)	•
	102-42	Identifying and selecting stakeholders	Our ESG Approach (p.19)	•
	102-43	Approach to stakeholder engagement	Our ESG Approach (p.19-23)	•
	102-44	Key topics and concerns raised	Our ESG Approach (p.23)	•
Reporting Practice	102-45	Entities included in the consolidated financial statements	Data and Reporting (p.88-89) Annual Report: Independent Auditor's Report (p.85-91)	•
	102-46	Defining report content and topic boundaries	Our ESG Approach (p.20-22) Data and Reporting (p.88)	•
	102-47	List of material topics	Our ESG Approach (p.21-22)	•
	102-48	Restatements of information	Key Statistics (p.90-97)	•
	102-49	Changes in reporting	Our ESG Approach (p.20-22) Data and Reporting (p.88)	•
	102-50	Reporting period	Data and Reporting (p.88)	•
	102-51	Date of most recent report	ESG Report 2019, published in April 2020	•
	102-52	Reporting cycle	Annual	•
	102-53	Contact point for questions regarding the report	Data and Reporting (p.89)	•
	102-54	Claims of reporting in accordance with the GRI Standards	Data and Reporting (p.88)	•
	102-55	GRI content index	GRI Content Index (p.98-105)	•
	102-56	External assurance	Verification Statement (p.115)	•

GRI Standards/ Material Topics	Disclosures	Cross Reference/ Information	External Assurance	
200: Economic				
201: Economic Performance 2016	103	Management approach	Creating Business Opportunities (p.27-35) Annual Report – Chairmen’s Statement (p.6-13)	•
	201-1	Direct economic value generated and distributed	Creating Business Opportunities (p.31) Annual Report – Report of the Directors (p.64-71)	•
	201-2	Financial implications and other risks and opportunities due to climate change	Protecting the Environment (p.52-55) Annual Report – Risk Factor (p.56-57)	•
	201-4	Financial assistance received from government	Annual Report – Notes to the Financial statements	•
202: Market Presence 2016	103	Management approach	Creating Business Opportunities (p.27-29)	•
	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	In 2020, all standard entry level wages fulfilled the regulatory requirement.	•
204: Procurement Practices 2016	103	Management approach	Contributing to Stakeholders (p.79-80)	•
	204-1	Proportion of spending on local suppliers	Contributing to Stakeholders (p.79-81)	•
205: Anti-corruption 2016	103	Management approach	Our ESG Approach (p.21-22) Strengthening Corporate Governance (p.85) Corporate Governance	•
	205-3	Confirmed incidents of corruption and actions taken	Strengthening Corporate Governance (p.86)	•
206: Anti-competitive Behaviour 2016	103	Management approach	Our ESG Approach (p.21-22) Strengthening Corporate Governance (p.85)	•
	206-1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	Strengthening Corporate Governance (p.86)	•

GRI Standards/ Material Topics	Disclosures	Cross Reference/ Information	External Assurance	
300: Environmental				
301: Materials 2016	103	Management approach	Protecting the Environment (p.49-50) Towngas Sustainable Purchasing Policy	•
	301-1	Materials used by weight or volume	Key Statistics (p.93-95)	•
	301-2	Recycled input materials used	Protecting the Environment (p.56)	•
302: Energy 2016	103	Management approach	Our ESG Approach (p.21-22) Protecting the Environment (p.49, 58) Green Building	•
	302-1	Energy consumption within the organisation	Key Statistics (p.93-95)	•
	302-4	Reduction of energy consumption	Protecting the Environment (p.56-59) Green Building	•
	302-5	Reductions in energy requirements of products and services	Protecting the Environment (p.56-59)	•
	G4-OG3	Total amount of renewable energy generated by source	Creating Business Opportunities (p.33-35) Protecting the Environment (p.56-57)	•
303: Water and Effluents 2018	103	Management approach	Our ESG Approach (p.21-22) Protecting the Environment (p.49, 59) Green Building	•
	303-1	Interactions with water as a shared resource	Protecting the Environment (p.49, 59-60)	•
	303-2	Management of water discharge-related impacts	Protecting the Environment (p.49, 59-60)	•
	303-3	Water withdrawal	Key Statistics (p.93, 95)	•
	303-4	Water discharge	Key Statistics (p.93, 95)	•
304: Biodiversity 2016	103	Management approach	Protecting the Environment (p.49, 61)	•

GRI Standards/ Material Topics	Disclosures	Cross Reference/ Information	External Assurance
305: Emissions 2016	103 Management approach	Our ESG Approach (p.21-22) Protecting the Environment (p.49-55) Carbon Management	•
	305-1 Direct (Scope 1) GHG emissions	Protecting the Environment (p.57) Key Statistics (p.93, 95)	•
	305-2 Energy indirect (Scope 2) GHG emissions	Protecting the Environment (p.57) Key Statistics (p.93, 95)	•
	305-4 GHG emissions intensity	Protecting the Environment (p.57)	•
	305-5 Reduction of GHG emissions	Protecting the Environment (p.50-57)	•
	305-7 NOx, SOx, and other significant air emissions	Key Statistics (p.93, 95)	•
	306: Effluent and Waste 2016	103 Management approach	Our ESG Approach (p.21-22) Protecting the Environment (p.49, 59) Waste Management
306-1 Water discharge by quality and destination		Key Statistics (p.93, 95)	•
306-2 Waste by type and disposal method		Key Statistics (p.94-95)	•
306-3 Significant spills		Protecting the Environment (p.60)	•
306-4 Transport of hazardous waste		Key Statistics (p.94-95)	•
306-5 Water bodies affected by water discharges and/or runoff		No water bodies are significantly affected by our Hong Kong operation.	•
Products and Services	G4-OG5 Volume and disposal of formation or produced water	Key Statistics (p.93, 95) In 2020, our Hong Kong operation did not involve formation or produced water.	•
	G4-OG7 Amount of drilling waste (drill mud and cuttings) and strategies for treatment and disposal	In 2020, our Hong Kong operation did not involve drilling waste.	•
	G4-OG8 Benzene, lead and sulfur content in fuels	The composition of town gas is regulated by the Environmental Protection Department, and the benzene, lead and sulfur contents did not exceed the permitted levels during the reporting period.	•
307: Environmental Compliance 2016	103 Management approach	Protecting the Environment (p.49)	•
	307-1 Non-compliance with environmental laws and regulations	Strengthening Corporate Governance (p.87)	•

GRI Standards/ Material Topics	Disclosures	Cross Reference/ Information	External Assurance
308: Supplier Environmental Assessment 2016	103 Management approach	Our ESG Approach (p.21-22) Contributing to Stakeholders (p.79-80)	•
	308-2 Negative environmental impacts in the supply chain and actions taken	Contributing to Stakeholders (p.80-81)	•
400: Social			
401: Employment 2016	103 Management approach	Our ESG Approach (p.21-22) Contributing to Stakeholders (p.64)	•
	401-1 New employee hires and employee turnover	Contributing to Stakeholders (p.67) Key Statistics (p.91-92, 96-97)	•
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	Contributing to Stakeholders (p.64, 66)	•
402: Labour/Management Relations 2016	103 Management approach	Our ESG Approach (p.21-22) Contributing to Stakeholders (p.64-65)	•
	402-1 Minimum notice periods regarding operational changes	Contributing to Stakeholders (p.64-65)	•
403: Occupational Health and Safety 2018	103 Management approach	Our ESG Approach (p.21-22) Ensuring Health and Safety (p.38) HSE Policy	•
	403-1 Occupational health and safety management system	Ensuring Health and Safety (p.38)	•
	403-2 Hazard identification, risk assessment, and incident investigation	Ensuring Health and Safety (p.38, 42)	•
	403-3 Occupational health services	Ensuring Health and Safety (p.37-41)	•
	403-4 Worker participation, consultation, and communication on occupational health and safety	Ensuring Health and Safety (p.38)	•
	403-5 Worker training on occupational health and safety	Ensuring Health and Safety (p.38-39)	•
	403-6 Promotion of worker health	Ensuring Health and Safety (p.40-41)	•
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Ensuring Health and Safety (p.38-41)	•
	403-8 Workers covered by an occupational health and safety management system	Ensuring Health and Safety (p.37-39)	•
403-9 Work-related injuries	Ensuring Health and Safety (p.37, 39) Key Statistics (p.90, 95)	•	

GRI Standards/ Material Topics	Disclosures	Cross Reference/ Information	External Assurance
404: Training and Education 2016	103 Management approach	Our ESG Approach (p.21-22) Contributing to Stakeholders (p.65)	•
	404-1 Average hours of training per year per employee	Key Statistics (p.92)	•
	404-2 Programmes for upgrading employee skills and transition assistance programmes	Contributing to Stakeholders (p.68)	•
	404-3 Percentage of employees receiving regular performance and career development reviews	Key Statistics (p.92)	•
405: Diversity and Equal Opportunity 2016	103 Management approach	Our ESG Approach (p.21-22) Contributing to Stakeholders (p.64, 68, 69)	•
	405-1 Diversity of Governance Bodies and Employees	Key Statistics (p.91-92, 96)	•
406: Non-Discrimination 2016	103 Management approach	Our ESG Approach (p.21-22) Contributing to Stakeholders (p.64, 66, 69)	•
	406-1 Incidents of discrimination and corrective actions taken	Contributing to Stakeholders (p.69)	•
407: Freedom of Association and Collective Bargaining 2016	103 Management approach	Contributing to Stakeholders (p.65) Strengthening Corporate Governance (p.85)	•
408: Child Labour 2016	103 Management approach	Our ESG Approach (p.21-22) Contributing to Stakeholders (p.64) Strengthening Corporate Governance (p.86)	•
	408-1 Operations and suppliers at significant risk for incidents of child labour	Contributing to Stakeholders (p.80-81) Strengthening Corporate Governance (p.86)	•

GRI Standards/ Material Topics	Disclosures	Cross Reference/ Information	External Assurance
409: Forced or Compulsory Labour 2016	103 Management approach	Our ESG Approach (p.21-22) Contributing to Stakeholders (p.64) Strengthening Corporate Governance (p.86)	•
	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labour	Contributing to Stakeholders (p.80-81) Strengthening Corporate Governance (p.86)	•
410: Security Practices 2016	103 Management approach	Our ESG Approach (p.21-22) Strengthening Corporate Governance (p.86)	•
	410-1 Security personnel trained in human rights policies or procedures	Strengthening Corporate Governance (p.86)	•
412: Human Rights Assessment 2016	103 Management approach	Our ESG Approach (p.21-22) Strengthening Corporate Governance (p.86)	•
	412-2 Employee training on human rights policies or procedures	Strengthening Corporate Governance (p.87)	•
413: Local Communities 2016	103 Management approach	Ensuring Health and Safety (p.44-46) Contributing to Stakeholders (p.74) District Council Focus Team Social Projects Towngas Concession Schemes Contributing to Stakeholders (p.74-78)	•
	413-1 Operations with local community engagement, impact assessments and development programmes		•
	413-2 Operations with significant actual and potential negative impacts on local communities	Ensuring Health and Safety (p.44-47)	•
	G4-OG11 Number of sites that have been decommissioned and sites that are in the process of being decommissioned	In 2020, our Hong Kong operation did not involve such sites.	•

GRI Standards/ Material Topics	Disclosures	Cross Reference/ Information	External Assurance
414: Supplier Social Assessment 2016	103 Management approach	Our ESG Approach (p.21-22) Contributing to Stakeholders (p.79-81)	•
	414-2 Negative social impacts in the supply chain and actions taken	Contributing to Stakeholders (p.79-81)	•
416: Customer Health and Safety 2016	103 Management approach	Our ESG Approach (p.21-22) Ensuring Health and Safety (p.42) Contributing to Stakeholders (p.70-71)	•
	416-1 Assessment of the health and safety impacts of product and service categories	Customer Safety Ensuring Health and Safety (p.42-47)	•
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	Public Safety Strengthening Corporate Governance (p.86)	•
417: Marketing and Labelling 2016	103 Management approach	Our ESG Approach (p.21-22) Contributing to Stakeholders (p.71)	•
	417-2 Incidents of non-compliance concerning product and service information and labelling	Contributing to Stakeholders (p.72) Strengthening Corporate Governance (p.87)	•
	417-3 Incidents of non-compliance concerning marketing communications	Contributing to Stakeholders (p.72) Strengthening Corporate Governance (p.87)	•
418: Customer Privacy 2016	103 Management approach	Our ESG Approach (p.21-22) Contributing to Stakeholders (p.38)	•
	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	Privacy Policy Statement Contributing to Stakeholders (p.72)	•

GRI Standards/ Material Topics	Disclosures	Cross Reference/ Information	External Assurance
419: Socioeconomic Compliance 2016	103 Management approach	Our ESG Approach (p.21-22) Ensuring Health and Safety (p.38) Contributing to Stakeholders (p.64) Strengthening Corporate Governance (p.84-86)	•
	419-1 Non-compliance with laws and regulations in the social and economic area	Strengthening Corporate Governance (p.86-87)	•
Emergency Preparedness	103 Management approach	Our ESG Approach (p.21-22) Ensuring Health and Safety (p.38, 45-46)	•
Asset Integrity and Process Safety	103 Management approach	Our ESG Approach (p.21-22) Ensuring Health and Safety (p.38, 45-46)	•
	G4-OG13 Number of process safety events, by business activity	Network Safety Ensuring Health and Safety (p.46-47)	•
Fossil Fuel Substitutes	103 Management approach	Creating Business Opportunities (p.33-35) Protecting the Environment (p.56-57)	•
	G4-OG14 Volume of biofuels produced and purchased meeting sustainability criteria	Landfill Gas Creating Business Opportunities (p.33-35) Protecting the Environment (p.56-57)	•

Environmental, Social and Governance Reporting Guide (ESG Guide) Content Index

This Report was in compliance with the mandatory disclosure requirements and “comply or explain” provisions of the latest ESG Guide of The Stock Exchange of Hong Kong Limited.

Aspects	General Disclosures and KPIs	Cross Reference/Information	
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	Protecting the Environment (p.49-50) Strengthening Corporate Governance (p.88) HSE Policy Carbon Management
	A1.1	The types of emissions and respective emissions data	Key Statistics (p.93-95)
	A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity	Protecting the Environment (p.57) Key Statistics (p.93, 95)
	A1.3	Total hazardous waste produced (in tonnes), and, where appropriate, intensity	Key Statistics (p.94-95)
	A1.4	Total non-hazardous waste produced (in tonnes), and, where appropriate, intensity	Key Statistics (p.94-95)
	A1.5	Description of emission target(s) set and steps taken to achieve them	Protecting the Environment (p.50-59)
	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	Protecting the Environment (p.59-60) Waste Management
A2 Use of Resources	General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials	Protecting the Environment (p.49, 58-59) HSE Policy Green Building
	A2.1	Direct and/or indirect energy consumption by type in total and intensity	Key Statistics (p.59, 93, 95)
	A2.2	Water consumption in total and intensity	Key Statistics (p.93, 95)
	A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them	Protecting the Environment (p.58-59)
	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	Protecting the Environment (p.58-60)
	A2.5	Total packaging material used for finished products (in tonnes), if appropriate, with reference to per unit produced	Key Statistics (p.93)

Aspects	General Disclosures and KPIs	Cross Reference/Information	
A3 The Environment and Natural Resources	General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources	Protecting the Environment (p.49, 51, 58-59, 61) HSE Policy
	A3.1	Description of the significant impacts of activities on the environment and natural resources and actions taken to manage them	Protecting the Environment (p.50-61)
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	Protecting the Environment (p.49, 51) HSE Policy
	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	Protecting the Environment (p.51-57)
B. Social			
Employment and Labour Practices			
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	Contributing to Stakeholders (p.64-66) Strengthening Corporate Governance (p.87)
	B1.1	Total workforce by gender, employment type, age group and geographical region	Contributing to Stakeholders (p.67) Key Statistics (p.91, 96)
	B1.2	Employee turnover rate by gender, age group and geographical region	Contributing to Stakeholders (p.67) Key Statistics (p.91, 96)
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	Ensuring Health and Safety (p.38) Strengthening Corporate Governance (p.86) HSE Policy
	B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year	Key Statistics (p.90, 95)
	B2.2	Lost days due to work injury	Key Statistics (p.90, 95)
	B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored	Ensuring Health and Safety (p.39-41)

Aspects	General Disclosures and KPIs	Cross Reference/Information
B3 Development and Training	General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work Description of training activities
	B3.1	Percentage of employees trained by gender and employee category
	B3.2	Average training hours completed per employee by gender and employee category
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
	B4.1	Description of measures to review employment practices to avoid child and forced labour
	B4.2	Description of steps taken to eliminate such practices when discovered
Operating Practices		
B5 Supply Chain Management	General Disclosure	Policies on managing environmental and social risks of the supply chain
	B5.1	Number of suppliers by geographical region
	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
	B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored
	B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored

Aspects	General Disclosures and KPIs	Cross Reference/Information
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
	B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons
	B6.2	Number of products and service related complaints received and how they are dealt with
	B6.3	Description of practices relating to observing and protecting intellectual property rights
	B6.4	Description of quality assurance process and recall procedures
	B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored
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
	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
	B7.2	Description of preventive measures and whistleblowing procedures, how they are implemented and monitored
	B7.3	Description of anti-corruption training provided to directors and staff
Community		
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
	B8.1	Focus areas of contribution
	B8.2	Resources contributed to the focus area

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Appendix I: Our Roles and Services

Hong Kong Gas Business	
The Hong Kong and China Gas Company Limited	<ul style="list-style-type: none"> Gas production and distribution Marketing and sale of gas and gas appliances Comprehensive after-sales services
Towngas Engineering Academy	<ul style="list-style-type: none"> Technical and professional training
Quality Testing Services Limited	<ul style="list-style-type: none"> Appliance and polyethylene (PE) joint testing and gas meter calibration
Mainland Utility Businesses	
Hong Kong & China Gas Investment Limited	<ul style="list-style-type: none"> Management of Towngas investments in mainland China
Hong Kong and China Water Limited	<ul style="list-style-type: none"> Management of water business investments in mainland China
Towngas China Company Limited	<ul style="list-style-type: none"> Focus on piped city-gas projects in mainland China
Towngas Engineering Academy	<ul style="list-style-type: none"> Technical and professional training
New Energy Business	
ECO Environmental Investments Limited	<ul style="list-style-type: none"> Liquefied petroleum gas (LPG), liquefied natural gas (LNG) and compressed natural gas (CNG) filling stations in Hong Kong and mainland China Construction and operation of ECO Aviation Fuel Facility (EAFF) in Hong Kong Exploration, research, development and utilisation of new and environmentally friendly energy sources, such as coalbed methane, coal-based chemical projects, tar oil and biomass activities Infrastructure and logistics projects in mainland China An oil exploration and production project in Thailand
Diversified Businesses	
GH-Fusion Corporation Limited (a joint venture with British Fusion Group)	<ul style="list-style-type: none"> Manufacture and supply of polyethylene (PE) products and equipment for gas and water piping systems
G-Tech Piping System (Zhongshan) Company Limited	<ul style="list-style-type: none"> Manufacture of quality polyethylene (PE) piping
Towngas Telecommunications Company Limited	<ul style="list-style-type: none"> Provision of telecommunications infrastructure and quality network solutions in Hong Kong and mainland China
U-Tech Engineering Company Limited	<ul style="list-style-type: none"> Specialises in a variety of projects, including building services, liquefied petroleum gas projects, civil works, waterworks and other pipeline infrastructure projects
P-Tech Engineering Company Limited	<ul style="list-style-type: none"> Plant design and construction Planning and operation of landfill gas utilisation projects in Hong Kong
M-Tech Metering Solutions Company Limited	<ul style="list-style-type: none"> Development and supply of smart metering solutions for the gas industry
S-Tech Technology Holding Limited	<ul style="list-style-type: none"> Product development, solution implementation and system integration Provision of cloud computing solutions and other information technology products as well as consulting services to companies

Appendix II: Memberships in Associations

Hong Kong and Mainland China
<ul style="list-style-type: none"> Association of Engineering Professionals in Society Ltd. British Chamber of Commerce in Hong Kong Business Environment Council Ltd. China Gas Association (Beijing) Employers' Federation of Hong Kong Federation of Hong Kong Industries Green Cross Group Hong Kong Association of Energy Engineers Hong Kong Bakery and Confectionery Association Ltd. Hong Kong Computer Society Hong Kong General Chamber of Commerce Hong Kong Green Building Council Hong Kong Green Finance Association Hong Kong Institute of Human Resources Management Hong Kong Institute of Marketing Hong Kong Management Association Hong Kong Quality Management Association Hong Kong Retail Management Association Hong Kong Waste Management Association Institution of Fire Engineers (Hong Kong Branch) The Chamber of Hong Kong Listed Companies The Chinese General Chamber of Commerce The Chinese Manufacturers' Association of Hong Kong The Goods Vehicle Fleet Owners Association Ltd. The Green Council The Hong Kong Advertisers' Association The Institute of Purchasing & Supply of Hong Kong World Wide Fund for Nature Hong Kong
International
<ul style="list-style-type: none"> Institution of Gas Engineers and Managers (IGEM) International Gas Union (IGU) World Energy Council World LP Gas Association

Appendix III: External Environmental, Social and Governance Charters and Initiatives

Charters and Initiatives	Issuing Bodies
Corporate Governance	
Companies Ordinance, Chapter 622 of the laws of Hong Kong Securities and Futures Ordinance, Chapter 571 of the laws of Hong Kong	The Government of the Hong Kong Special Administrative Region
Corporate Governance Code and Corporate Governance Report, Appendix 14 to the Listing Rules Environmental, Social and Governance Reporting Guide, Appendix 27 to the Listing Rules	The Stock Exchange of Hong Kong Limited
Environment	
Carbon Footprint Repository for Listed Company in Hong Kong Carbon Reduction Charter: Carbon Audit • Green Partners	Environment Bureau
Hong Kong Green Organisation IAQwi\$e Label Wastewi\$e Label	Environmental Campaign Committee
"Let's save 10L Water" Campaign	Water Supplies Department
Sustainable Procurement Charter	Green Council
Hong Kong Zero Carbon Partnership	The University of Hong Kong
CarbonCare®ESG Label (Level 4) Innovation Partner of CarbonCare Open Innovation Lab	CarbonCare InnoLab
Green Bottle Charter	The Green Earth
Hong Kong Green Shop Alliance	The Hong Kong Green Building Council
Occupational Health and Safety	
Safety Charter International Safe Workplace Program Charter on Preferential Appointment of OSH Star Enterprises Joyful@Healthy Workplace Charter	Occupational Safety and Health Council
Social Responsibility	
Barrier-free Company	The Hong Kong Council of Social Service
Talent-Wise Employment Charter and Inclusive Organisations Recognition Scheme	Labour and Welfare Bureau

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VERIFICATION STATEMENT



VERIFICATION STATEMENT

Scope of Verification

Hong Kong Quality Assurance Agency ("HKQAA") has been commissioned by The Hong Kong and China Gas Company Limited ("Towngas") to undertake an independent verification for its Environmental, Social and Governance ("ESG") Report 2020 ("the Report"). The scope of HKQAA's verification covers the information on ESG performance of Towngas businesses both in Hong Kong and outside Hong Kong for the period from 1st January 2020 to 31st December 2020.

The aim of this verification is to provide a reasonable assurance on the reliability of the report contents. The Report has been prepared in accordance with the Global Reporting Initiative ("GRI") Standards: Core option and with reference to the GRI G4 Oil and Gas Sector Disclosures. It also fulfils the mandatory disclosure requirements and "comply or explain" provisions of the Environmental, Social and Governance Reporting Guide ("ESG Guide"), under Appendix 27 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited.

Level of Assurance and Methodology

The process applied in this verification was referring to the International Standard on Assurance Engagements 3000 (Revised), Assurance Engagements Other Than Audits or Reviews of Historical Financial Information issued by the International Auditing and Assurance Standards Board. Our evidence gathering process was designed to obtain a reasonable level of assurance for devising the verification conclusion.

In order to understand the process that Towngas adopted to ascertain the key ESG issues and impacts, the Report compilation process was discussed including stakeholder engagement and materiality assessment processes. Also, system and process for collecting, collating and reporting ESG performance data were verified. Our verification procedure covered reviewing relevant documentation, interviewing responsible personnel with accountability for preparing the Report and verifying the selected samples of data and information used for preparing the Report. Raw data and supporting evidence of the selected samples were also thoroughly examined during the verification process.

Independence

Towngas is responsible for the collection and presentation of the information presented in the Report. HKQAA does not involve in calculating, compiling, or in the development of the Report. Our verification activities are independent from Towngas.

Conclusion

On the basis of our verification results and in accordance with the verification procedures undertaken, it is the opinion of the HKQAA's verification team that:

- The Report has been prepared in accordance with the GRI Standards: Core option and with reference to the GRI G4 Oil and Gas Sector Disclosures, also it fulfills the ESG Guide for disclosure;
- The Report illustrates Towngas ESG performance, covering all material and relevant aspects in a balanced, comparable, clear and timely manner; and
- The data and information disclosed in the Report are reliable and complete.

HKQAA confirmed that the selected information and data of Towngas stated in the Report has been prepared and presented in a fair manner, in all material aspects. In conclusion, the ESG performance disclosed in the Report is appropriate to the sustainability context and materiality of Towngas.

Signed on behalf of Hong Kong Quality Assurance Agency

Connie Sham
Head of Audit
March 2021

The Hong Kong and China Gas Company Limited
香港中華煤氣有限公司

YOUR FEEDBACK

If you have any questions or feedback, we would very much like to hear from you. Please fill in the [online questionnaire](#) or contact us:

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