



煤氣
Towngas

Greening up your life

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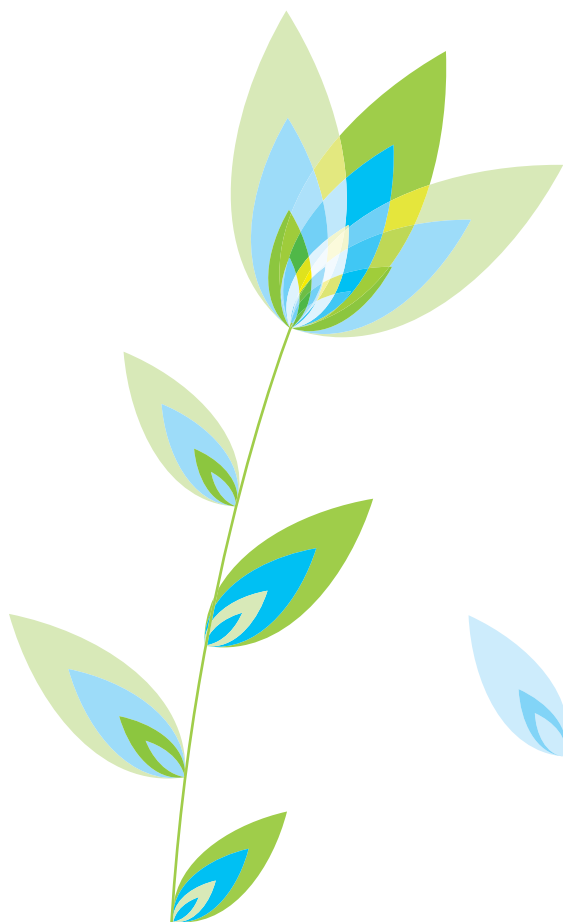


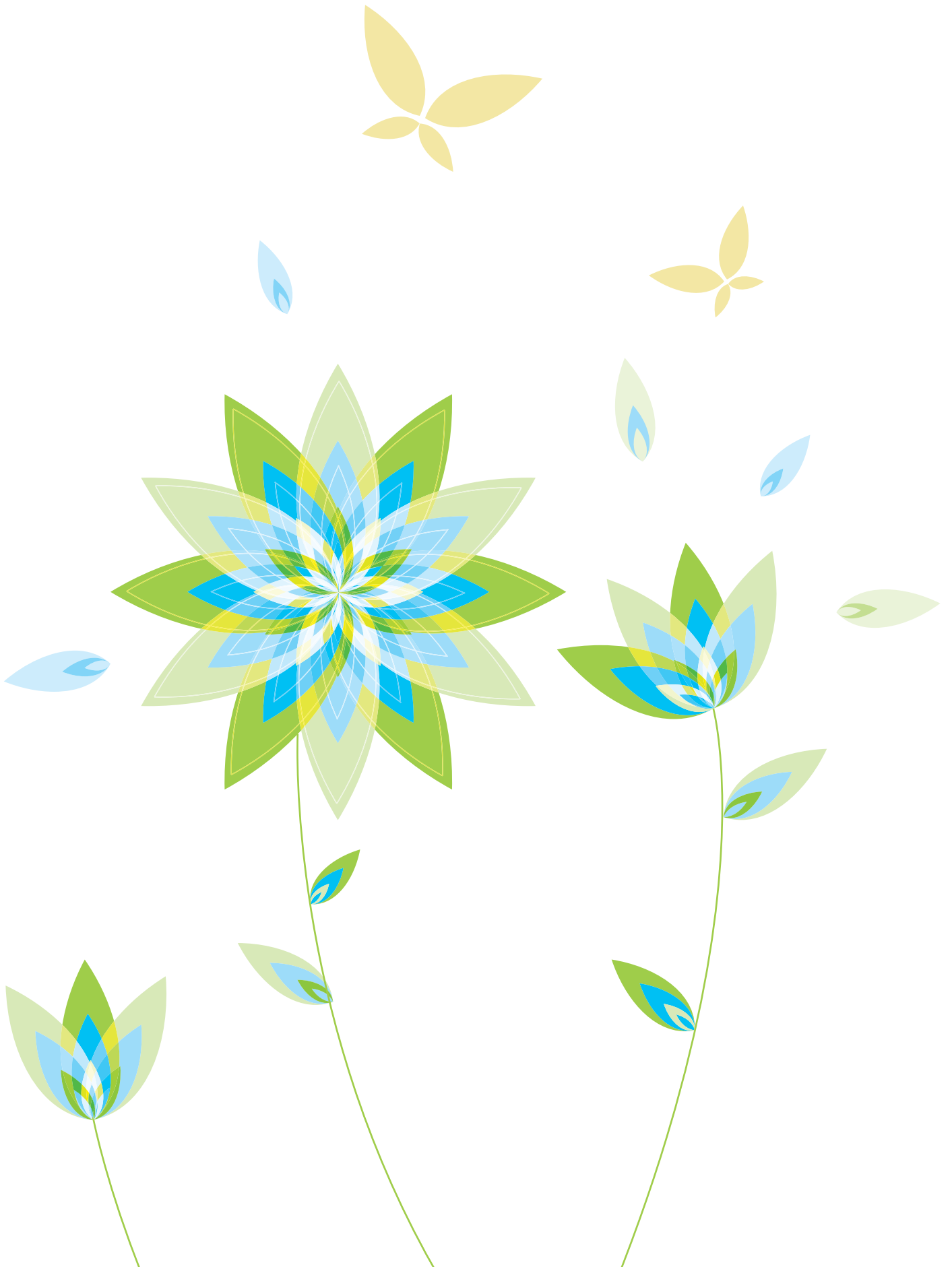
SUSTAINABILITY REPORT
2016



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MANAGING DIRECTOR'S MESSAGE



Alfred W K Chan
Managing Director



Our dedication to sustainability, quality and innovation define Towngas. Our knowledge, experience and green vision will benefit the entire industry.



Towngas Hall of Innovation



Sustainability Characterised by Quality and Innovation

In 2016, there were significant changes to the regional and global energy landscapes. It was a year of political and economic uncertainty, affecting industries across the world. Export-oriented production was adversely affected, and a slowdown in mainland China's industrial activities continued throughout the year.

Public concern about climate change and cleaner energy sources has never been stronger. To cope with this over the long term, the Chinese government has formulated an aggressive natural gas utilisation policy which will strengthen measures to reduce air pollution and minimise smog. This step represents a trend towards using more natural gas and environmentally-friendly energy, which will favour the Group's businesses.

Towngas has made multifaceted efforts to transform these challenges into opportunities for strategic growth. We continued our

metamorphosis into an eco-friendly energy supplier of Asia. Our strategy for 2016 was twofold: diversification via new gas applications, and extending our products and services while shifting to less oil-price-sensitive chemical products. Towngas will continue on this course, and our top priority remains operating the business responsibly – with respect for people, their safety, our communities and the environment.

In this report, we have highlighted our innovative approach to sustainable development, including details of our initiatives and performance for the year. We continue to uphold our philosophy of "Growth = Innovation x Implementation", which empowers our employees to contribute to the ongoing growth and development of the Group, while engaging stakeholders and cultivating a sustained joint effort to create a better future for all.

Innovating to New Levels of Excellence



In 2016, we invested in new technology to galvanise the reliability, efficiency and quality of our products and services. This enhanced our operations across a range of scenarios, including during field inspections, while checking external service risers for early symptoms of gas leaks, and when rectifying defects. A notable example is the Smart Riser Jacket, a new device that stops gas leaks on risers instantly and prevents further pipe erosion.

We also extended our Total Quality Management message to boost levels of safety, work and service quality across our teams. The Towngas MasterCraft campaign was launched to encourage frontline staff to strive for quality and excellence, and focus on the aesthetic elements of the Group's culture using a variety of means and channels.

Securing a Greener Future for All



Towngas is proud to play a leading role in protecting the environment through sharing our knowledge and experience. This approach benefits the community and the environment. In Hong Kong, we continued to mitigate greenhouse gas (GHG) emissions. Natural gas, a far cleaner fuel, now comprises 60% of our fuel mix. In 2016, we reached another milestone by completing the construction of our third landfill gas treatment plant located at the South East New Territories (SENT) landfill site. Utilising

the gas generated from the waste buried at the site, we expect this project to reduce our carbon emissions by 56,000 tonnes a year, which is the equivalent of planting 2.4 million tree seedlings, and saves us from using the equivalent amount in fossil fuel.

The Chinese government has committed to reducing its carbon intensity by 60% to 65% from its 2005 level by the year 2030, while capping the absolute amount. To achieve this, it encourages converting biomass into clean energy and chemical products, as well as using cleaner fuels, among other policies. Towngas has embraced this by constructing a plant at Suzhou Industrial Park under our brand Hua Yan Water which, each day, will convert 500 tonnes of food waste, green waste and landfill leachate into natural gas, oil products, solid fuel and fertiliser, turning waste into high-value products.

Ensuring Safe and Reliable Operation



Safety is of our paramount concern. We endeavor to improve reliability and safety at our operations. In 2016, the uninterrupted gas supply was upheld more than 99.99% and our emergency teams achieved the average set arrival time of 25 minutes in Hong Kong. The Group's total town gas customers in Hong Kong reached 1.86 million, while city-gas customers in mainland China exceeded 23 million. The serious gas-related accidents in our mainland operations have fallen by 18% over the last five years.

Instilling the Spirit of Inclusion



Throughout the year, the Company increased efforts to encourage a family-friendly culture. We continued to help our employees achieve a good work-life balance by investing in a range of activities for staff and their families. Towngas persisted in promoting diversity and equal opportunities while addressing our long-term human capital challenges. We actively sought to hire people with disabilities and improved our facilities for them.

Giving back to our communities is hugely rewarding, and we take part in voluntary social services regularly. In 2016, our Towngas Volunteer Service Team carried out 75,588 hours of voluntary service in Hong Kong, and the Company worked closely with a number of organisations on a range of community programmes. Grouped under the theme of “Inclusion and Diversity”, these events included our first cooking contest which involved hearing-impaired people and our employees to promote social integration, as well as a Hand-in-Hand Mooncakes-of-Love campaign which celebrated Mid-Autumn Festival with ethnic minorities. In mainland China, our Gentle Breeze Movement has accumulated a donation of RMB2.9 million since its launch in 2013 to enhance educational facilities and improve living standards in remote rural villages.

Our total commitment to corporate social responsibility earned us two gold awards at the 7th Outstanding Citizenship Awards organised by the Hong Kong Productivity Council, a testimony to the concerted efforts of our employees in social care and environmental protection initiatives.

Looking Ahead

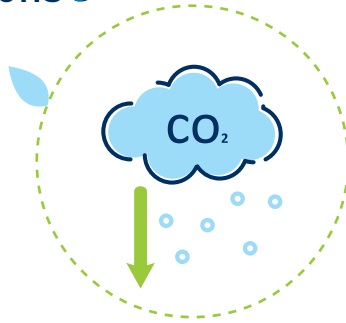


Towngas has secured a favourable position over the years in driving sustainable development through safe, high-quality services, green innovation, technological advancement and a diversified business portfolio. In the coming years, we expect even more fruitful development and innovation in sustainability, both in Hong Kong and mainland China, thanks to the initiatives, resources and the attention we gave our projects in 2016. We will continue to review our sustainability initiatives, performance and disclosure levels. We value your thoughts and opinions with sincerity, and look forward to your ongoing support for our efforts towards achieving ever-greater sustainability.

Alfred Chan Wing Kin
Managing Director

2016 HIGHLIGHTS

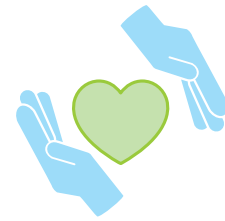
2.1 Hong Kong Operations



Our Carbon Reduction Competition

was first extended to cover our Hong Kong operations.

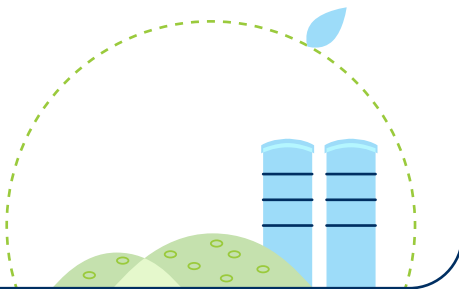
Two projects account for the **reduction of carbon emissions by 85 tonnes a year**



Customer and employee

voluntary service hours increased by 55%

compared with 2010, to a total of **75,588 hours**

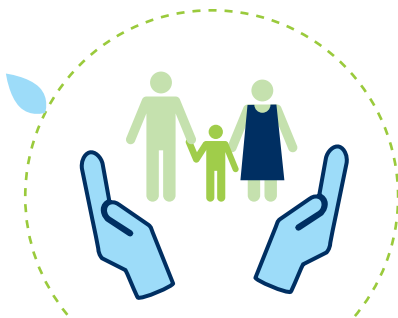


The **SENT landfill gas treatment facility**

in Tseung Kwan O is substantially completed and will be commissioned in first half of 2017. **Carbon emissions will fall by up to 56,000 tonnes a year**

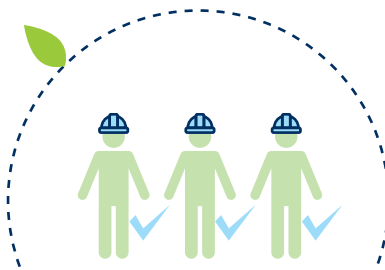


We offered more job openings for the disabled people and launched a wide range of community activities to promote **inclusion and diversity**



Fun Living Series programme continued to help our staff and their families increase positive energy

2.2 Mainland China Operations



Launched **Towngas MasterCraft**
to promote artisanship in gas installation



Around **900,000 safety training hours** recorded



Serious gas-related accidents dropped by 18% over past five years



Around **90%** of our city-gas and water project companies
have established their own
volunteer service teams



25 carbon reduction projects which
cut carbon emissions by around 64,000 tonnes
in 2016

2.3 Major Corporate Awards and Recognitions in 2016

A comprehensive list of awards received in 2016 can be found on our [website](#).

Governance


- **Global 2000**
by Forbes
- **The Outstanding Listed Company Award**
by the Hong Kong Institute of Financial Analysts and Professional Commentators Limited
- **Global Chinese Business 1000**
by Yazhou Zhoukan
- **Constituent Company of the Hang Seng Corporate Sustainability Index Series**
by Hang Seng Indexes Company Limited

Business and Service

- **2016 HKMA Quality Award Grand Award (Towngas China Company Limited)** 
by The Hong Kong Management Association
- **Listed Enterprises of the Year 2016**
by Bloomberg Businessweek / Chinese Edition
- **The Listed Enterprise Excellence Awards 2016**
by Capital Weekly
- **Most Valuable Listed Company at the 6th China Securities Golden Bauhinia Awards (Towngas China Company Limited)**
by Hong Kong Ta Kung Wen Wei Media Group Limited
- **Sing Tao Excellent Services Brand Awards – Excellent After-sales Services** 
by Sing Tao Daily
- **Hong Kong Service Award – Public Utilities** 
by East Week
- **GoHome Awards 2016 – Best Kitchen Appliance**
by GoHome HK Company Limited



Safety

- **The 15th Hong Kong Occupational Safety and Health Award**
 - Annual Report Award – Gold Award
 - Pointing and Calling Award – Gold Award (ECO Environmental Investments Limited)
 - Safety Performance Award
 - > Other Industries
 - > **Construction Industry (U-Tech Engineering Company Limited)** 
- by the Occupational Safety and Health Council



Social

• The 7th Hong Kong Outstanding Corporate Citizenship Awards

- Enterprise category – Gold Award
- Volunteer Team category – Gold Award
- Special Commendation for Community Care

by Hong Kong Productivity Council

• Champion of Highest Service Hour Award 2015 (Private Organizations- Best Customers Participation)

by the Social Welfare Department

• Award of 10,000 Hours for Volunteer Service

by the Social Welfare Department

• Outstanding Caring Award

by the Federation of Hong Kong Industries

• President's Award 2015/2016

by Community Chest

• 2015/16 Family-Friendly Employers Award Scheme

- Special Mention (Gold)
- Distinguished Family-Friendly Employers

by the Home Affairs Bureau and the Family Council

• Best Corporate Social Responsibility Award

by Bloomberg Businessweek / Chinese Edition

• Outstanding Award of Corporate Citizen in China 2016

by Corporate Citizenship Committee of China Association of Social Workers,
China Central Television and Tencent Charity Foundation

• CSR Action Award at CSR China Education Award 2016

by Central Committee of the Communist Youth League backed by Ministry of
Education and Ministry of Industry and Information Technology

Environment

• 2015 BOCHK Corporate Environmental Leadership Awards – Gold Award (Manufacturing Sector)

by The Federation of Hong Kong Industries and the Bank of China (Hong Kong) Limited

• HSBC Living Business Awards

- Sustainable Business Partner
- Green Achievement Award – Certificate of Excellence
(Towngas Telecommunications Company Limited)

by The Hongkong and Shanghai Banking Corporation Limited

• Sustainable Business Award 2016

by the World Green Organisation

• U Green Awards

- Public Utilities (Excellence)
- My Favourite Green Building – Towngas Headquarters

by U Magazine





ABOUT THIS REPORT

The Hong Kong and China Gas Company Limited (Towngas) has long been a leading pioneer of sustainability reporting in Hong Kong. Our Sustainability Report 2016 (the report) represents an opportunity for us to tell the story of the Group's achievements in 2016 and to evaluate how we are progressing as we strive for greater business sustainability.

It is our belief that the report is a highly effective way to engage our stakeholders on the issue of sustainability. Its transparency allows them to gain a comprehensive understanding of our operations and what impact they have, as well as to establish a solid platform from which we can improve our performance.

The scope of the report runs from 1 January 2016 to 31 December 2016, unless otherwise specified. To ensure the information presented is of the greatest accuracy and highest standard, our Green Development Steering Committee, which is chaired by the Executive Director and Chief Operating Officer – Utilities Business, has provided direction on how to plan the report, given feedback and reviewed the Group's performance based on our material aspects.

Detailed information about our financial performance and how we conduct our business can be found in Chapters 4 and 5, and although statistics are presented in absolute figures, they have been normalised to portray a comparable picture where necessary or appropriate. For more information about our business initiatives, financial data and the entities included in the consolidated financial statements, please refer to the [Towngas Annual Report 2016](#).

This report has been compiled in accordance with the Core Option of the Global Reporting Initiative (GRI) G4 Guidelines, the associated GRI Oil and Gas Sector Supplement and the Environmental, Social and Governance Reporting Guide (ESG Guide) under Appendix 27 of the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited (Listing Rules). It was in compliance with the "comply or explain" provisions and reported on the "recommended disclosures" of ESG Guide. The ESG Guide Content Index can be found on [p.104](#). The report has also been verified by an independent third party to ensure that it is complete, accurate and reliable, as well as to confirm that it adheres to reporting the guidelines. For the verification statement, please see [p.114](#).

3.1 The Scope of the Report

The principal activities of Towngas and its subsidiaries (collectively, the "Group") are the production, distribution and marketing of gas, water supply and emerging environmentally-friendly energy businesses in Hong Kong and mainland China. The report addresses material issues that have arisen from the Group's main operations. In addition, we have widened our focus to cover our sustainability performance

outside Hong Kong, particularly our diverse and ever-changing key businesses in mainland China. Readers can find examples of the issues we face in mainland China, as well as how we have performed in dealing with them, through case studies and key performance indicators. For more information, please refer to the [2016 Towngas China Corporate Social Responsibility \(CSR\) Report](#), as well as the [2016 Hua Yan Water CSR Report](#).

3.2 Materiality Assessment

The data and content of the report was decided after a materiality assessment had been conducted in collaboration with an independent consultant. This was to ensure that only topics relevant to stakeholders were included, and to guarantee that the report focuses on sustainability issues pertinent to our operations – specifically the economic, environmental and social impacts of these operations – as well as to identify a future strategic direction for realising our vision for greater sustainability.

The independent consultant engaged with internal and external stakeholders via a series of interviews, focus group discussions and prioritisation exercises. During these sessions, stakeholders were asked to rate the importance of sustainability aspects, covering a wide range of topics pertinent to sustainability reporting. Subsequently, the feedback was collected and evaluated against how our peer companies report about their own issues in order to establish what the material aspects for the report should be.

The Process

● Preparation



- Compiled a list of issues that could potentially be considered as material aspects, with reference to international standards
- Identified key stakeholder groups in agreement with an independent consultant
- Designed a stakeholder engagement programme

● Stakeholder Engagement



- Engaged six key internal and external stakeholder groups
- Stakeholders' feedback on our sustainability performance was collected via a series of interviews and focus group discussions
- Stakeholders expressed their views on topics of reporting importance to Towngas through a prioritisation exercise

● Benchmarking Exercise



- The data from stakeholders was compiled and analysed against discourse practices of key peers based locally and overseas for benchmarking purposes, so as to determine the most relevant material issues to Towngas

● Aspect Identification



- Identified the material aspects and their corresponding boundaries for final review and endorsement by senior management









Identifying Material Aspects for Towngas

The first task in determining the report's material aspects was to engage with six stakeholder groups: employees, non-governmental organisations, professional bodies, suppliers, commercial customers and business partners. To accomplish this, we identified various sustainability issues with reference to the GRI G4 Guidelines and other international standards. The sessions included focus group meetings, face-to-face interviews and questionnaires about stakeholders' opinions on our existing sustainability strategy, current performance and

reporting, as well as perceived risks facing by the Group.

Further information was gathered from stakeholders by making reference to local and overseas peer companies' sustainability disclosure practices and thoroughly studying their identified material aspects. At the conclusion of the materiality analysis, 23 material aspects had been identified. These were endorsed by the senior management and, as a result, are the main focus of this report.

Material aspects for 2016 and their corresponding boundaries, including internal and external impacts:

Material Aspects	Boundaries	
	Internal	External
Economic Performance		
Economic Performance		
Market Presence		
Environmental Performance		
Materials		
Energy		
Water		
Emissions		
Effluent and Waste		
Products and Services		
Compliance		
Labour Practices and Decent Work		
Employment		
Occupational Health and Safety		
Diversity and Equal Opportunities		
Training and Education		

Society		
Local Communities		
Anti-corruption		
Emergency Preparedness		
Asset Integrity and Process Safety		
Product Responsibility		
Customer Health and Safety		
Product and Service Labelling		
Marketing Communications		
Customer Privacy		
Compliance		
Fossil Fuel Substitutes		

Internal – The impacts of the material aspects that occur within Towngas.

External – The impacts of the material aspects that occur outside Towngas.

3.3 Acknowledgements

This report was made possible through a high level of commitment and support from various Towngas departments, plus endorsement by the Group's senior management. We extend our sincere thanks to all those who contributed to the preparation of this report, and to everyone at Towngas who shares our vision of enhancing our business sustainability.

3.4 Your Feedback

The complete version of this report is published on our website and the website of The Stock Exchange of Hong Kong Limited (SEHK), and printed copies of the summary are also available. We welcome feedback on our sustainability performance and reporting approach. To contact us, please complete the [questionnaire](#) or email us at ccd@towngas.com.

OUR COMPANY

- Towngas is committed to protecting the environment, carrying out corporate responsibilities and setting a leading example for others to follow.



Towngas is a limited liability company incorporated and domiciled in Hong Kong and is listed on SEHK. With its headquarters in Hong Kong, as of 31 December 2016, the Group employed approximately 49,000 people across Hong Kong and mainland China. In 2016, there were incremental changes to the Group's business portfolio. For details of these changes, please refer to our [Annual Report 2016](#).

4.1 Our Vision and Mission

For organisations everywhere, sustainability has never been more important. As a key member of the business community in Hong Kong, Towngas is committed to managing the way we operate, both responsibly and with care. Our vision and mission give a clear and coherent message about our commitment to protect the environment from an operational perspective. In addition, there is

a direct link between our vision and mission and the way we have developed our sustainability strategies and programmes to improve our performance continuously, thus contributing to building a better environment for the next generations.

To be Asia's leading energy supplier and service provider, with an environmentally-friendly focus.



VISION

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



COMMITMENT

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.



MISSION

RESPONSIBILITY

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



Business Drivers



4.2 Our Businesses

Business in Hong Kong

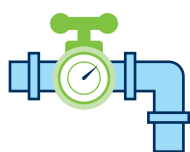
In Hong Kong, our core businesses comprise gas production and distribution, the marketing and sale of gas appliances and after-sales services.

Towngas provides gas to commercial and residential customers, as well as a comprehensive maintenance service which includes regular safety inspections and safety checks on gas risers, installations and appliances.



[Click to view our coverage in Hong Kong](#)

In 2016



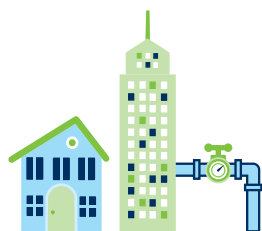
Our pipeline network stretched over **3,600 km**



Out of around **1,500** suppliers, **87%** were local



Our customer base comprised about **1.86 million** accounts



Our supply reliability rate exceeds **99.99%**



Sales of gas appliance under our brands of TGC, SIMPA, etc reached **275,361 units**

Operational Statistics

	2016	2015	2014
Number of Customers as of 31 December	1,859,414	1,839,261	1,819,935
Town Gas Sales, million MJ	28,814	28,404	28,835
Length of Gas Network, km	3,606	3,573	3,545
Installed Capacity, thousands m ³ per hour	525	525	511
Maximum Daily Demand, thousands m ³	6,964	6,172	6,571

Businesses in Mainland China

As of the end of 2016, the Group has 241 projects, 19 more than in 2015, spread across 26 provinces, autonomous regions and municipalities. These projects encompass upstream, midstream and downstream natural gas sectors, water sectors, efficient energy applications, exploration and utilisation of emerging environmentally-friendly energy, as well as telecommunications.



[Click to view our coverage in Mainland China](#)

Utility Businesses

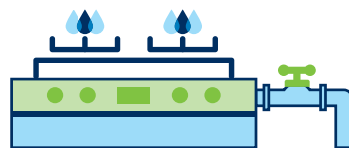
The Group possessed 131 piped city-gas projects covering 23 provinces, autonomous regions and municipalities as of the end of December 2016.

Aside from city-gas projects, our businesses also include water supply and wastewater as well as foodwaste treatment.

In 2016



We supplied a network longer than **90,000 km**



We sold about **750,000 units** of Bauhinia gas appliances



We offered our customers an inviting one-stop-shop experience with our online service platform and **244 Customer Service Centres**



We served more than **23 million** city-gas customer accounts, an **increase of 11%** compared with 2015



Hua Yan Water acquired a new project to establish a **food waste treatment plant** in the Suzhou Industrial Park

Operational Statistics

	2016	2015	2014
Number of City-gas Customers, million as of 31 December	23.1	20.9	19
Gas Sales, billion m ³	17.1	15.5	15.2
Length of Gas Network, km	90,765	82,153	74,526
Number of Water Customers, million as of 31 December	1.19	1.12	1.04
Water Sales, million tonnes	455	433	424

New Energy and Diversified Businesses



Towngas strives to tackle the problems posed by climate change by developing environmentally-friendly businesses and seeking innovative ways to harness clean energy. ECO Environmental Investments Limited (ECO), a company under the Group, focuses on exploring business opportunities in clean and efficient energy and transforms them into viable businesses. For updates on our clean energy development projects, please refer to Chapter 6, Environmental Performance, on [p.32](#).

In terms of diversified businesses, our scope also covers telecommunications, civil and building services engineering, manufacturing operations and information technology.

In 2016



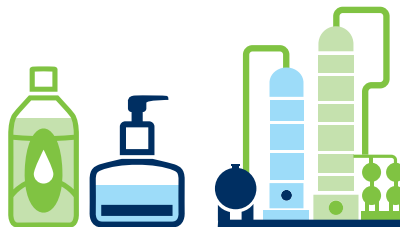
We had **62 gas refilling stations** in operation, under construction or at the planning stage in mainland China



We supplied **6.2 million tonnes** of aviation fuel to Hong Kong International Airport



We were constructing a plant that turns **coke oven gas** into **liquefied natural gas (LNG)**



We plan to **upgrade low-quality inedible bio-oil** into **high-quality products** at the production plant at Zhangjiagang city

For a general summary of the roles and services of Towngas, please refer to the Appendix I on [p.110](#).

4.3 Corporate Governance

The long-term success of any company rests on a strong foundation of good corporate governance. At Towngas, good corporate governance ensures our operations are managed and directed in a way that is both transparent and fair. It also secures our credibility and ensures our stakeholders' interests are at the heart of our operations. Our governance structure, policies and procedures have been established for a long time, and are central to the Group's business activities at all levels and in all sectors. Please refer to our [website](#) for more information about our corporate governance principles, practices and corporate policies.

Within the Group, the highest governing body is the Board of Directors (the Board). The Board is committed to maintaining a high standard of corporate governance, sound internal

controls, effective risk management to enhance transparency, accountability and integrity, and to enable the Group to fulfil its social responsibilities.

The Board comprises nine members: two executive directors and seven non-executive directors, three of whom are independent. The Board is ultimately accountable for the Group's activities, strategies and financial performance. For more details about the Board, please refer to our [Corporate Governance](#). Information about its composition, operation and committees etc can be found in our [Annual Report 2016](#).

During the year ended 31 December 2016, Towngas complied with all code provisions as set out in the Corporate Governance Code contained in Appendix 14 to the Listing Rules.

Risk Management

Towngas considers risk governance among its top priorities and is committed to establishing a robust system of risk management and internal control. Not only will this strengthen future success, it will also 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, this 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 risks it is willing to take in a manner consistent with its strategic business drivers.

To ensure proper risk reporting channels, the Group Risk Management Committee (GRMC) recommends the risks and corresponding controls to the Executive Risk Management Committee (ERMC), which eventually reports to the Board for endorsement. For further information about risk management, please refer to our [Annual Report 2016](#).

Code of Conduct



We take pride in carrying out our operations with integrity. Our internal code of conduct offers clear guidelines on best practice and ethical behaviour if required to deal with prevention of bribery and corruption, equal opportunities issues, fair practices, freedom of association, conflicts of interest and whistleblowing.

We are particularly vigilant about misconduct cases which relate to bribery and conflicts of

interest. We have clear guidance to our people that they must never request any advantage from, or offer any advantage to, stakeholders in our business, including customers, suppliers, contractors, authorities or any other stakeholders.

We expect our people to fully adhere to the principles set out in the Code of Conduct. For more information, please refer to our [website](#).

Whistleblowing and Anti-Corruption



The Group's whistleblowing policy aims to provide formal channels for employees and other stakeholders to raise concerns about any misconduct, malpractice or irregularity, particularly in relation to violations of our code of conduct or business ethics and principles. The policy is available at our [website](#).

All whistleblowing cases would be handled by the whistleblowing panel while staff grievances would be managed by Corporate Human Resources Department. A summary of whistleblowing cases would be reported to the Board Audit and Risk Committee twice a year.

Prevention of Bribery



Provided 200 hours of anti-corruption training for our employees in 2016

We maintain that the key to preserving our competitive advantage in the market is for laws, honesty and fair competition to be championed. In this respect, all employees are strictly forbidden from giving or accepting bribes. Our people must never ask for an advantage from, or offer an advantage to, our stakeholders, including customers, suppliers, contractors, regulators and legislators, authorities or other business partners.

Without prior approval from a supervisor or the company itself, no individual is permitted to offer an advantage that could influence these

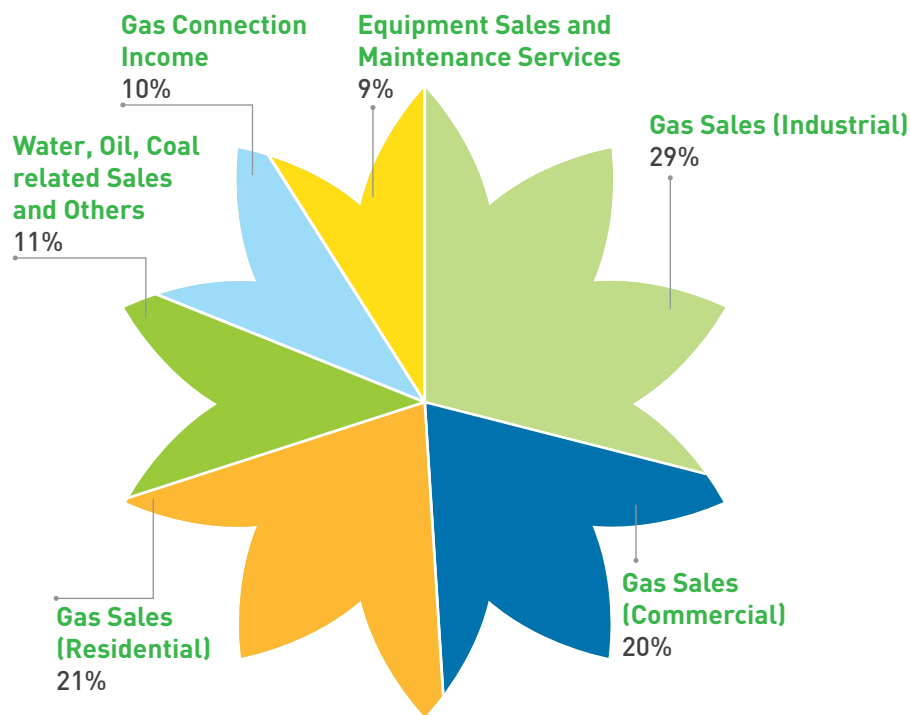
stakeholders. Similarly, we also forbid all our employees from giving or accepting illegal advantages to or from their co-workers, and everyone should observe all relevant laws and regulations with the utmost vigilance.

To ensure this message is clear, we provide training for our employees on anti-corruption and maintaining our code of conduct. According to the Prevention of Bribery Ordinance (Cap. 201 of the laws of Hong Kong), Towngas is a public body and all our employees are subject to this Ordinance.

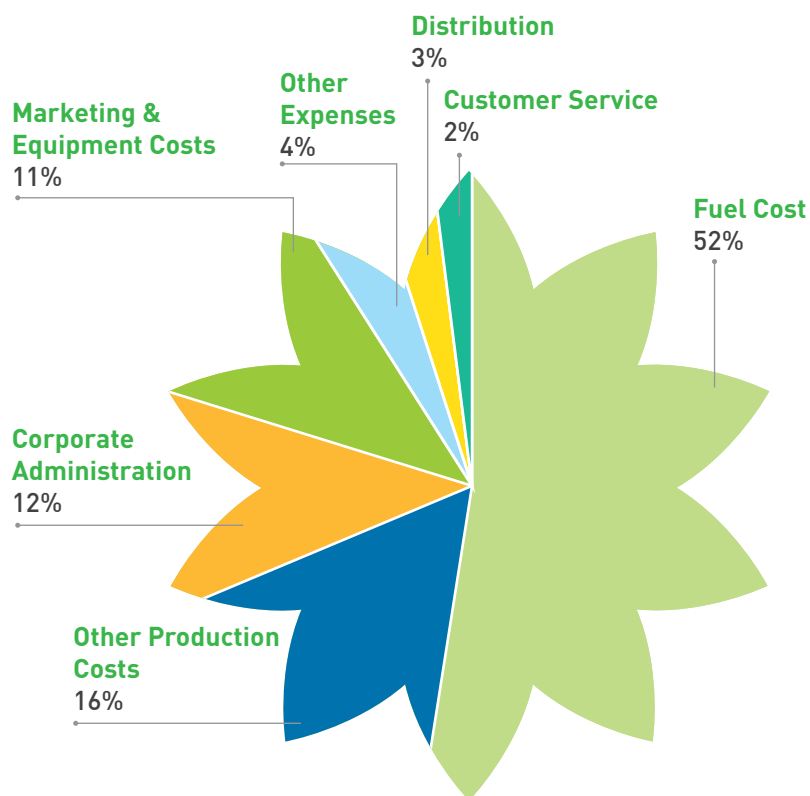
4.4 2016 Financial Analysis

Revenue	Capital Expenditure	Manpower Costs
HK\$28,557 million	HK\$6,257 million	HK\$2,955 million

Analysis of Revenue



Analysis of Expenditures



SUSTAINABILITY AT TOWNGAS

- Together with the companies in our supply chain, Towngas takes a unified approach to ensuring sustainability at all levels through our value chain.



Towngas embraces sustainability to minimise our environmental impact and establish social harmony

We communicate our sustainability messages to all stakeholders through a variety of channels

Sustainability is central to the Group's identity as a business and is critical to all aspects of our operations. Whenever the Company makes a decision, we consider its environmental, social and economic impact. Our attitude to sustainability is enshrined in our vision: "To be Asia's leading energy supplier and service provider, with an environmentally-friendly focus". This vision compels us to conduct our operations in a sustainable way.

As an organisation, we expend a great deal of effort in maintaining our position as an energy sector leader. This is why we discuss sustainability with companies in our supply chain, so that together, we represent a unified approach to ensuring sustainability at all levels. Our sustainability message is embedded across the gamut of our businesses and operational initiatives.

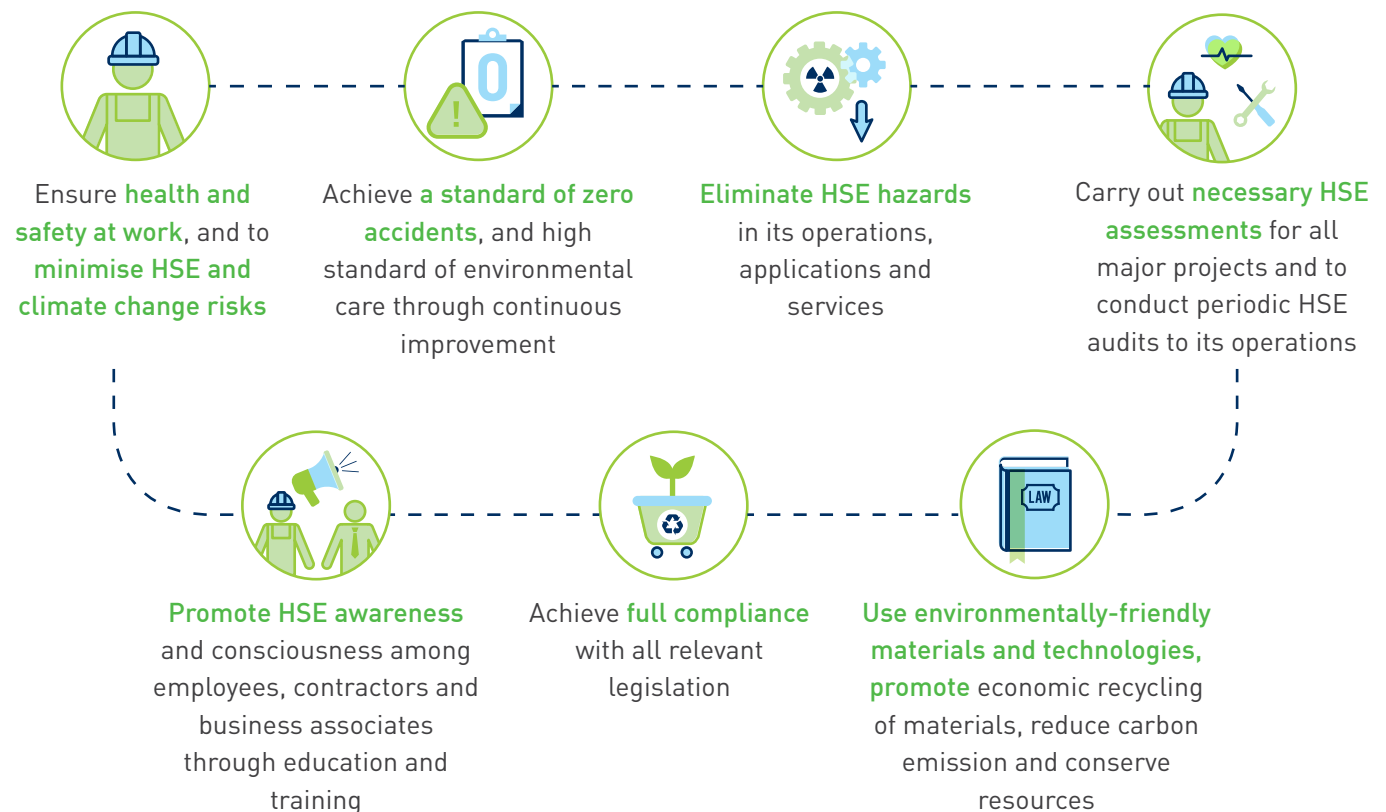
5.1 HSE Governance and Policy

In Chapter 4, we outlined our corporate governance structure and risk management approach. Of equal importance is the Group's health, safety and environmental (HSE) governance in defining our sustainability strategy.

As well as helping to reinforce our sustainability strategy, it showcases how our top management is fully engaged in providing strong sustainability leadership.

HSE Policy

Our HSE Policy is in place so that we carry out our operations in a way which poses no risk to the health, well-being and safety of our employees, contractors, customers or the general public. The HSE Policy provides the framework for the development of guidelines with regard to environmental protection, health and safety.



HSE Management Structure



Our multi-tier HSE Management structure is organised so that it is chaired by the Managing Director and is supported by the Corporate Health, Safety and Environment Department (CHSED). It is the CHSED's role to coordinate, monitor and control the Group's HSE performance and initiatives, and it is also responsible for reporting HSE and sustainability issues to senior management. The CHSED also provides HSE support to our companies in mainland China.

With the support of the Environmental Working Committee (EWC), the Corporate Safety & Quality Management Steering Committee and the Green Development Steering Committee are dedicated to coordinating, monitoring and controlling the Group's HSE performance and initiatives both in our Hong Kong and mainland China operations. The 11 divisional/stream/ departmental HSE committees provide a communication platform to deliver and discuss HSE related matters among employees, as well as to promote HSE awareness. The 12 functional sub-committees under the EWC arrange company-wide

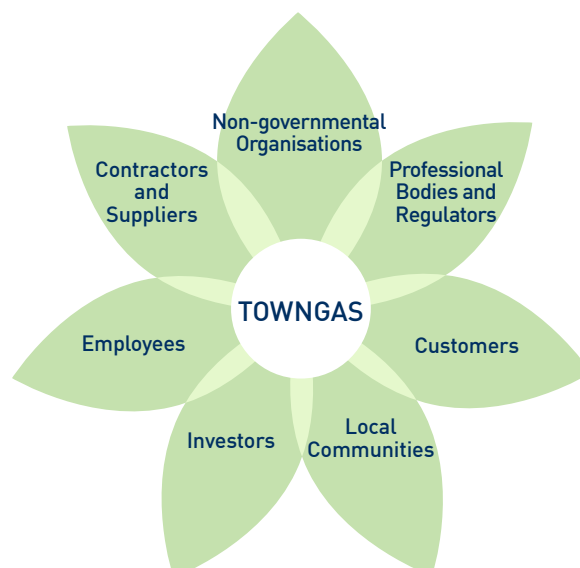
environmental programmes to raise awareness about environmental issues among employees, contractors and dealers, as well as to enhance the Company's environmental performance in general.

As the Group's operations are geographically widespread, the HSE departments of the Group's companies outside Hong Kong are responsible for their own HSE management and operations. This practice covers Hong Kong & China Gas Investment Limited (HCIL) and Towngas China Company Limited (TCCL), ECO as well as other joint ventures (JVs) in mainland China. Within all our JVs, the HSE department reports directly to the general manager so that safety and risks management initiatives are rigorously upheld.

Aside from HSE issues, we have established regular social responsibility reporting systems within our mainland companies. Each year, these companies present a record of their social responsibility activities to the Board.

5.2 Stakeholder Engagement

One of our key concerns is enabling Towngas to grow as a business and secure long-term value for our stakeholders. At Towngas, our engagement mechanism helps us assess our operations and pinpoint areas for continuous improvement, because we listen to our stakeholders' views and act upon them. During the preparation of this report, we conducted an engagement exercise with our stakeholders. Their key concerns and expectations are expressed in the following table:



Stakeholder Groups, Communication Channels and Key Concerns and Expectations

Communication Channels	Key Concerns and Expectations in 2016	Our Actions in Relation to Key Concerns
Employees		
<ul style="list-style-type: none"> Employee surveys and focus groups Suggestion boxes, bulletins, newsletters, "Innovation Headlines", intranet, meetings with the employee union Issue-specific consultative sessions Superior Quality Service Programme Strategy Ambassadors Club (Hong Kong) Green Ambassadors Club (Hong Kong) Fun Living Series in 2016 iCandy Corner Social media platforms, such as Yammer in Hong Kong, WeChat and Weibo in mainland China Whistleblowing system 	<ul style="list-style-type: none"> Remuneration and benefit packages could be reviewed more frequently to ensure they align with market trends to retain talents Foresee the risk of a "talent gap" (i.e. a shortage of skilled employees) emerging as experienced staff begin to retire in the near future 	<ul style="list-style-type: none"> Continue to benchmark current remuneration levels regularly with external markets and make necessary adjustments to stay competitive within the labour market Continue to identify and develop high-potential employees for succession to future leadership Proactively expand our talent sourcing channels and enhance our employer branding to attract and recruit talents at all levels to develop their careers within the Company
Local Communities		
<ul style="list-style-type: none"> District Council Focus Teams Community programmes, e.g. the Towngas Volunteer Service Team, festive food delivery campaigns, etc. District Fire Safety Committees 	<ul style="list-style-type: none"> Public safety Air Pollution 	<ul style="list-style-type: none"> Towngas communicates its emergency plans effectively with government departments and other stakeholders. A 24-hour Grid Control Centre continuously monitors the gas network, our emergency service team is on stand-by around the clock, and we conduct regular surveys and inspections. We have been able to establish new standards of gas safety across our operations Our production plant in Tai Po has been certified to ISO 14001 standard. We fully comply with relevant environmental regulatory requirements. We proactively utilise landfill gas in our gas supply

Communication Channels	Key Concerns and Expectations in 2016	Our Actions in Relation to Key Concerns
Professional Bodies and Regulators		
<ul style="list-style-type: none"> Joint Utilities Safety and Occupational Health Policy Group Joint Utilities Policy Group Business Environment Council China Gas Association Gas Authority The Hong Kong Institution of Engineers Polyethylene (PE) piping coalitions and the International Organisation for Standardisation (ISO) Technical Committees on PE pipes and fittings 	<ul style="list-style-type: none"> Towngas should consider increasing its level of disclosure on its mainland operations and supply chain management practices 	<ul style="list-style-type: none"> Due to the diverse and evolving nature of our businesses in mainland China, determining the scope of reporting beyond Hong Kong is difficult. Despite this challenge, we have enhanced the reporting scope and level of disclosure in this report
Customers		
<ul style="list-style-type: none"> Newsletters and leaflets Bimonthly bill inserts – “Newsflash” Company websites, social media platforms and mobile phone networks and our app Regular maintenance visits, safety inspections and safety talks 24 annual visits to residential customers by customer focus teams Monthly surveys and focus group research into specific programmes Year-round publicity and community campaigns Management offices/incorporated owners’ associations 24-hour customer service hotline 19 customer centres 24-hour emergency hotline Reporting channels for possible improprieties, misconduct, malpractice or irregularities 	<ul style="list-style-type: none"> Towngas could further promote new technology and products that meet the growing need for green and safe products 	<ul style="list-style-type: none"> We help our customers to save costs and contribute to a cleaner environment by offering a wide range of eco-friendly products. To meet the needs of our residential customers we launch at least one energy efficient appliance every year We encourage groups and trade associations to visit our Green Kitchen
Investors		
<ul style="list-style-type: none"> Annual General Meetings Investors and Securities Analysts Briefings post annual and interim results Interim and annual reports Sustainability reports Company website Newsflash via email and posting on the Company’s website Non-deal roadshows Investment conferences Investor meetings Telephone conference with investors, securities analysts and credit rating agencies Annual review with credit rating agencies 	<ul style="list-style-type: none"> Impact of depressed oil and commodity prices on our new energy business Impact of slower economic growth and the manufacturing sector on the city-gas business in mainland China 	<ul style="list-style-type: none"> The strategy for our new energy business has been realigned so as not to focus on resource-related projects. We will focus on in-house technology development for the production of clean energy and chemicals from waste or low-value feedstock and swing away from crude-oil-sensitive products To push our own initiatives to drive gas consumption: coal-to-gas conversion, restaurant customers acquisition, promote gas clothes dryers and space-heating applications for increased household consumption, promote distributed energy centre projects

Communication Channels	Key Concerns and Expectations in 2016	Our Actions in Relation to Key Concerns
Contractors and Suppliers		
<ul style="list-style-type: none"> • Ongoing audits • Regular management meetings and supplier conferences • Green Ambassadors Club for dealers and contractors • Seminars and workshops • Mass communication • Whistleblowing system 	<ul style="list-style-type: none"> • There could be more discussion about raw material sourcing as this issue is related to risk management 	<ul style="list-style-type: none"> • We strive to mitigate the impact of climate change on our businesses by conducting country-based risk assessments on different inventory items
Non-governmental Organisations (NGOs)		
<ul style="list-style-type: none"> • Year-round green partnership programmes and community programmes • Annual meetings with green groups • Questionnaires 	<ul style="list-style-type: none"> • Towngas plays an important role in lowering carbon intensity and furthering its commitment to combating climate change • Towngas should have a deeper involvement in diversity in the workplace. Also, Towngas should invest in developing the skills and professionalism of our differently abled staff to give them an equal opportunity to be considered for more senior-level positions 	<ul style="list-style-type: none"> • We adopt innovative approaches across our operations to reduce carbon emissions. In 2016, we further extended our Carbon Reduction Competition to cover operations in Hong Kong • Towngas continues to perform well in diversity and inclusion. A highlight of our efforts to promote an inclusive working environment is the way we engage staff to help develop skills and awareness about working with differently abled colleagues. Towngas has employed differently abled staff since the 1990s and has enhanced recruitment efforts in recent years. Regardless of sex, race, colour, ethnic origin, religion, marital status or physical handicap, our Equal Employment Opportunity Policy emphasises recruiting and promoting based on getting the best people for the job

5.3 Supply Chain Management

Our Approach to Supply Chain Management

At Towngas, we are committed to safeguarding the open, fair and consistent treatment of our suppliers and contractors, regardless of where, geographically, they operate. There are five main principles that guide our approach to supply chain management: offering equal opportunities to all suppliers; treating suppliers ethically and fairly; promoting strong buyer-seller relationships; encouraging suppliers to contribute to continuous improvement and supporting green procurement practices.

Our sustainability values reach all parts of our supply chain and we have introduced a number of measures. These will also help us share best practice information with the public at large. We now urge our suppliers to embrace sustainable procurement practices themselves, and to adopt green specifications to facilitate the purchase of green products.

Sustainable Procurement

To ensure our suppliers and contractors adhere to our own standards, we request they follow our CSR Code of Practice for Suppliers and the Towngas Environmental Purchasing Policy. The CSR Code of Practice is a framework which our suppliers can use as a guide to promote CSR activities with regard to their own business ethics, workplace operations, marketplace activities, community contact and environmental undertakings.

Another key arm of our approach to supply chain management is our Environmental Purchasing Policy. As a founding member of the Hong Kong Green Purchasing Charter, we established green specifications for each item we have to procure, such as energy efficient equipment like LED lighting, or products that have been certified by the Forest Stewardship Council (FSC). To raise staff awareness about environmental purchasing

When selecting vendors in Hong Kong and mainland China, a wide range of criteria has to be taken into account: company background, quality, price, delivery, services and environmental protection performance. We also conduct a factual quality audit on potential suppliers using a standardised checklist, and inspect ISO certificates and other documents pertaining to quality.

Furthermore, it is important to consider if prospective suppliers implement their own environmental protection policies and waste reduction programmes, and to assess whether or not a supplier has been involved with any volunteering activities or community engagement efforts. Towngas prioritises suppliers who offer green products and give preference to local suppliers who conduct their business in a socially and environmentally responsible way.

and protection, we organised a Green Office Day in 2016. More information about the scope of our CSR Code of Practice for Suppliers and the Towngas Environmental Purchasing Policy can be found [here](#).

At present, approximately 87% of our suppliers were local for our operations in Hong Kong. Through this arrangement, Towngas contributes directly to local economies and maintains healthy relations with our communities. Furthermore, we monitor the performance of our suppliers and contractors through regular meetings and audits to ensure environmental standards are being met. We also launched an e-commerce system for all kinds of tendering processes and purchasing transactions between our JVs and suppliers in order to maintain a high level of information security and contribute to environmental protection by reducing paper usage.

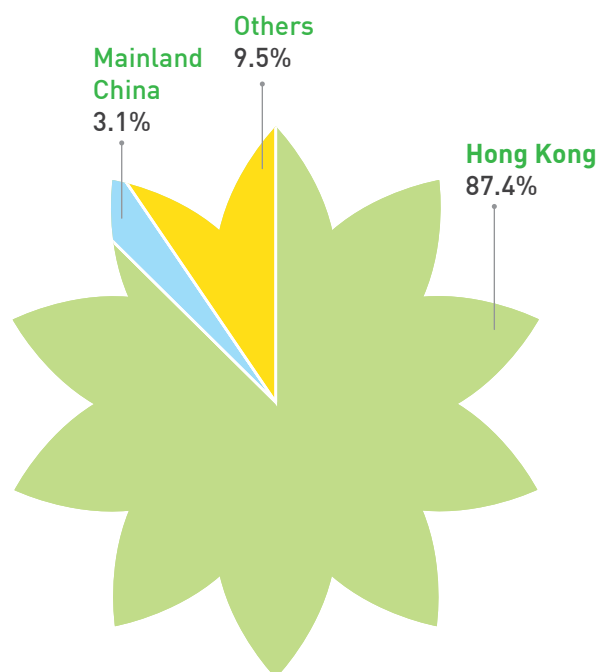
Other Practices

We have undertaken further measures to ensure the scope of our supply chain management approach covers as much of our business as possible. Previously, we conducted a climate change country-based risk assessment for different inventory items. We have also extended our supply chain management measures in mainland China. To ensure our mainland suppliers meet all our environmental, social and governance criteria, our mainland procurement team conducts regular CSR and Code of Practice audits. In 2016, we revisited seven JVs to assess their procurement workflow and checked for any deviations from standard practices.

“6S” is a proven workplace management tool that “Safety” is incorporated into the basis of the traditional “5S” – Seiri, Seiton, Seiso, Seiketsu and Shitsuke, in which effectively manage the “people, equipment, material, compliance and environment”.

Towngas has established 6S implementation guidelines, promoted 6S best practices and shared our 6S experiences to our JVs’ colleagues through training workshops. We plan to audit suppliers for their 6S adoption and award those who have performed outstandingly.

Supplier Profile by Geographical Location (Hong Kong Business)



Case study

Promoting “6S Applications” among our Suppliers

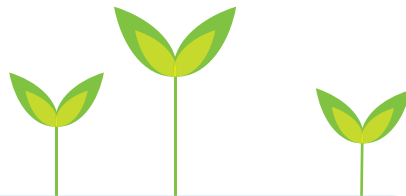
Since 2015, Towngas has promoted Total Quality Management among our mainland operation suppliers by selecting those to have implemented 6S management in the best way.

The first 6S management assessment of suppliers was completed in September 2016. The assessment covered the production site, laboratory, warehouse, integrated management, and approximately a year’s worth of quality performance data. Out of 28 suppliers that took part in this stringent test, eight were selected for their outstanding performance. Currently, more than 80% of our suppliers are committed to applying 6S management.

With 6S management, both the on-site management of suppliers and product quality were enhanced significantly. Priority will now be given to outstanding suppliers during procurement.



We carry out our operations under robust environmental governance so the Company can address stakeholders' concerns about our environmental impact.





ENVIRONMENTAL PERFORMANCE

At Towngas, environmental considerations are central to our decision-making and management processes. The threat posed by unprecedented climate change, environmental degradation and the depletion of natural resources means we have to commit to reducing the environmental footprint of our energy services at source and search for cleaner fuels. To face these challenges, we support innovation, invest in technology and businesses that lessen our environmental impact, stimulate long-term growth and strive for the highest standards of operational efficiency.

Towngas complies fully with all applicable environmental laws and regulations and, in many instances, works beyond compliant standards. During 2016, no critical non-compliance reports were received.

Key Environmental Performance 2016



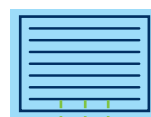
Total GHG emissions
1,258,000 tonnes CO₂-e

23% reduction in GHG emissions of our gas production in Hong Kong

Compared with 2005

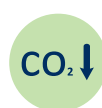


27 projects received from operations in Hong Kong and mainland China for our seventh **carbon reduction competition**



2,700 tonnes carbon emissions

reduced by heat recovery system at our Tai Po gas production plant



1% reduction

in water use at Towngas headquarters

Compared with 2015

Achievements and Targets



We have clear objectives in place to address environmental, social and safety issues at our Hong Kong operations. Each year, we review them alongside our achievements. In 2016, Towngas met all targets set for the year. The details can be found below:

Achievements in 2016	Targets for 2017	Medium-term Targets (Two to Three Years)
Green Certification		
<ul style="list-style-type: none"> Achieved a Wastewi\$e Certificate for the 15th consecutive cycle Recognised as “Finalist” at the Green Building Award 2016 	<ul style="list-style-type: none"> To achieve a Wastewi\$e Certificate for the 16th consecutive cycle To explore and apply for other global and local environmental certifications and awards 	<ul style="list-style-type: none"> To prepare gap analysis of Building Environmental Assessment Method (BEAM) Plus new version and Towngas headquarters
Gas Production Plant Modifications		
<ul style="list-style-type: none"> Completed materials procurement of the second rainwater collection system. The system will be substantially completed in the first quarter in 2017 	<ul style="list-style-type: none"> To recirculate water used for warming ammonia drums and transfer blow-down water from air compressor station cooling towers to the make-up water for the Phase 2 cooling tower. These projects aim to save 1,500 m³ of water per year 	<ul style="list-style-type: none"> To convert the Phase 1 ions-exchange type water treatment plant to a Reverse Osmosis plant in order to reduce effluent generation and chemical usage
Waste Management		
<ul style="list-style-type: none"> Completed a study on the carbon footprint of different hand-drying methods 	<ul style="list-style-type: none"> To replace existing hand dryers with more energy efficient models to reduce paper towel usage and save energy 	<ul style="list-style-type: none"> To implement measures to enhance waste reduction and recycling at headquarters
Climate Change Adaption		
<ul style="list-style-type: none"> Reviewed the findings from the climate change risk assessment and implemented adaption measures 	<ul style="list-style-type: none"> To extend the climate change risk assessment to our operations in mainland China and to conduct workshops about climate change for our projects in different regions 	<ul style="list-style-type: none"> To monitor continuously the progress of the adaptation measures across different departments

Achievements in 2016	Targets for 2017	Medium-term Targets (Two to Three Years)
Carbon and Environment, Social and Governance (ESG) Data Management		
<ul style="list-style-type: none"> Completed the seventh mainland carbon reduction project competition. The scope of the competition was extended to cover projects in Hong Kong Launched a corporate ESG data management system for operations in Hong Kong Enhanced the collection of environmental key performance indicators for operations in mainland China 	<ul style="list-style-type: none"> To organise the eighth carbon reduction project competition To develop a corporate ESG data management system for operations in mainland China 	<ul style="list-style-type: none"> To upgrade our corporate ESG data management system to cater for the increased demand for ESG data and information disclosure To identify and explore new initiatives relating to emissions reduction and resource conservation To study the latest development of carbon reduction policies in Hong Kong and mainland China To explore ways to improve transparency about carbon reporting
Other Environmental Initiatives		
<ul style="list-style-type: none"> Carried out rooftop organic farming at headquarters Adjusted the chilled water supply temperature to improve energy saving at headquarters Replaced lighting in lift lobbies, pantries and warehouses with LED lights at headquarters Completed a feasibility study on lift system modernisation at headquarters 	<ul style="list-style-type: none"> To provide green and healthy cooking tips To provide environmental seminars and workshops for employees and contractors To explore new partnership programmes with green groups 	<ul style="list-style-type: none"> To study and develop environmental best-practice guidelines for the Towngas cooking centre, restaurant and gas refilling stations To study the feasibility of increasing the greening of off-take stations and gas production plants To improve the energy efficiency of the lift system at headquarters To carry out lift modernisation of the freight lift system

6.1 Our Approach

The Group’s Corporate HSE Policy contributes to the framework for identifying key environmental impacts and developing environmental objectives and green key performance indicators, clarifying what we need to do to manage the impact of our operations responsibly. Under this robust environmental governance, we are able to address stakeholders’ concerns about our environmental impact. Furthermore, we urge our employees to apply our “5Rs” principle – Replace, Reduce, Reuse, Recover, Recycle – to all our operations, products and services.

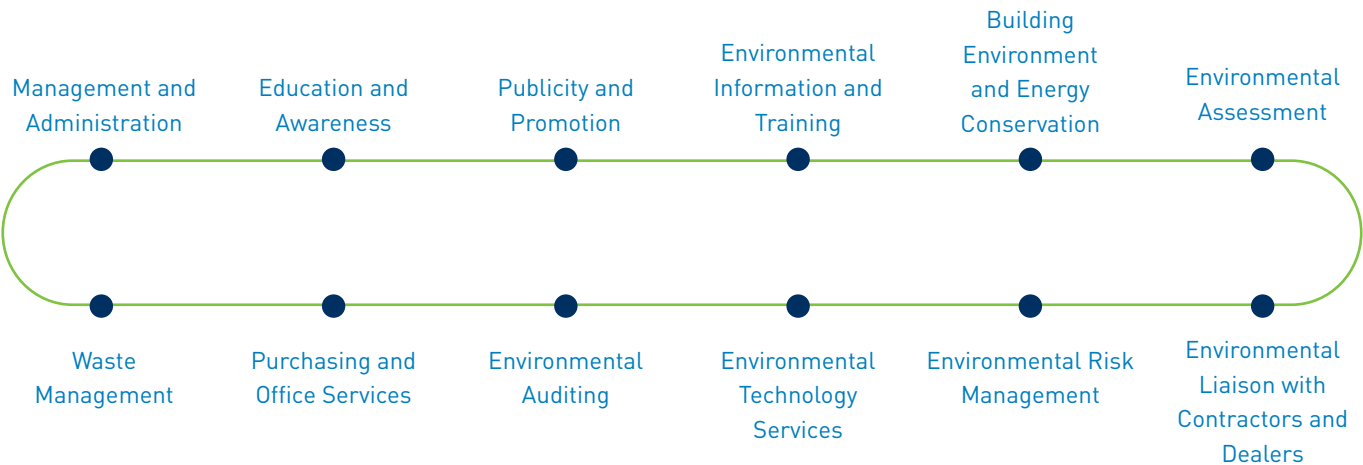
Our Corporate Environmental Manual sets out the environmental legislation, necessary policies, internal standards, procedures and guidelines and methods for protecting the environment. We abide by all legal requirements and strictly follow the HSE policy to protect the environment and minimise our impact on it.

Environmental Governance

Overseen by in 1992, EWC was established to raise awareness about environmental issues among our employees, contractors and dealers, and to improve the environmental performance of the Company. The EWC is supported by 12

functional sub-committees. They each play a vital role in systematically driving environmental programmes.

Functional Sub-committees



Around 50 environmental objectives completed in 2016 by functional sub-committees

Case study

In 2016, the Purchasing and Office Services Sub-committee received the Outstanding Environmental Working Sub-committee Award for its Energy Saving Lighting System project. The project oversaw the replacement of existing fluorescent lighting tubes with LED tubes at the warehouse at headquarters. The new LED tubes consume less energy, leading to a cost-saving forecast of 50%, and their superior quality and performance will ensure they need to be replaced less often. The new LED tubes truly demonstrate dedication to energy conservation.

In mainland China, our companies have also established their own Environmental Protection Committee. It is chaired by the general manager, whose duty is to ensure we comply with the appropriate environmental legislation and standards, and to formulate policies and implement corresponding measures. The Committee hosts regular training programmes for employees to promote the importance of environmental protection work.

Environmental Management Systems and Project Management

We ensure all our activities follow the most stringent regulatory requirements and benchmark ourselves against the highest international standards and Codes of Practice. For instance, our Gas Production Plant in Tai Po has been certified to ISO 14001 standard since 1999. For more details of the Management System Certification at our Hong Kong operations, please refer to our [website](#).

We work to minimise the impact our operations have on areas that are ecologically sensitive. Before we develop new infrastructure projects, we undertake an environmental impact assessment in accordance with Hong Kong's Environmental Impact Assessment Ordinance (Cap. 499 of the laws of Hong Kong). This shows that we have identified all the environmental aspects of the project, and will monitor them throughout its duration, as well as ensure the environmental impact on its surroundings is mitigated and

controlled. In addition, our trenchless technology helps eliminate the need for massive excavations, reduces noise and air pollution, and minimises disturbances to traffic and the surrounding environment. This technology is being used in our pipe-laying works whenever possible, which further reduce the impact on habitat and soil ecology.

In mainland China, a number of JVs have also obtained ISO 14001 standard and are required to carry out environmental impact assessments for new projects. As in Hong Kong, these are subject to international requirements and their environmental performance is scrutinised on a daily basis. Since 2011, we have actively launched environmental audits across our JVs in mainland China. In 2016, 98 of these were carried out, each focusing on energy conservation, waste and wastewater management and noise control. The results were satisfactory.

Environmental Education and Training



We provide training sessions for our employees and contractors, which cover a wide range of environmental and sustainability issues. In addition, if employees have ideas for interesting environmental activities, we encourage them to apply to our Green Creativity Fund for financial support.

Case study

Green cooking demonstration

We invited Elvis Chan, a veggie expert, to promote vegetarianism by demonstrating quick and easy fusion recipes and sharing fun facts about vegetarian diets. Green, healthy and sustainable lifestyles were the theme of the event.



Case study

Visit to green facilities

We arranged for our Dealer & Contractor Ambassadors to visit the Community Green Station in Sha Tin. The session piqued interest and enhanced attendees' existing knowledge, specifically about waste collection and recycling, and encouraged environmentally-friendly behaviour. After that, we launched a campaign to promote the recycling of resources and to encourage our employees to implement sustainable green office habits.



Managing Climate Risks



Climate patterns are changing, and this is having an impact on the global business landscape. Directly, company operations can be affected, and indirectly, supply chains can be affected.

Coping with the threat of climate change requires a dual approach: mitigation and adaptation. We are tireless in our efforts to reduce GHG emissions and become more resilient to the impact they have. Several years ago, in order to enhance our resistance to climate change, we commissioned a comprehensive risk assessment

for Hong Kong operations. It identified risks and opportunities and led us to develop and implement targets for adaptation. Specifically, we incorporated the risk of climate change into our existing practices. An example of this is our adverse weather preparedness plan, which offers general guidance to employees.

In future, we shall continue to monitor the situation and strengthen our capacity to cope with the challenging environments in which we operate.



Case study

Water Project Climate Adaptation

In July 2016, caused by heavy rain, the water level of Lake Taihu in Jiangsu province reached 4.7 metres. 0.9 metres above the warning level, leading to the prospect of flooding. To deal with this, our joint venture, Wujiang Hong Kong and China Water Company Limited, immediately sourced wet-weather gear, shovels, torches, sandbags and drainage pumps. In addition, senior management held three meetings to ensure clear communication and effective coordination during flooding. Based at our two water treatment plants and seven water supply services units, nine regional joint emergency teams were set up responsible for managing a specific area during flooding. Moreover, we have established an emergency preparedness plan for flood season to uphold safety and ensure a reliable water supply. Emergency drills are carried out to reduce response time and increase efficiency. Also, we conduct maintenance checks at our water plants, pumping stations and other crucial water facilities or elements of the power system.



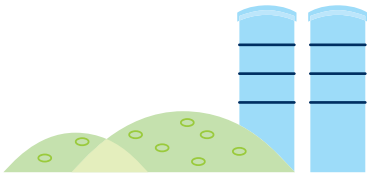
In response to climate change, we have been conducting risk assessments of our operations in Hong Kong and mainland China to ensure the infrastructure can withstand the effects of extreme weather, ensuring public safety and gas supply reliability.

– Victor Kwong,
Head of Corporate Health, Safety and Environment, Towngas



6.2 Sustainable Operations

Harnessed landfill gas to power a commercial CHP system for a hospital, reducing carbon emissions by 2,000 tonnes annually



Installed a Rainwater Harvesting System at our Tai Po plant to save 27,800 m³ of water each year



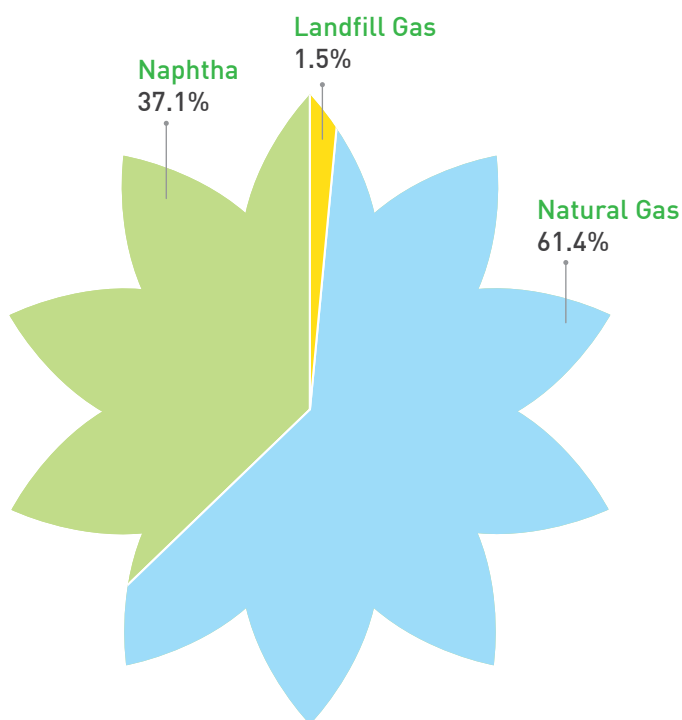
The Coalbed Methane (CBM) liquefaction facility in Shanxi province can produce 250 million m³ of CBM, offsetting around 390,000 tonnes of carbon emissions



Clean Energy

As a gas supplier, the way we choose our energy resources and develop our energy projects is inherently important to improving our environmental performance.

2016 Fuel Mix for Town Gas Production



Natural gas is adaptable and creates low emissions, so it is likely to play an increased role in meeting future energy demands. Since 2006, we have used natural gas as an effective feedstock option to produce town gas for households in Hong Kong. We also modified our plant at Ma Tau Kok to replace naphtha with natural gas.

Harnessing Landfill Gas

In the past, landfill gas – a by-product of Hong Kong's landfill sites – was flared off, which meant it contributed to the city's GHG emissions. However, landfill gas is a potential source of energy. The following visual explains our landfill gas story:

- 1999** • Began harnessing landfill gas from the Shuen Wan landfill site for small-scale use
- 2007** • Landfill gas generated at the North East New Territories (NENT) landfill was treated and transferred to our Tai Po production plant and replaced some of the naphtha used as heating fuel in our town gas production
- 2016** • The construction of SENT Landfill Gas Treatment Plant was completed by end of 2016 and will be commissioned in the first half of 2017. Landfill gas is treated to synthetic natural gas that has impurities removed, and is transported to a regulating station in Tseng Lan Shue where it is injected into the towngas supply network
 - **Environmental Benefits:** Reduce naphtha consumption by 13,000 tonnes per year, offset 56,000 tonnes of carbon emissions per year (equivalent to planting 2.4 million trees)

Case study

Combined Heat and Power System (CHP) with landfill gas

In 2016, in what was the first ever commercially viable CHP project in Hong Kong, treated landfill gas from the North East New Territories (NENT) site was used to fuel the CHP system at the Alice Ho Miu Ling Nethersole Hospital. The project harnesses renewable energy and will reduce carbon emissions by an anticipated 2,000 tonnes per year, equivalent to planting 87,000 trees. Moreover, it will improve overall efficiency to more than 80%, with complete utilisation of electrical and thermal energy.



New Energy Developments and Unconventional Energy



Clean Vehicular Fuel

During 2016, our five liquefied petroleum gas (LPG) refilling stations in Hong Kong together sold approximately 61,000 tonnes of fuel, and served more than 18,000 LPG taxis and minibuses. These figures account for approximately 30% of the city's auto LPG market share. In mainland China, we continued to promote LNG as a fuel alternative to diesel for heavy duty trucks. We now have 62 gas refilling stations in operation, under construction or at the planning stage across the country.

Coalbed Methane (CBM) and Coke Oven Gas

CBM is often considered an unconventional source of natural gas because it is seen as a by-product of coal mining. However, if extracted before coal-mining operations take place, it can be harnessed rather than being flared off as waste. As of 2016, our liquefied CBM plant in Shanxi province has a designed production capacity of 250 million cubic metres of liquefied

CBM per year. Around 390,000 tonnes of carbon emissions will be offset per year.

Furthermore, in 2016 we largely completed the construction of a project in Xuzhou, Jiangsu province, to produce LNG by the methanation of coke oven gas. Trial production is expected to commence in the first half of 2017.

Methanol and Gasoline

In 2016, our coal-based methanol production plant in the Inner Mongolia Autonomous Region operated smoothly and produced a yield of approximately 312,000 tonnes of methanol. Our

plans are afoot to enable methanol conversion to natural gasoline. This will provide a platform for upgrading other areas of our methanol businesses.

Biomass into Energy

Agricultural waste, when processed correctly, can yield economic and environmental benefits. To maximise these benefits, we have developed new technology that converts agricultural waste into

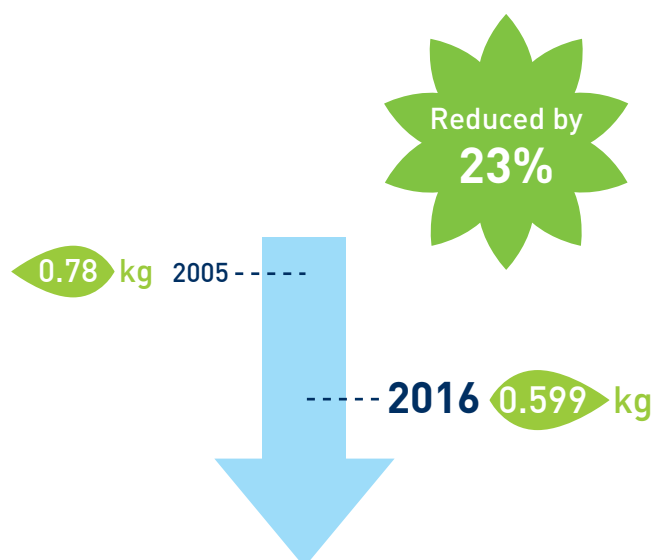
syngas and chemical raw materials, and a pilot project has been planned for 2017 when we will develop a facility to harness this energy source.

Greenhouse Gas Emissions

Hong Kong

Towngas has committed to monitoring the Company's GHG emissions and has devised strategies for supporting an overall reduction. We conducted a company-wide carbon audit aligned to ISO 14064-1 standard to quantify and accurately report our GHG emissions. Apart from using natural gas and landfill gas to produce town gas, we also enhance energy efficiency at our Tai Po plant. A waste heat recovery system was installed to recover and reuse waste heat generated by the gas-production process. This helps cut carbon emissions by 2,700 tonnes each year.

Carbon Emissions per Unit of Town Gas



Direct and Indirect GHG Emissions (Town gas production)

	2016	2015
Scope 1 - Direct GHG Emissions (Tonnes CO ₂ -e)	334,863	329,731
Scope 2 - Energy-related Indirect GHG Emissions (Tonnes CO ₂ -e)	24,437	28,114

- Standard: GHG Protocol Corporate Standard Reported Gases: CO₂, CH₄, N₂O, HFCs & PFCs. Only gas production and storage facilities' GHG emissions are reported.
- The emission factors of GHG emissions due to the consumption of electricity are obtained from the sustainability reports of the two local electricity companies, which were released one year prior to our reporting year.

Mainland China

In mainland China, the government has clean energy policies in place to reduce emissions. In parallel with rapid business expansion, Towngas is committed to adhering to compliance and regulations. In 2016, our piped city gas businesses covered a total of 23 provinces, autonomous regions and municipalities, and served over 23 million customers. Our expanding city-gas network offers cleaner fuel options with lower carbon emissions.



Energy consumption is always a major operating expense at our data centres. Our subsidiary, Towngas Telecommunications Company Limited (TGT), always strives for environmental sustainability especially through the operation of its data centres and building strategy. Its efforts were well-recognised in 2016. TGT was granted a Certificate of Excellence in HSBC Living Business Awards 2016 - Green Achievement Award. TGT also received the world-renowned U.S. Green Building Council's LEED for Core and Shell Gold Level Certification and Pre-certification for its TGT Dalian Data Centre 1 and TGT Harbin Data Centre 1 respectively.

Group GHG Emissions

	2016	2015	2014	2013	2012
Scope 1 -Direct GHG Emissions (Tonnes CO ₂ -e)	859,000	927,000	728,000	804,000	797,000
Scope 2 -Energy-related Indirect GHG Emissions (Tonnes CO ₂ -e)	399,000	378,000	300,000	284,000	258,000

Remarks:

- Scope 1 - Fuel consumption of production plants, vehicle fleets etc.
- Scope 2 - Electricity consumption of production plants, offices, customer centres, gas refilling stations and data centers etc.
- The reported GHG emissions data covers the operations within and outside Hong Kong. The data is consolidated on an equity basis.



Case study

Carbon Reduction Competition 2016

This competition is one of our major initiatives for improving the Company's environmental performance in mainland China. In 2016, we broadened the scope of the competition to include carbon reduction projects from our Hong Kong operations. We welcomed a total of 27 entrants, which resulted in annual savings of 64,500 tonnes of carbon emissions.

One of our projects came from Suzhou Industrial Park Qingyuan Hong Kong & China Water Company Limited (Qingyuan Hua Yan). The business owns two water treatment plants and provides fresh water for the surrounding area. Qingyuan Hua Yan utilised Big Data Platform to develop a mathematical model which maximises the water supply energy efficiency at two plants. By comparing the individual water supply quantity and the respective power consumption under different water supply levels, Qingyuan Hua Yan was able to determine the plants' optimum output profiles with the lowest possible power consumption.

Annual carbon reduction: 2,400 tonnes

Annual economic benefits: RMB1.6 million

Water Conservation



Hong Kong

To produce gas, we require a reliable water supply. However, as fresh water sources are precious and scarce, regionally and globally, we try to reduce our water consumption by enacting a range of measures at our plants.

Tai Po Gas Production Plant Water Conservation Initiatives

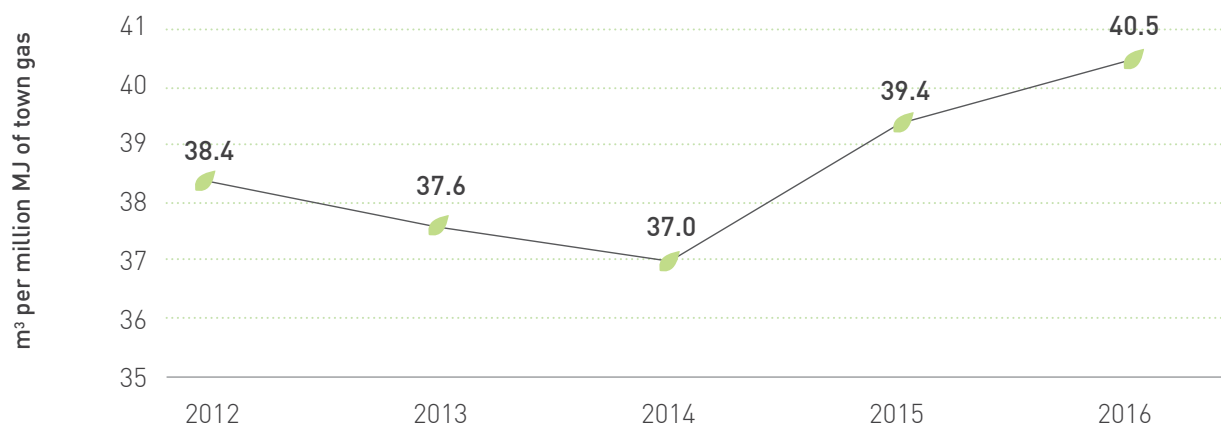
Rainwater Harvesting System

This system collects rainwater from the Naphtha Tank Bund Area. We use the treated rainwater in our gas production, saving an estimated 27,800 cubic metres each year.

Reverse Osmosis System (RO)

We reuse the surplus concentrate from our RO system as make-up water for our cooling tower, which makes an estimated saving of 118,000 cubic metres annually.

Water Consumption (m³) per Million MJ of Town Gas Produced



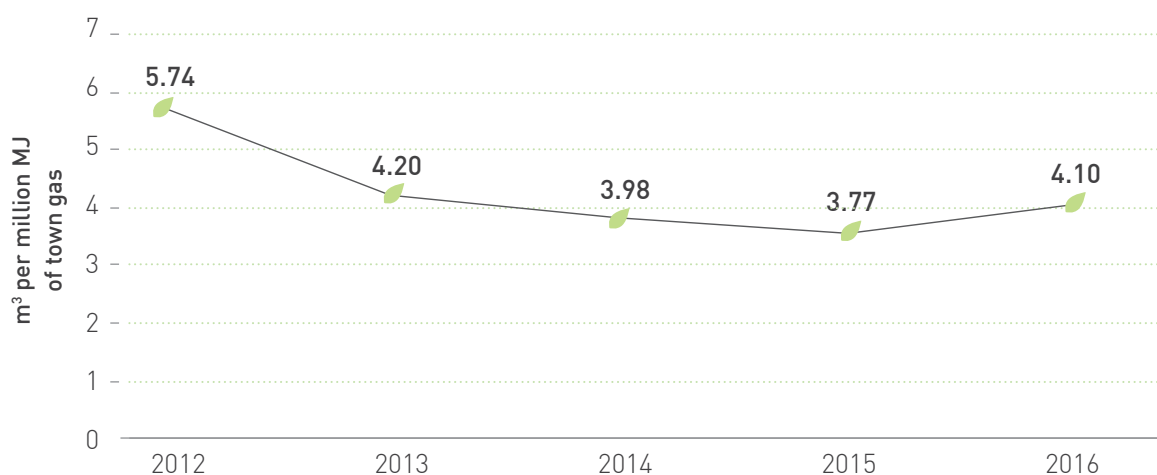
Effluent and Waste

We take great care when treating effluent and waste. All effluent generated at our gas production plants is processed in compliance with existing regulatory effluent discharge standards. In 2016, no significant effluent spills were recorded.

For other types of waste generated, we have established strict handling procedures. These

ensure that regulatory requirements are communicated to individuals responsible for the operations. Our chemical waste is handled by a waste collector licensed by the Environmental Protection Department according to regulatory requirements. Overall, we monitor closely what we generate by tracking how much hazardous and non-hazardous waste is produced and recycled.

Wastewater Discharge (m³) per Million MJ of Town Gas Produced



For a summary of the environmental data pertaining to our operations, please refer to Chapter 9 – Key Statistics.

Mainland China

We take an efficient and conservative approach to using water and other natural resources in our mainland China operations. For example, projects undertaken for our brand Hua Yan Water make every effort to source and use green products to

reduce water pollution. We also explore different ways to go green by treating wastewater and reusing it, leading to significant water-use savings and greater efficiency.

6.3 Greening our Headquarters

Approximately 90% of energy is used for buildings in Hong Kong, so we continue to review our building performance to contribute to the government's energy saving target. Our headquarters contribute a relatively small amount to our overall carbon footprint. Nevertheless, it is important to "green" our offices to reduce energy consumption, conserve resources and promote a green company culture.

Case study

BEAM Plus Certificate Presentation Ceremony

Our headquarters in North Point, Hong Kong, became the first non-residential building in the city to be awarded the Final Platinum rating under the BEAM Plus Existing Building Version 1.2 for our green upgrading. The achievement was in recognition of how we integrated green management – including electricity conservation, preservation of water resources, improvement of indoor air quality and waste management – to enhance our work environment in the 23-year-old building. There were several challenges to overcome, including adapting to the limitations of the original structure, which offered limited flexibility for incorporating green facilities. The project was a resounding success, and a certificate presentation ceremony officiated by Wong Kam-sing, Secretary for the Environment, was held on 9 August 2016 to acknowledge our efforts.



Major green measures adopted at Towngas headquarters:

- Replaced fluorescent lighting in lift lobbies, pantries and warehouses with LED lights
- Replaced the existing chilled water pipe raiser insulation and adjusted chilled water temperature to enhance chiller plant performance to reduce energy consumption

Energy Conservation

Waste Management

- Collected and sorted around 18 types of material either for recycling or reuse in our business operations
- Conducted a recycling trial for converting used loose tea leaves into hand-made soap



- Installed a rainwater harvesting tank and a condensate water collection tank for cleaning purposes

Water Conservation

Staff Education and Involvement

- Launched a rooftop organic farm to give staff the opportunity to learn about growing vegetables and to help reduce the heat island effect on the roof
- Conducted green office audits every two months via our green ambassadors

6.4 Green Partnerships

In 2016, Towngas continued to develop partnerships with an array of Hong Kong's green groups by supporting and participating in a range of their programmes. Some of these included Green Power's 5riday Green Challenges programme, the WWF's annual Earth Hour initiative, Greeners Action's Lai See Packet Reuse and Recycle Programme, Green Sense's No Air-Con Night, Green Council's Hong Kong Green Day and Clean Air Network's AirMazing Race.

Capturing Green Living - GREENFIE Contest



Together with Friends of the Earth (HK), we organised "Capturing Green Living - GREENFIE" Contest to promote nature photography and to raise public awareness about environmental protection. The word "Greenfie" is a portmanteau of "green" and "selfie". Participants took creative selfies with nature as the backdrop, and then upload and share them using the dedicated Towngas app. After a fantastic response from the public, judges selected their favourite entries, and the winner received the trip of a lifetime to beautiful Iceland.

Eco Rangers 2016

The Conservancy Association organised Eco Rangers 2016, which Towngas was delighted to support. The event is an opportunity for the public to enjoy nature and enhance their environmental awareness by taking part in a challenging, exciting activity. Our staff team won the Champion in the Corporate Team category at the competition.



Green Walk Campaign

With the prospect of climate change, more people are rediscovering walking as a natural form of green mobility. In light of this, we supported the World Green Organisation's Walk campaign to encourage Hongkongers to walk more. We helped spread the message about the health benefits of walking, as well as how it contributes to lowering carbon emissions. The campaign had an added benefit: on foot, people could appreciate Hong Kong's stunning architectural heritage.



Experience-sharing with Others

This year, we were honoured to garner recognition for our efforts to improve the environment, including at the prestigious BOCHK Corporate Environmental Leadership Awards, at which we received a Gold Award in the Manufacturing Sector category. Taking this opportunity, we shared best-practice knowledge with others for demonstrating excellent environmental leadership. In 2016, we welcomed over 300 guests from corporations, associations, green groups and other key stakeholders to our headquarters.



Low Carbon Creative SHOW

Our Low Carbon Creative "SHOW" campaign is designed to promote creativity and showcase interesting environmental protection. This year, more than 50 activities took place, such as tree planting, low carbon travel, earth hour, etc. More than 30 companies invited employees, their family members, customers and the general public to take part.



Our health and safety standards align with the highest international requirements are implemented across our businesses and enforced with sophisticated management systems.



SAFETY PERFORMANCE

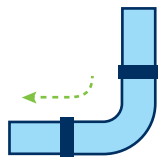
All operations of Towngas are underpinned by an unwavering commitment to safety. Our HSE policy, which conforms to ISO 9001, ISO 14001 and OHSAS 18001 standards, ensures our operations do not risk the health, well-being and safety of our people, contractors, customers or the public. We aim at a record of zero accidents and comply fully with all relevant health and safety legislation.

Key Safety Performance 2016

HONG KONG



24,094 safety training hours



Number of trench inspections
12,606 sites



12 reportable accidents

Number of network inspections **176,925**



MAINLAND CHINA



906,691 safety training hours

99 JVs of city-gas business completed safety audit and achieved an average score of "Excellent"



13 serious gas-related incidents

Achievements and Targets



Our objectives address environmental, social and safety issues, and are reviewed every year. In 2016, we achieved all our safety-related objectives and set new targets.

Achievements in 2016	Targets for 2017	Medium-term Targets (Two to Three Years)
Safety and Health Training and Promotion		
<ul style="list-style-type: none"> ✓ Held the highly successful 2016 HSE Month and Stay Healthy promotion programme to enhance occupational safety and health, fire safety and environmental protection awareness for colleagues and contractors ✓ Organised a number of process safety training courses for ECO mainland employees ✓ Organised several HSE workshops to enhance mainland employees' safety awareness further, attracting 450 attendees ✓ Worked with the Hong Kong Fire Services Department to deliver a five-day practical firefighting training course for 21 safety and risk management staff, predominantly from our mainland joint ventures 	<ul style="list-style-type: none"> ✓ To organise quarterly occupational health and safety promotional activities to enhance safety awareness 	<ul style="list-style-type: none"> ✓ To develop key performance indicators for occupational health and safety
Safety Audit		
<ul style="list-style-type: none"> ✓ Conducted safety audits at 11 ECO mainland gas refilling stations, yielding satisfactory results ✓ Conducted the third scored ECO mainland chemical plant safety audit, which gave good results ✓ Established process safety KPIs for ECO mainland chemical plants. KPI monitoring made good progress 	<ul style="list-style-type: none"> ✓ To conduct safety inspections at no less than 20 ECO mainland gas refilling stations ✓ To review the safety audit scheme for ECO mainland chemical plants and launch a post-audit enhancement programme 	<ul style="list-style-type: none"> ✓ To promote further safety awareness and culture among mainland employees through education, training and experience-sharing visits ✓ To enhance our ECO mainland chemical plants' safety performance by implementing an effective process safety management system and monitoring process safety KPIs
Safety Procedures and Guidelines		
<ul style="list-style-type: none"> ✓ Carried out the Corporate Emergency Table-top Exercise for TGT to improve our response to emergencies 	<ul style="list-style-type: none"> ✓ To conduct internal safety audits for TGT and improve performance further 	<ul style="list-style-type: none"> ✓ To study the transfer from OHSAS 18001 to ISO 45001 standard ✓ For all managerial staff in our mainland companies' risk management departments to earn the Safety Engineer certificate

7.1 Our Approach



Our Total Safety Management Approach highlights what we need to do when managing our safety performance across the gamut of our businesses. It also helps nurture a culture of safety among our stakeholders. Towngas is able to align this approach with our organisational values, standards and guidelines, and showcase our long-term thinking about health and safety.

The CHSED develops and reviews corporate health and safety guidance and policies, and coordinates and monitors the Group's overall safety performance. A safety management system is highly effective when it is fully supported by management and employees. We tailor programmes and activities for staff and contractors alike, and provide clear channels of communication to improve continually. We have sought to maintain these high standards in both Hong Kong and mainland China, and in doing so have applied our corporate safety and risk management system across the Group.

Towngas Safety Principles

- Comply with all relevant health and safety legislation requirements
- Benchmark against the highest standards of health and safety
- Conduct safety inspections led by Managing Director
- Uphold the Senior Management HSE Inspection Programme
- Offer HSE training, promotions and incentives
- Execute comprehensive safety inspections and safety audits
- Implement pre-work hazard identification and risk assessment programme
- Emergency preparedness and handling
- Safety teams report directly to Managing Director

7.2 Gas Infrastructure Safety

Hong Kong



We strive for the highest safety standards for our gas infrastructure. The global standards we adhere to include the ISO 55001-certified Asset Management System across our gas production plants and our transmission and distribution network. At all Hong Kong plants, our equipment, networks and processes are regulated by the government's Electrical and Mechanical Services Department (EMSD). We work closely with the

EMSD to create strategic plants which include a facilities utilisation framework and a preventative maintenance index to guarantee optimum safety standards. An example of this is the large investment we have made to replace essential equipment at our Tai Po Gas Production Plant, as well as integrating ultrasonic and flame detector technology to monitor and control leaks.

Process Safety and Asset Management

Long-established design and engineering principles – and robust operating and maintenance practices – ensure our processes and assets are efficient and effective and, at the same time, protect people's lives and maintain the safety of the gas supply. It is vital for us to be able to manage the risks associated with large-scale projects or modification work. To achieve this, we conducted a Process Hazard Analysis to establish the potential cause and impact of incidents and critical controls. An example of this in practice is the six-stage Hazard Studies approach, which is adopted by our gas production department for identifying and documenting critical hazards,

as well as developing measures to control or mitigate major risks.

By improving our assets, such as replacing essential equipment or investing in technology, we help maintain safety standards. We shall install an additional naphtha cooler and retractable grounding assembly at our existing naphtha pumping system and naphtha tanks respectively, reducing the risk of fire. We also intend to install a backup export gas line at the Phase 2 gas production plant to increase gas supply reliability.

Network Safety

Maintaining the integrity of our pipeline network is crucial to business success. We pay great attention to strengthening our trench inspections and have undertaken more in-depth leakage surveys while upgrading ageing pipes. In addition, our sophisticated Supervisory Control and Data Acquisition system (SCADA) allows us to monitor and control more than 3,500 real-time telemetry points. This helps our entire network, including every strategic pressure-regulating station, to operate smoothly. If an incident does occur, our remote control, emergency logging and geographical information systems will enable us to respond quickly, efficiently and accurately. In 2016, we carried out 176,925 inspections at 12,606 sites, and surveyed 6,817 km of pipeline.

Further efforts to improve safety include Quality Testing Services Limited, our wholly-owned subsidiary, which is accredited under the Hong Kong Laboratory Accreditation Scheme (HOKLAS) for gas meter collaboration services, gas appliance testing, stainless steel gas tubing and PE fitting. Another is our Pay For Safety, Quality and Environmental Appraisal System, which recommends that contractors ask their staff to demonstrate responsible awareness when working on pipe-laying contracts. If specified criteria are met, contractors receive a bonus of 1% to 2% of the contract sum. Schemes such as this are not new in Hong Kong, but our system is unique because 50% of the incentive total is paid directly to frontline workers.

Network Safety Performance 2016

Area	Results	Target
Gas Supply Reliability	99.991%	> 99.99%
Gas Incidents Reported by the Public per 10 km of Gas Pipes	0.18	≤ 0.15
Third-party Damage Incidents	13	≤ 7
Emergency Team Average Arrival Time within 25 minutes	Achieved	

Leakage and Pipeline Surveys

Type of Pipeline	Frequency of Leakage Surveys
All HP & IPB Mains	At least once a year
Medium-pressure Ductile Iron Pipes or All-galvanised Iron Pipes	At least six times a year
Low-pressure Ductile Iron Pipes	At least three times a year
PE or Steel Pipes Over or Enclosed within Structures	At least twice a year
Others	At least once a year

Mainland China



As a leading energy supplier in mainland China, it is our responsibility to make safety a top priority by improving standards within our operations.

We utilise systems that are operationally successful in Hong Kong, such as SCADA, which has now been adopted in mainland China.

Likewise, in 2016, we introduced our knowledge of polyethylene (PE) piping to our mainland operations and became heavily involved in setting PE piping standards for the country.

The Group has been asked to become involved in establishing multiple codes and specifications for our industry in mainland China, offering a channel for us to make direct contributions to the gas industry at large. To help raise the standard of our industry's corporate safety and risk management practices in mainland China, we have published guidelines such as Towngas Mainland Joint Venture Network Design, Construction and Maintenance Guidelines (DM11) and Plant and Station Equipment and Facilities Maintenance Guidelines (DM50), among others.

Since 2015, G-Tech Piping System (Zhongshan) Company Limited, our wholly-owned subsidiary, has supplied piped-gas operators with PE pipes manufactured under a stringent quality control system. By ensuring we only use fittings produced by our business units, we can be confident that our JVs' pipes comply with high safety standards. Not only does this minimise the risk of accidents, but it also mitigates reputational risk. We have continuously implemented the replacement programme of replacing aging cast iron gas pipe with more durable PE pipe.

A further level of protection is the requirement that all our city-gas projects conduct safety inspections of their operational gas networks and address any issues that arise.

We also established process safety key performance indicators (KPIs) for our new energy businesses, specifically our ECO mainland

chemical plants. Furthermore, we update the process safety audits for our CBM liquefaction plant and methanol plant regularly, so they correlate with the latest national and industry standards. The 2016 safety audits of both plants achieved a good result.

A further measure was to adopt bowtie analysis to identify potential risks arising during operational stages at our chemical plants, and ways to offset them systematically. Moreover, we continued to improve Process Safety Management (PSM) quality in accordance with international standards. In 2016, we implemented a Mechanical Integrity (MI) enhancement scheme at two of our chemical plants, where a Failure Mode, Effect and Criticality Analysis (FMECA) was carried out to determine critical equipment with a relatively high priority. Over 10 pieces of critical equipment were identified following the MI workshop, allowing us to optimise our preventative maintenance strategy more effectively.



7.3 Occupational Health and Safety

Hong Kong

Towngas has a long history of excelling in HSE management in Hong Kong. In 2016, we successfully renewed our International Safe Workplace Programme (ISWP) certification and joined the Joyful@Healthy Workplace Charter, which recognises our efforts in caring for the

health and safety of our staff at work. In addition, five awards at, including two gold awards, were obtained at the 15th Hong Kong Occupational Safety and Health Award in recognition of our robust safety culture and improvements in safety management standards.

Case study

Improvement on safety and health at work

Enhancement on working at height safety

Installing, inspecting and maintaining risers involve working at height, which poses the risk of persons and objects falling from height. Various departments worked together to improve safety standards of work above ground operations through systematic approach and standardization:

- Develop a site specific working-at-height safety plan template and pictorial safety guideline
- Conduct a pre-work hazard identification and risk assessment
- Offer practical working-at-height safety training

Heat stress prevention programme

Working under hot and humid weather increases the risk of developing heat stress or other heat related illness. Since heat stress issues affect the health of outdoor workers, safety and health guideline for working in hot weather, mobile application on heat stress prevention, and safety cue cards for checking dehydration level and heat stress index has been developed for the benefit of employees and contractors.



Key Safety Statistics (Hong Kong)

	2016	2015	2014	2013	2012
Number of Accidents – all industrial injuries	13	19	14	15	10
Accident Frequency Rate	0.19	0.29	0.22	0.24	0.19
Number of Reportable Accidents	12	15	12	12	7
Accident Incidence Rate	4.1	5.3	4.4	4.9	2.5
Fatal Accidents	0	0	0	1	0
Number of Industrial Injury Person – days lost	576	596	132	194	111

Remarks:

- Accident – an accident that results in injury for one or more days
- Accident Frequency Rate – the number of accidents per 100,000 person-hours worked
- Reportable Accident – an accident that results in incapacity for more than three days
- Accident Incidence Rate – the number of reportable accidents per 1,000 employees
- Towngas employees and the employees of its subsidiaries only

Activity Highlights in 2016

HSE Month

During 2016 HSE Month, a variety of activities under the theme “Let’s Promote HSE Culture” were organised for employees and contractors to further enrich their knowledge of health, safety and environmental protection, including seminars, visits, workshops, games and others. Over 1,500 staff and contractors took part in the activities, with more than 200 participants attended the Contractor OSH Forum.

One of the ways we inspire our people to improve continually is by recognising their outstanding HSE performance. Furthermore, a number of safety awards were presented, including the Corporate HSE Award and the Contractor Site Safety Award, at the opening ceremony of HSE month.



Stay Healthy Programme



This year, we launched a promotion initiative titled “Stay Healthy” to enhance colleagues’ awareness of health at work. Activities include occupational health talks, medical examinations, games and competitions. We also staged the Walking Campaign in which participants should work out a walking plan with a daily target of 8,000 steps in a month.

Fire Safety Training

In collaboration with the Hong Kong Fire Services Department, we arranged a five-day practical firefighting training course for 21 of our fire, safety and risk management personnel, mainly from our JVs in mainland China. The course took place at the new Fire and Ambulance Services Academy in Tseung Kwan O.

We also arranged a half-day building fire safety envoy training course for 26 employees to further enhance their building fire safety awareness.



Mainland China

Some of our companies have obtained the OHSAS 18001 Occupational Health and Safety (OHS) standard certification. Furthermore, we developed a set of OHS management system documents specific to this certification. This is designed to increase our JVs' capacity to manage safety and risk, as well as to align the standards set out in the Group's HSE management system, which covers general OHS, fire control, operational safety and emergency response procedures.

We have implemented the General Manager Monthly Safety Inspection Programme across our businesses. It ensures safe operations across 12 areas, including customer safety, fire safety, pipeline patrol and gas leakage surveys, station safety and emergency response and management, among others. Our Safety Committee, led by senior management, also visits project companies across the regions to make annual safety inspections. Since 2006, we have carried out a safety and risk management audit, of which six rounds have been completed to date.



In addition, as the number of our Compressed Natural Gas (CNG) and LNG refilling stations continues to increase in mainland China, the Company has, since 2013, rolled out a safety audit. It assesses the safety performance of these businesses with the overall aim of enhancing the results for the future. In 2016, 11 ECO mainland gas refilling stations were audited and all achieved satisfactory results.

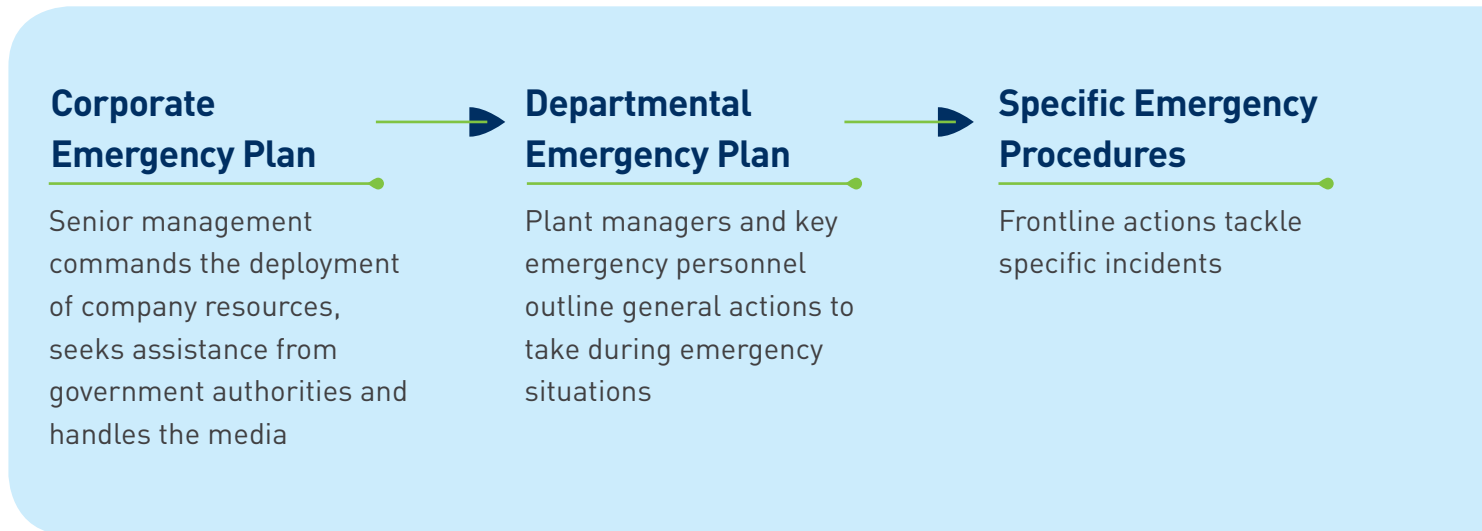
In 2016, we held several HSE workshops which were attended by more than 450 people. They shared experiences about safety and risk management in Hong Kong and mainland China and helped to strengthen the safety culture across the business portfolio. In addition, we introduced our WeChat HSE promotion platform, which serves as a communication channel to promote the latest HSE best practice, HSE knowledge, incident alerts and various interactive campaigns.



7.4 Emergency Preparedness

Throughout the year, we conducted regular drills to deal with critical situations across our operations. We also reviewed the efficacy and practicality of our emergency plan to enhance the way we handle a range of emergencies.

Table-top exercises and emergency drills are an integral part of our Total Safety Management Approach. They are carried out regularly so we can respond effectively and promptly to emergency situations. To ensure we have allocated sufficient resources to deal with an emergency, we have adopted a three-tiered method:



Emergency Drills and Corporate Emergency Table-top Exercise

In 2016, we worked with the Hong Kong Fire Services Department to hold fire safety exercises at our gas production plants, LPG filling stations and headquarters to prepare staff for any emergencies. Furthermore, we launched a corporate emergency table-top exercise for our subsidiary, TGT, to enhance management's ability to handle emergencies, particularly data centre crises. This exercise, involving over 50 personnel, was conducted at the Towngas headquarters, Tseung Kwan O Data Centre and Dongguan Data Centre 1. The hypothetical scenarios included a fatal industrial accident at a work site, a data transmission problem due to a power outage and an accidental gas release incident. Apart from helping senior management plans for crises, the exercises also foster the coordination and cooperation between colleagues to cope with real-life disasters.

7.5 Customer Safety





Towngas offers its customers safe, efficient appliances with comprehensive after-sales services. We have a strict quality control system in place to test our appliances, and conduct compliance checks to ensure consistency of specifications and quality requirements. All our residential gas appliances adhere to relevant international standards, as well as the Code of Practice GU05 (Approval of Domestic Gas Appliances for the HKSAR). Furthermore, Towngas products are safe, user-friendly and equipped with modern safety features, such as flame failure devices. We sell our appliances under our own brand names: TGC and SIMPA in Hong Kong, and Bauhinia in mainland China.

In the interests of public safety and the integrity of the gas supply system, we conduct regular safety inspections (RSIs) of domestic gas appliances every 18 months in Hong Kong. As a result, in recent years we have witnessed a steady decline in the number of customer-related emergency reports. We run a similar safety check for our customers in mainland China.

We are dedicated to promoting safety among our customers and make a concerted effort to pass on our social responsibility activities and messages to the public across a range of channels.

- 22 community safety exhibitions and talks
- Safety tips inserted into gas bills
- Regular safety inspections and 1,312,275 home visits
- Safety booklets and leaflets



-  **Energy-efficient home appliances**
-  **Professional Installation**
-  **Comprehensive after-sales services**
-  **Proactive regular inspections**

Case study **Smart Riser Jacket**

Echoing our philosophy of “Growth = Innovation x Implementation”, our talented teams have continued using their creativity to develop innovative tools and technologies which help with inspection and maintenance work.

Corrosion is often attributed to sewage or flush-water seepage on the outside of these structures. For safety reasons, corroded gas risers need to be replaced and customers must be notified a week before the necessary work is carried out as their gas supply will be affected, causing inconvenience. In addition, a three-metre section of the gas pipe usually needs to be replaced, even though, generally, only a 30cm portion is corroded, leading to a 90% wastage of gas pipe.

To resolve this issue, Towngas developed a new riser repair technology called the Smart Riser Jacket, which was inspired by the process used for retreading vehicle tires. The Smart Riser Jacket stops gas leaks instantly and prevents further corrosion from damaging the pipes. It repairs the leaking or corroded gas riser without interrupting our customers' gas supply, and without wasting material. What's more, the time it takes to repair a riser is reduced from half a day to 30 minutes. The Smart Riser Jacket is a triumph of efficiency and innovation.

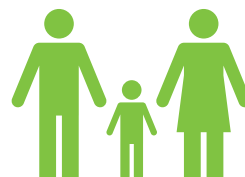


Before



After

We express our inclusive message by embracing social responsibility and fostering harmonious relationships with our staff, customers and the community.



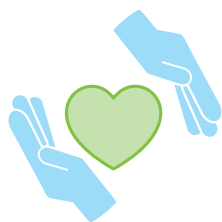
SOCIAL PERFORMANCE

Towngas puts social responsibility at the heart of everything it does. Underpinning our duty is our belief in inclusion – not just for our employees, contractors and customers – but for those in society who are most in need of help. Our inclusive approach is defined by how we develop the well-being of our people, pursue a high standard of product responsibility and strive to improve society.

Key Social Performance 2016



HONG KONG



248 voluntary activities in which Towngas volunteers took part



133 programmes supported through active participation, donation or in-kind sponsorship

830 employees registered for voluntary services



488,755 people who benefited from our volunteer services



75,588 voluntary service hours (including employees and customers)



4,717 Personal Emergency Link Services checked



45,719 households benefiting from all Towngas Concession Schemes



MAINLAND CHINA



RMB2.9 million donated through our Gentle Breeze Movement since 2013



More than 93,000 voluntary service hours worked for local communities



More than 2,500 trees planted, covering over **6,600m²**

Achievements and Targets



We have identified objectives and targets to address employee and social issues, and these are reviewed each year. In 2016, all our targets were achieved. Please see below for more details.

Achievements in 2016	Targets for 2017	Medium-term Targets (Two to Three Years)
Employees		
Career Development		
<ul style="list-style-type: none"> Continued to strengthen career path and development for employees with high potential at different levels in Hong Kong and China. This included the successful completion of TLC+, a two-year programme for high-potential middle managers. Expanded recruitment channels, including NGOs and our disabled workforce, as well as enhanced employer branding by participating in various media interviews and awards 	<ul style="list-style-type: none"> To continue strengthening initiatives conducive to talent attraction, retention and engagement 	<ul style="list-style-type: none"> To develop a competent workforce with the right mindset to manage the changes and transformation of the businesses and the Group
Knowledge Management		
<ul style="list-style-type: none"> Held sessions on gas safety, customer service, operational excellence, warehouse management and quality improvement to enhance the quality of work and standardise processes. They were conducted in the corporate office for JVs from the mainland. Also held regular meetings, collaborative projects, exchanges and mobility programmes among cross-location corporate offices and business units to share knowledge and best practice 		
Learning and Development (L&D)		
<ul style="list-style-type: none"> Offered the 3-Courtesy Training Series in Hong Kong and mainland China to equip our frontline staff with the skills and strategies necessary to deal with customer situations positively Offered a series of programmes focusing on change and innovation in different regional hubs in Hong Kong and mainland China to enhance the multi-perspective and strategic-thinking capabilities of our employees at all levels Ran a series of workshops focusing on driving change, igniting team innovation and enhancing customer service in different regional hubs including Qingdao, Jinan, Suzhou and Shenzhen in mainland China Adopted a real-time online discussion forum, instant polling during workshops, e-learning course materials, post-course assessments and online evaluation to make the overall learning process more effective and dynamic 	<ul style="list-style-type: none"> To provide learning and development activities which reinforce change awareness and the mindset to prepare for the transformation and re-engineering of our business process 	

Achievements in 2016	Targets for 2017	Medium-term Targets (Two to Three Years)
Talent Development		
<ul style="list-style-type: none"> Recruited 10 graduates from Hong Kong and overseas, and 16 graduates from mainland China into our Towngas Group Graduate Trainee Programme to cope with business development Held talent review discussions across business units and functions. We identified high-potential future leaders to enrich the management succession pipeline. We also put in place career development action plans supported by learning and development programmes Arranged company visits to different JVs and external companies in Hong Kong and mainland China to enable our middle-level managers to gain a comprehensive view of Towngas's businesses and learn innovative practices from other companies 	<ul style="list-style-type: none"> To continue launching the high-potential talents programme to prepare young managers for future leadership roles for the purpose of strengthening our talent pipeline and for the Company's talent succession planning 	<ul style="list-style-type: none"> To strengthen our employer brand further and to become the employer of choice for new talent who wish to join our diversified business portfolio
Creating an Inclusive Workplace		
<ul style="list-style-type: none"> Improved barrier-free facilities in different public areas. Conducted workshops, sign language classes and activities to foster communications with disabled people and promote an inclusive culture 	<ul style="list-style-type: none"> To continue communication programme to foster inclusive culture 	
The Community		
Community Projects		
<ul style="list-style-type: none"> Distributed a grand total of 330,000 rice dumplings, 100,000 mooncakes and 49,430 servings of hot soup Held our first Social Harmony Cooking Contest in collaboration with The Hong Kong Society for the Deaf Continued the programme to donate gas appliances to the community Participated in the CARE programme and other events of the Community Chest to raise HK\$1.5 million 	<ul style="list-style-type: none"> To continue installing toilet washlets in elderly care centres To maintain Towngas Concession Schemes to help those less fortunate To support fundraising programmes organised by The Community Chest To support or sponsor events held by major non-profit organisations 	<ul style="list-style-type: none"> To work with non-profit organisations to identify impactful community programmes benefitting the society

Achievements in 2016	Targets for 2017	Medium-term Targets (Two to Three Years)
Volunteer Programmes		
<ul style="list-style-type: none"> Organised a series of events with non-profit organisations for people with disabilities and ethnic minorities, aimed at promoting an inclusive culture Held the Reading x Experiential Learning Programme for a group of 50 primary school students 	<ul style="list-style-type: none"> To collaborate with SAHK and other non-profit organisations over the long term To establish a child volunteer team to perform during variety shows for the elderly or needy 	<ul style="list-style-type: none"> To develop new volunteer programmes for people with disabilities To explore community programmes for young people

8.1 Our Approach

Towngas communicates the message of inclusion by embracing social responsibility and fostering harmonious relationships with our staff, customers and the community at large. We are recognised as a family friendly employer as a result of our dedicated initiatives to develop,

train and look after the wellbeing of our people. We also seek to spread care and give back to the communities in which we operate. This means lending a helping hand when required, especially to vulnerable people or those in need.

8.2 Our People

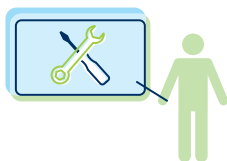
Delivered 10,200 non-technical training hours (Hong Kong)



Hired 26 fresh graduates from Hong Kong, mainland China and overseas



Spent 1,000 hours on management training programmes (Hong Kong)



46 senior executives completed our Executive Development Programme (EDP)



359 teams participated in our “MasterCraft” campaign competition



Organised 4 sign language workshops for employees (Hong Kong)



Employee Responsibility Practices



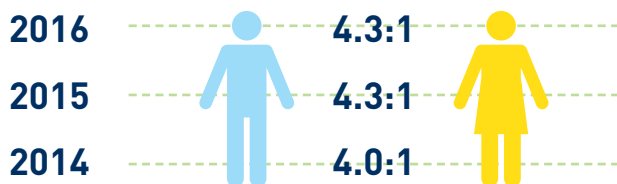
We strive to achieve a good work-life balance for our people. This is why we seek to improve our family friendly employment policies and invest in ways to foster family bonds of employees. In 2016, there were no substantial cases of non-compliance in relation to employment practices.



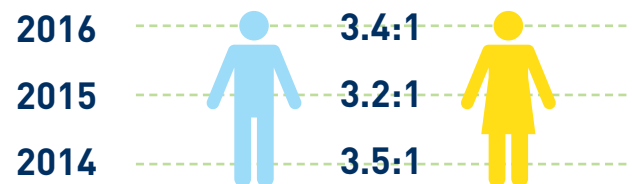
Equal Opportunity, Diversity and Inclusion

Ratio of Male to Female (Hong Kong)

General Staff



Senior Management



Towngas acknowledges the importance of diversity and inclusion to our business. We attract the best people for the job irrespective of gender, physical ability or other aspects of diversity by offering an inclusive working environment. This is emphasised during the recruitment process and throughout our operational processes. We actively advocate the

integration of able-bodied and disabled people in the workplace. Recently, Towngas hired more disabled people for different roles across a range of departments, and will continue to provide them with training to realise their talents fully. We ask our people to observe high ethical standards and comply with professional codes of conduct.



Over the past year, Towngas has organised activities, including cooking contest and sign language workshops, and hired hearing-impaired people at their headquarters. We are glad to see the Company continue to contribute to enhancing the work skills of disabled people.

– Clarence Lee,
Head of Project Development, The Hong Kong Society for the Deaf



Remuneration

Our competitive remuneration packages are positioned well above the local minimum requirements. Full-time employees are eligible for a range of benefits, including maternity and paternity leave, medical insurance, a dental scheme, group life insurance, a gas allowance, an educational allowance, a performance-based bonus and other incentives. We also offer clinical medical services at our headquarters – including

for staff who are employed on a temporary or part-time basis. Men and women enjoy equitable remuneration, both in principle and in practice. In Hong Kong, there is no regulatory requirement regarding collective bargaining. Instead, we engage in meaningful and regular consultations with our employees using a variety of internal communication channels.

Staff Development

One of the most important Group sustainability strategies we have is to develop our people's skills. In place are annual staff performance appraisals with evaluations covering all levels within our businesses. These aim to encourage individual performance and enhance collective competence. We also subsidise employees, in applicable cases, if they wish to attend

educational courses, academic programmes and other external skill-developing opportunities.

Harnessing our philosophy of "Growth = Innovation x Implementation", we ran a series of programmes on change and innovation, aimed at different employees across the gamut of our businesses. The workshops were held in regional hubs in mainland China and Hong Kong.

Towngas Engineering Academy

Established in 2009, the Towngas Engineering Academy (TEA) offers structured and professional technical training for mainland China and Hong Kong employees who wish to obtain academic or professional qualifications to advance their careers. Currently, the Group is the only gas company in mainland China accredited by both the Hong Kong Institute of Engineers and the Institution of Gas Engineers and Managers in the United Kingdom to offer graduate training schemes for mainland gas engineers.

To keep pace with the development of engineering training in the Group, the Training Centre at headquarters was renovated in 2016, updating existing facilities and installing new ones to enhance training effectiveness. We introduced a new Commercial and Industrial System Simulation Learning Zone with cutting-edge



technology to offer trainees an interactive learning experience covering operating principles, key components and the application of strategic products. The new gas pipe practical area enables them to construct more complicated composition pipework with lower maintenance costs.

Towngas Engineering Academy Training in 2016



	Training Man-hours	Employees Trained
Continuing Professional Development Seminars	1,967	1,483
Technical Training (Hong Kong)	45,497	3,098
Technical Training (Mainland China)	143,612	6,934



189,109 Technical Training Hours
were reached by OUR
EMPLOYEES

Towngas MasterCraft Campaign

In 2015, we launched the Total Quality Management programme in mainland China to improve safety standards, work quality and services. Leading on from this, in 2016 we launched the Towngas “MasterCraft” campaign across the Group. This campaign was designed to build and promote a culture of aesthetics, attitude and work quality, and increase self-esteem, among frontline staff.

Two competitions for Towngas MasterCraft Awards were held for contestants from our JVs

and Hong Kong operations in September and December 2016 respectively. In mainland China, we held roadshow events in nine regions, which attracted 274 teams to join. In the Hong Kong contest, a total of 85 teams from commercial and engineering divisions and contractors took part. They competed by demonstrating their craftsmanship with the “Four Senses, Two Requirements and Six Aesthetic Standards” needed to win the Towngas MasterCraft Awards.

Graduate Trainee Programme

Graduate Trainees (GTs) continue to be the life-blood of our leadership talent pipeline. In 2016, we hired 10 fresh graduates from universities in Hong Kong and overseas, and 16 from mainland Chinese universities. We strongly encourage cross-learning among young talent in different locations to

facilitate the active exchange of ideas. An example of this was the cross-learning networking event we arranged for trainees in three locomotives so they could collaborate and understand more about one another’s business functions.

Management and Leadership Development

A key strategic human resource initiative is to build a sustainable leadership pipeline to cope with future business expansion. To ensure this, we seek to enhance the leadership and managerial competencies of our senior executives. In 2016, we offered a comprehensive curriculum for various levels of management in different locations. The workshops focused on driving change, igniting team innovation and enhancing customer service and were held in Qingdao, Jinan, Suzhou and Shenzhen.

In 2016, 46 senior executives from business sectors spanning Hong Kong and mainland China completed

the EDP. In the years ahead, people development will continue to be the strategic human resource focus to increase leadership capabilities across all businesses in China.

We also offer a structured development programme for high-potential middle managers called the Towngas Leadership Competencies Acceleration Programme (TLC+). This two-year course cultivates middle managers for future leadership roles and TLC+ graduates are expected to take more responsibility in driving business performance, as well as furthering their own careers.

Mobility Programme

With ever more Hong Kong employees taking up diverse assignments which support new projects and initiatives in mainland China, we have witnessed an increase in the number of people joining our

Mobility Programme. By the end of 2016, more than 40 individuals had enrolled and have either embarked on, or completed, assignments in mainland China.

Caring for the Wellbeing of our Employees



Towngas launched the Fun Living Series for a fourth consecutive year, providing our staff and their families with positive energy. In 2016, we arranged seminars and workshops which addressed the needs of employees at different life stages, such as financial planning for younger employees, parenting skills for working mothers and fathers, and retirement preparation for older colleagues.

We continued to promote our caring culture in mainland China through a series of activities grouped under four themes: Me and Positive Energy, My Healthy Life, My Low Carbon Environment and My Happy Life. Also in 2016, we ran fun farming activities for our staff and their families to enhance knowledge and engender patience and teamwork.

8.3 Our Customers

“Customers Focus” is an innate philosophy at Towngas. Across Hong Kong and mainland China, we manage more than 23 million customer accounts, including businesses and residential households. The experience we give our customers is key to our success as a service provider and how we uphold our corporate responsibility pledges. We are committed to providing customers with a caring, competent and efficient service that exceeds their expectations, as is stated in our mission.

Ran 79 new staff courtesy programme sessions in Hong Kong with 1,400 attendees

Engaged more than 40,000 employees through our Etiquette, Politeness, Caring Programme

Honing Our Customer Service

Hong Kong

We seek to offer caring, competent and convenient services to our customers. This is embodied by our total solution service, which comprises a 24-hour customer service hotline and a one-working-day pledge for installation and maintenance work.

While we endeavour to maintain internationally recognised best-practice in customer service, the Chinese virtue of courtesy also plays a large role in our principles. Traditionally, there are three elements to the courtesy virtue: etiquette, politeness and the will to care. With this in mind, we ran a specially designed programme in 2016 which focused on staff behaviour and providing service from the heart. Since its introduction, 79 sessions have been conducted with more than 1,400 attendees. It has been of great benefit to frontline staff, as well as to contractors from our customer service, marketing and sales, and restaurant business units.

A further measure is to have clear lines of communication with our customers, and respond to their comments and queries. To gauge our effectiveness, an external research consultancy conducts monthly customer satisfaction surveys. In support of this, our Customer Focus Team, which comprises staff from frontline departments, arranges bimonthly visits to local residential areas to gather first-hand feedback and pass on safety and green messages. We also have a number of targets for excellence in service reliability, safety, accessibility, convenience, quality and customer enquiry handling. These fall under the [Towngas Service Pledge](#), which has been placed since 1994. In 2016, there was no substantial legal recourse regarding customer complaints.



Reliability

Uninterrupted gas supply
(over 99.99%)

99.991%

3 days prior notification in
cases of supply interruption
on account of maintenance or
engineering work

100%

Restoration of gas supply
within 12 hours

100%



Safety

Emergency team average
arrival time (within 25 minutes)

Average 21.54 minutes



Appointments

Availability of maintenance and
Installation services within 2
working days

Average 1.14 days



Speed and Convenience

Customer Service Hotline
(calls answered within 4 rings)

92.53%

Connect or disconnect gas
supply within one working day

**100% upon customer's
request**

Deposit refunded at Customer
Centres (2 hours after
disconnection of gas supply)

**100% upon customer's
request**



Service Quality

Efficiency*

8.87

Courteous and friendly
attitude*

8.81



Handling Suggestions

Reply within 3 working days

100%

Resolution, or a statement
of when the matter will be
resolved, within 2 weeks

97.92%

*The result was based on surveys conducted by an independent research company. Our target is to exceed a score of 8 out of 10.



Mainland China

In mainland China, we operate according to our principle of being “Customer-oriented, Professional and Efficient”. We have 244 modern customer service centres which provide a plethora of services, including consultation, bill payment facilities, account opening facilities, repair and maintenance, and appliance sales. Moreover, we have rolled out our online platform so customers have the most up-to-date information and are able to check their personal accounts, check bills and make payments at a time convenient for them.

We also introduced our “Three Courtesies” concept in mainland China to inculcate a sense of awareness for nature and an efficient service culture in our employees across our projects. We engaged more than 40,000 people with various activities to promote the virtues of “Etiquette, Politeness, Caring” and demonstrate them at work, whether in offices, stations, construction sites, customer centres, customers’ homes or while travelling in our vehicles. The “Three Courtesies” concept helped spread the spirit of positivity throughout the community.



Protecting Customer Data and Privacy

Towngas strictly adheres to all regulatory requirements pertaining to the protection of customers’ legal rights and data privacy when communicating with them. To help our staff handle confidential and proprietary information, we have created a comprehensive set of policies and procedures, with training carried out across the Group.

We have also established a Data Privacy Departmental Committee and a Data Protection Office. This is so we can monitor our data protection subsidiaries and departments’ performance progress and make improvements where needed. The standing committee reviews strategies for handling personal data and makes recommendations to the Executive Committee


if a significant breach of data protection occurs. Furthermore, the data protection officer is required to make declarations to the Group each year.

The privacy law governing direct marketing has been amended and we have upgraded our system so operational processes are aligned. Towngas has also provided periodic training and held seminars for colleagues and contractors to boost their knowledge of personal data protection. In 2016, there were no substantiated customer complaints about data loss or breaches of privacy in Hong Kong or mainland China.

8.4 Our Community

Towngas is committed to good corporate citizenship and carrying out our operations responsibly so we benefit our local communities and society at large. We support a number of non-governmental organisations' public programmes with donations and financial sponsorship,

investing our resources in areas pertaining to CSR which reflect our top five business attributes: "Community", "Quality", "Safety", "Service" and "Environmental Protection". In 2016, our CSR events focused on social integration, diversity and inclusion and achieved a great success.

 **Towngas employees are so kind and giving! Every Saturday, their volunteer team comes to our organic farm in Fanling, tends to the fields and hand-delivers the produce to charity organisations.**

– Amber Lee,
Development Offer, Produce Green Foundation



Hong Kong

Donated cooking appliances to individuals and families in need

Distributed around 640 kg of vegetables to 2,093 beneficiaries

Donated HK\$100,000 to SAHK via sports initiatives

Raised more than HK\$330,000 through our annual fundraising event with Mad Dog Café

Delivered out 330,000 rice dumplings and 100,000 mooncakes

Distributed 49,430 soup servings

Throughout 2016, 830 people joined the Towngas Volunteer Service Team to undertake community service activities in the city. This team was established in 1999 and, to date, a total of 697,594 volunteering hours have been logged.

Games of Friendship

Held on 10 December at Ma On Shan Sports Complex, this sports event was co-organised with Spastics Association of Hong Kong (SAHK) with the aim of advocating greater social integration and understanding about disabled people. With the support of over 60 Towngas volunteers, approximately 500 SAHK service users took part in this heart-warming event, overcoming their physical disabilities and demonstrating a true passion for sport. Furthermore, the Towngas charity foundation donated HK\$100,000 to SAHK to purchase sports equipment for their service users.



Social Harmony Cooking Contest

During the year, in association with The Hong Kong Society for the Deaf, we arranged a cooking competition in June to highlight the importance of integration between the deaf and hearing people, and communication within the family unit. This was the first cooking contest of its kind in the city, and Towngas volunteers attended preparatory sign language courses before teaming up with their hearing-impaired partners.



Rice Dumplings and Mooncakes for the Community

Since 2000, the Company has been holding the annual charitable campaign Towngas Rice Dumplings for the Community. It encourages the tradition of wrapping rice dumplings and donating them to those in need. This year, we kicked off the 16th campaign with the Wrapping in the Dark workshop. The workshop encouraged social harmony and gave an authentic experience of what it was like to be visually impaired. In 2016, with the help of 220 legislative councillors, district councillors, members of more than 25 community organisations and other volunteers, we delivered 330,000 rice dumplings to the elderly and society's most vulnerable people.

This year, we also held our Towngas Mooncakes for the Community campaign. We partnered with the Hong Kong Community Network – LINK Centre, which is sponsored by the Home Affairs Department, to organise a Hand-in-Hand Mooncakes-of-Love workshop. This special event



celebrated Mid-Autumn Festival with a special focus on diversity and inclusion, especially for ethnic minorities. Towngas invited 124 charity groups and local organisations to help donate 100,000 mooncakes. In total, more than 1.8 million mooncakes were distributed to people in need across Hong Kong since the campaign was launched in 2001.

Electric Toilet Washlets for the Elderly

Originally the idea of Managing Director Alfred Chan, this donation programme has been active since 2013. It enables elderly people to use toilet facilities with dignity while reducing the workload of care workers. Since the programme's inception, we have installed more than 200 electric toilet seats. This year we raised more than HK\$330,000 through our annual fundraising initiative Mad Dog Café, which supported us with charity hot dog sales.



Farming for Fun

Established in 2014, this has been one of our major volunteering activities. Every Saturday, volunteers take turns to work on an organic

farm in Fanling. In 2016, approximately 640 kg of vegetables were harvested, which were distributed to 2,093 beneficiaries.



Soup to Warm the Heart

In December 2016, we launched a campaign to help fight winter flu among the elderly. In collaboration with the Social Welfare Department and six district community centres, the Company donated more than 600 servings of hot soup, together with lucky bags, to elderly people

living alone in Wan Chai and Eastern districts. Approximately 600 volunteers took part in the campaign. Towngas has been donating over 470,000 bowls of soup to the nourish elderly and vulnerable people since 1999.



Gas Appliances for the Community Programme

With support from 18 District Councillors, we donated cooking appliances to low-income families, as well as elderly couples or those living alone over the age of 60, which helped improve their quality of life.

Mainland China



Donated RMB200,000 to a school in Shandong province

Handed out 46,000 rice dumplings

Approximately 90% of our city-gas and water JVs have their own volunteer service teams with 93,700 volunteering hours logged

In the spirit of philanthropy, we launched various education-for-all and poverty relief initiatives to assist students in economically depressed regions, as well as for disadvantaged families in the community, in a bid to improve their educational and living circumstances. Meanwhile, we also launched carbon-reduction and greening activities, including tree planting, which involved employees, their families, customers and the public, to promote a green and low-carbon lifestyle.

Gentle Breeze Movement

Since 2013, this initiative has donated more than RMB2.9 million to 32 schools throughout the provinces of Jiangxi, Anhui, Jiangsu, Shandong, Guizhou, Shaanxi, Liaoning and Sichuan, and 200 households in Hubei province. The money is used for building libraries, dormitories, renovating houses and buying new learning materials and sports equipment to improve the learning environment and quality of education for students.



Rice Dumplings for the Community

Similar to our programme in Hong Kong, this initiative has attracted more than 80 companies within the Group to participate. Together, they have wrapped and distributed more than 46,000 rice dumplings for welfare groups, people in need and construction workers. In addition, more than 20 million festive gifts were handed out in 2016, benefitting nearly 9,000 people.



Hua Yan Siyuan Programme

Hua Yan Water has been building its identity as a socially responsible company by launching the Hua Yan Siyuan programme to introduce a series of educational activities about water conservation and low-carbon living concepts. For example,

Set-fish-free – a Water and Eco-friendly Event was organised on World Water Day to raise public awareness about water shortages and ways to protect water resources.



KEY STATISTICS

This section presents an overview of our 2016 key performance of the Group, with a focus on economic, safety, environmental, employee and social aspects. This quantitative data has been selected from the GRI G4 Guidelines, the ESG Guide of SEHK and other key performance indicators.

Economic Performance

	Unit	2016	2015	2014	2013	2012
Operating						
Customers (Hong Kong gas business)	Million	1.86	1.84	1.82	1.80	1.78
Customers (City-gas business)	Million	23.1	20.9	19.0	17.3	14.8
Customers (Water business)	Million	1.19	1.12	1.04	0.97	0.92
Town gas sales (Hong Kong)	Million MJ	28,814	28,404	28,835	28,556	28,360
Gas sales (mainland China)	Billion cubic metres	17.1	15.5	15.2	13.4	11.8
Water sales (mainland China)	Million tonnes	455	433	424	414	393
Financial						
Revenue	HK\$ million	28,557	29,591	31,615	28,246	24,923
Manpower costs	HK\$ million	2,955	2,844	2,706	2,282	2,013
Capital expenditure	HK\$ million	6,257	6,356	6,365	5,984	6,438
Taxation	HK\$ million	1,576	1,727	1,771	1,655	1,485
Dividends	HK\$ million	4,451	4,047	3,680	3,346	3,042
Profit attributable to shareholders	HK\$ million	7,341	7,302	7,109	6,854	7,712

Safety Performance

	Unit	2016	2015	2014	2013	2012
Inspection and Training						
Trench inspections	Number (sites)	12,606	14,044	16,390	13,675	17,599
Regular safety inspections – home visits	Number	1,312,275	1,236,796	1,247,727	1,021,089	1,114,409
Community safety exhibitions	Number	12	13	12	12	12
Community safety talks	Number	10	14	10	5	6
In-house staff safety training	Hours	19,482	17,558	19,726	17,822	20,254
External staff safety training	Hours	4,612	4,991	6,385	6,181	6,720
Occupational Safety and Health ¹						
Accidents – all industrial injuries	Number	13	19	14	15	10
Reportable accidents	Number	12	15	12	12	7
Accident frequency rate	Number of accidents per 100,000 man-hours	0.19	0.29	0.22	0.24	0.19
Occupational diseases rate	Number of incidents per 100,000 man-hours	0	0	0	N/A	N/A
Accident incidence rate	Number of reportable accidents per 1,000 employees	4.1	5.3	4.4	4.9	2.5
Traffic accident injury rate	Number of traffic accident injuries per 100 vehicles	3.36	1.68	1.68	1.47	3.74
Industrial injury man-days lost	Number of man-days	576	596	132	194	111
Fatal accidents	Number	0	0	0	1	0

Employees

	Unit	2016	2015	2014	2013	2012
Total Headcount						
Hong Kong gas business	Number	2,019	1,999	1,972	1,966	1,943
All Hong Kong staff²						
Full-Time	Number	2,392	2,380	2,331	2,310	2,266
Part-Time	Number	116	110	79	61	77
By gender						
Male	Number	1,887	1,882	1,847	1,825	1,800
Female	Number	505	498	484	485	466
Ratio of male to female – Senior management	Ratio	3.4	3.2	3.5	3.5	3.9
Ratio of male to female – Middle management	Ratio	3.2	3.3	3.6	3.7	3.4
Ratio of male to female – General staff	Ratio	4.3	4.3	4.0	3.9	4.3
By age group						
<26	Number	126	118	106	116	109
26-35	Number	372	385	388	364	330
36-45	Number	487	491	499	563	632
46-55	Number	909	940	947	915	876
>=56	Number	498	446	391	352	319
By employee category						
Senior management	Number	239	239	230	225	219
Middle management	Number	831	820	768	744	792
General staff	Number	1,322	1,321	1,333	1,341	1,255
Turnover Rate						
Average turnover of workforce (Hong Kong gas business)	%	5.8	4.8	6.4	5.1	4.6
Average turnover of workforce (all Hong Kong staff) ²	%	6.7	5.8	7.5	6.0	4.9
By gender						
Male	%	6.0	4.9	6.6	4.6	4.0
Female	%	9.0	9.4	10.9	11.4	8.8

	Unit	2016	2015	2014	2013	2012
By age group						
<26	%	21.3	26.8	22.5	33.8	23.9
26-35	%	14.8	14.0	18.6	10.4	14.9
36-45	%	6.1	3.6	6.6	4.5	2.6
46-55	%	3.4	2.4	3.4	2.7	1.9
>= 56	%	3.4	2.9	3.2	3.6	1.3
New Recruitment						
Total	Number	200	203	182	174	169
By gender						
Male	Number	144	145	140	111	113
Female	Number	56	58	42	63	56
By age group						
<26	Number	56	48	37	50	55
26-35	Number	71	64	73	70	63
36-45	Number	34	36	37	22	33
46-55	Number	22	21	25	26	16
>= 56	Number	17	34	10	6	2
Employee Performance and Career Reviews ²						
Total	%	85.6	85.8	85.5	86.1	83.2
By gender						
Male	%	87.1	88.8	87.1	89.0	85.5
Female	%	79.8	74.5	79.8	75.3	74.2
By employee category						
Senior management	%	82.0	82.8	83.9	85.3	80.8
Middle management	%	92.4	90.1	91.8	93.4	86.7
General staff	%	81.9	83.6	82.2	82.2	81.4
Training Hours (HSE training excluded) ²						
Total	Hours	15,753	19,069	22,611	32,186	31,349
Average	Hours	6.6	8.0	9.7	13.9	13.8
Anti-corruption	Hours	200	300	155	128.75	93.75
By gender (Average training hours and percentage of employees received training)						
Male	Hours (%)	5.8 (43.3)	7.6 (40.3)	8.4 (65.7)	13.4 (66.0)	13.9 (92.8)
Female	Hours (%)	9.6 (70.3)	9.4 (44.6)	14.7 (67.9)	15.8 (63.1)	13.7 (94.3)
By employee category (Average training hours and percentage of employees received training)						
Senior management	Hours (%)	9.5 (73.2)	12.6 (75.1)	14.1 (87.5)	32.6 (96.4)	33.0 (97.7)
Middle management	Hours (%)	10.7 (63.4)	8.7 (53.7)	12.8 (67.6)	21.9 (75.4)	16.4 (94.2)
General staff	Hours (%)	3.5 (35.6)	6.8 (27.7)	7.1 (62.1)	6.4 (54.2)	8.9 (94.6)

Environmental Performance

Energy and resource consumption³

	Unit	2016	2015	2014	2013	2012
Towngas Headquarters						
Electricity	GJ	21,383	21,277	21,696	22,934	24,889
Town gas	GJ	2,217	1,477	1,353	1,586	4,135
Water ⁴	Cubic metres	15,631	15,791	16,735	14,006	13,470
Gas Production Process (Heating fuel, electricity and water used)						
Electricity	GJ	150,251	145,797	141,937	132,257	131,568
Naphtha	GJ	616,538	598,935	602,016	785,476	715,625
Natural gas	GJ	5,069,673	4,934,059	4,973,358	4,862,842	4,708,134
Synthetic natural gas and landfill gas	GJ	481,963	550,926	527,790	519,401	681,392
Town gas	GJ	168,086	156,196	164,020	168,868	154,368
Diesel	GJ	1,365	1,452	1,458	1,304	1,498
Water ⁴	Cubic metres	1,162,611	1,091,897	1,041,582	1,058,641	1,065,243
Vehicle fleet ⁵						
Unleaded petrol	GJ	14,518	15,662	17,254	17,569	19,418
Diesel	GJ	10,172	9,420	8,144	7,003	5,718
Packaging Material Use						
Carton	Tonnes	822	866	824	798	N/A
Wood	Tonnes	29	25	24	23	N/A
Plastic	Tonnes	0.9	1.0	1.0	1.0	N/A

Resource Conservation

	Unit	2016	2015	2014	2013	2012
Naphtha saved (Gas Production) ⁶	GJ	449,349	519,160	492,844	477,459	639,480
Town gas saved (Gas Production) ⁶	GJ	32,614	31,766	34,945	41,942	41,912
Effluent water saved (Gas Production) ⁸	Cubic metres	118,187	112,159	121,504	127,379	114,113
Amount of raw water collected by the rainwater harvesting system (Tai Po Plant)	Cubic metres	4,125	3,663	N/A	N/A	N/A
Grid electricity saved through PV Panels	GJ	311	312	313	312	311
Electricity saved (Towngas Headquarters and Ma Tau Kok office) ⁶	GJ	19,919	19,557	18,581	17,396	15,316

Emissions

	Unit	2016	2015	2014	2013	2012
Carbon dioxide (CO ₂)	Daily average in metric tonnes (Metric tonnes per million MJ of town gas)	907 (11.55)	898 (11.82)	904 (11.70)	931 (12.09)	904 (11.92)
Nitrogen oxides (NO _x)	Daily average in kg (Kg per million MJ of town gas)	314 (4.00)	292 (3.84)	310 (4.02)	353 (4.59)	318 (4.20)
Sulphur oxides (SO _x)	Daily average in kg (Kg per million MJ of town gas)	1.4 (0.02)	1.3 (0.02)	1.4 (0.02)	1.2 (0.02)	1.5 (0.02)
Greenhouse gases(Production equipment) ⁹	Tonnes CO ₂ -e	359,300	357,845	358,582	365,981	360,634
CO ₂ reduction equivalent to electricity saved (Towngas Headquarters and Ma Tau Kok office) ⁷	Tonnes	3,873	3,803	3,613	3,376	2,981

Effluent and Waste

	Unit	2016	2015	2014	2013	2012
Treated wastewater discharged to marine water bodies	Daily average in cubic metres	79	47	N/A	N/A	N/A
Wastewater discharged to sewage	Daily average in cubic metres	241	239	N/A	N/A	N/A
Total wastewater discharged	Daily average in cubic metres (Cubic metres per million MJ of town gas)	321 (4.10)	287 (3.77)	307 (3.97)	323 (4.20)	435 (5.74)
Non - hazardous waste landfilled ¹⁰	Tonnes	150.4	123.6	129.5	126.7	N/A
Non - hazardous waste recycled ¹¹	Tonnes	125.7	210.0	N/A	N/A	N/A

	Unit	2016	2015	2014	2013	2012
Hazardous waste¹²						
Chemical waste generated	Daily average in kg (kg per million MJ of town gas)	167 (2.10)	49 (0.64)	83 (1.07)	150 (1.94)	93 (1.23)
Spent catalyst collected for metal recovery	Tonnes	18.5	11.7	23.6	39.7	35.3
Spent lube oil recycled	Tonnes	45.6	13.2	25.2	46.7	25.3
Others						
Metal chemical drums reused	Number	41	18	15	90	318
Plastic chemical drums reused	Number	1,021	1,927	1,030	914	969
Scrap metal recycled – old gas appliances	Tonnes	1,218	1,265	1,229	1,278	926
Scrap metal recycled – from construction and maintenance of plant and pipelines	Tonnes	34	77	23	28	35
PE pipe recycled	Tonnes	30.9	23.6	17.8	12.6	10.7
Gas appliances polyfoam packaging materials avoided	Tonnes	1.56	1.56	1.29	1.31	1.52

Environmental Training

	Unit	2016	2015	2014	2013	2012
In-house staff environmental training	Hours	1,653	865	1,012	1,420	1,951
External staff environmental training	Hours	431	386	349	818	1,120

Social Performance

Customer Service

	Unit	2016	2015	2014	2013	2012
Customer compliments	Number	6,930	6,766	5,894	6,026	6,090
Customer complaints	Number	13	6	8	16	7

Community Involvement

	Unit	2016	2015	2014	2013	2012
Employees participating in voluntary services	Number	830	859	994	918	1,079
Voluntary service hours (including employees and customers)	Hours	75,588	75,369	79,551	72,025	68,508
Charitable donations made by the Group	HK\$ million	7.1	7.1	34.2	58.6	7.9

Remarks:

- 1) Towngas's employees and the employees of its subsidiaries only.
- 2) A revised scope was adopted in 2016. The scope includes the hired 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.
- 3) The following conversion factors are used to standardize the units to gigajoules (GJ): Town gas (0.048GJ/unit), electricity (0.0036GJ/kWh), petrol (0.033GJ/L), diesel (0.036GJ/L). For the conversion of naphtha and landfill gas to energy term, they are calculated by multiplying individual monthly fuel volumetric data by their corresponding monthly average calorific value.
- 4) All water is purchased and distributed by the HKSAR Water Supplies Department.
- 5) Tankers and ECO Aviation Fuel Services (EAFS) vehicles are excluded.
- 6) These figures are the savings achieved compared with the data of a reference year before implementing the respective environmental initiative.
- 7) The default value to account for the GHG Emission Factor of electricity sold to customers in Hong Kong is 0.7kg/kWh. Reference: Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings of Commercial, Residential or Institutional Purposes in Hong Kong (by EPD & EMSD).
- 8) The indicator 'Water saved' was replaced by 'Effluent water saved' in 2016. The figures have been adjusted accordingly.
- 9) The emission factors of greenhouse gas emissions due to electricity consumption are obtained from the sustainability reports of the two local electricity companies, which are released one year prior to our reporting year.
- 10) Non - hazardous waste landfilled refers to the refuse, wood pallets and construction waste collected from Towngas Headquarters and the Tai Po Plant.
- 11) Non-hazardous waste recycled refers to the plastics, papers, paper cartons and metals collected 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.
- 12) All chemical waste handling procedures comply with the [Waste Disposal Ordinance \(Cap. 354\)](#). We also collect other hazardous waste, such as rechargeable batteries, fluorescent tubes and obsolete electronic products to licensed recyclers on a regular basis.



Safety Performance¹

	Unit	2016	2015	2014	2013	2012
Safety training	Hours	906,691	904,211	N/A	N/A	N/A
Serious gas-related accidents	Number	13	14	14	12	16
Fatal accidents	Number	2 [#]	0	1	N/A	N/A
Industrial injury man-days lost	Number of man-days	3,653.5	1,676.0	N/A	N/A	N/A

Two employees felt discomfort at work due to personal health problem, they were certified death after admission to hospital.

Environmental Performance²

Energy and Water Consumption³

	Unit	2016	2015	2014	2013	2012
Diesel	GJ	82,204	N/A	N/A	N/A	N/A
LNG	GJ	465,110	N/A	N/A	N/A	N/A
Unleaded petrol	GJ	68,430	N/A	N/A	N/A	N/A
Electricity	GJ	1,567,187	N/A	N/A	N/A	N/A
Others	GJ	9,737,518	N/A	N/A	N/A	N/A
Water	Cubic metres	3,731,565	N/A	N/A	N/A	N/A

Emissions

	Unit	2016	2015	2014	2013	2012
GHG	Tonnes CO ₂ -e	1,258,000 [#]	1,305,000	1,028,000	1,088,000	1,055,000
Nitrogen oxides (NO _x) ⁴	Tonnes	149.8	N/A	N/A	N/A	N/A
Sulphur oxides (SO _x) ⁴	Tonnes	98.4	N/A	N/A	N/A	N/A
Respirable Suspended Particulates (PM ₁₀) ⁵	Tonnes	0.27	N/A	N/A	N/A	N/A

The reported GHG emission data covers the operations within and outside Hong Kong. The percentage of GHG emissions arising from Hong Kong operations is around 30%.

Effluent and Waste⁶

	Unit	2016	2015	2014	2013	2012
Hazardous waste (Solid)	Tonnes	1,134	N/A	N/A	N/A	N/A
Hazardous waste (Liquid)	Litres	28,600	N/A	N/A	N/A	N/A
Non-hazardous waste (Solid)	Tonnes	220,180	N/A	N/A	N/A	N/A
Non-hazardous waste (Liquid)	Litres	65,677	N/A	N/A	N/A	N/A
Wastewater discharged to sewage	Cubic metres	2,088,830	N/A	N/A	N/A	N/A

Employees⁷

	Unit	2016	2015	2014	2013	2012
Total Headcount						
Employees as at 31 December	Number	46,803	45,292	44,257	42,294	39,142
By employment types						
Full-time	Number	46,789	N/A	N/A	N/A	N/A
Part-time	Number	14	N/A	N/A	N/A	N/A
By gender						
Male	Number	31,945	N/A	N/A	N/A	N/A
Female	Number	14,844	N/A	N/A	N/A	N/A
By age group						
<26	Number	4,656	N/A	N/A	N/A	N/A
26-35	Number	16,468	N/A	N/A	N/A	N/A
36-45	Number	13,964	N/A	N/A	N/A	N/A
46-55	Number	9,961	N/A	N/A	N/A	N/A
>=56	Number	1,740	N/A	N/A	N/A	N/A
By employee category						
Senior management	Number	929	N/A	N/A	N/A	N/A
Middle management	Number	4,485	N/A	N/A	N/A	N/A
General staff	Number	41,375	N/A	N/A	N/A	N/A
Turnover Rate						
Average turnover of workforce	%	2.3	N/A	N/A	N/A	N/A
By gender						
Male	%	2.5	N/A	N/A	N/A	N/A
Female	%	1.9	N/A	N/A	N/A	N/A
By age group						
<26	%	3.5	N/A	N/A	N/A	N/A
26-35	%	2.7	N/A	N/A	N/A	N/A
36-45	%	1.9	N/A	N/A	N/A	N/A
46-55	%	1.7	N/A	N/A	N/A	N/A
>=56	%	1.8	N/A	N/A	N/A	N/A

	Unit	2016	2015	2014	2013	2012
New Recruitment						
Total	Number	1,853	N/A	N/A	N/A	N/A
By gender						
Male	Number	1,352	N/A	N/A	N/A	N/A
Female	Number	501	N/A	N/A	N/A	N/A
By age group						
<26	Number	320	N/A	N/A	N/A	N/A
26-35	Number	766	N/A	N/A	N/A	N/A
36-45	Number	465	N/A	N/A	N/A	N/A
46-55	Number	260	N/A	N/A	N/A	N/A
>=56	Number	42	N/A	N/A	N/A	N/A

Social Performance

Community Involvement









	Unit	2016	2015	2014	2013	2012
Employees participating in voluntary services (mainland utility business)	Number	9,016	8,341	7,240	6,150	N/A
Voluntary service hours (mainland utility business)	Hours	93,701	82,280	103,875	505,722	N/A














Remarks:












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. The data is consolidated on an equity basis.
3. The following conversion factors are used to standardize the units to gigajoules (GJ): electricity (0.0036GJ/kWh), petrol (0.033GJ/L), diesel (0.036GJ/L) and natural gas (0.04GJ/m³).
4. From fuel combustion and vehicle emissions.
5. From vehicle emissions.
6. All hazardous waste and wastewater handling procedures comply with the national regulations.
7. Includes all people employed by the Group, its' subsidiaries, associates and joint ventures outside Hong Kong.

GRI AND ESG GUIDE CONTENT INDEX

Global Reporting Initiative (GRI) G4 Guidelines Content Index (with Oil and Gas Sector Disclosures)

GRI G4	Description	Cross reference/Information (SR – Towngas Sustainability Report 2016; AR – Towngas Annual Report 2016; WEB – www.towngas.com)	External Assurance [#]
General Standard Disclosures			
Strategy and Analysis			
G4-1	Statement from the most senior decision-maker of the organisation	SR: Managing Director's Message (P.4)	
G4-2	Provide a description of key impacts, risks and opportunities	SR: About this Report (P.12); Our Company (P.16) AR: Risk Factors (P.60)	
Organisational Profile			
G4-3	Name of the organisation	SR: Our Company (P.16)	
G4-4	Primary brands, products, and/or services	The principal activities of the Company and its subsidiaries are the production, distribution and marketing of gas, water supply and emerging environmentally-friendly energy businesses in Hong Kong and mainland China.	
G4-5	Location of organisation's headquarters	SR: Our Company (P.16)	
G4-6	Number of countries where the organisation operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report	SR: Our Company (P.16); Appendices (P.110) AR: Businesses Coverage In 2016 (P.4) We have projects in Hong Kong, mainland China and Thailand.	
G4-7	Nature of ownership and legal form	SR: Our Company (P.16)	
G4-8	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries)	SR: Our Company (P.16)	




GRI G4	Description	Cross reference/Information (SR – Towngas Sustainability Report 2016; AR – Towngas Annual Report 2016; WEB – www.towngas.com)	External Assurance [#]
G4-9	Scale of the reporting organisation	SR: About this Report (P.12); Our Company (P.16)	
G4-10	Employee statistics	SR: Social Performance (P.69); Key Statistics (P.82, 90)	
G4-11	Percentage of employees covered by collective bargaining agreements	SR: Social Performance (P.70)	
G4-12	Description of the organisation's supply chain	SR: Sustainability at Towngas (P.30)	
G4-13	Significant changes during the reporting period regarding the organisation's size, structure, ownership or its supply chain	In 2016, there were no significant changes.	
Commitments to External Initiatives			
G4-14	Explanation of whether and how the precautionary approach or principle is addressed by the organisation	SR: Our Company (P.21); Sustainability at Towngas (P.27); Safety Performance (P.53)	
G4-15	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organisation subscribes or endorses	SR: Appendices (P.110)	
G4-16	Memberships of associations	SR: Appendices (P.110)	
Identified Material Aspects and Boundaries			
G4-17	Entities included in the organisation's consolidated financial statements	SR: About this Report (P.12) AR: Independent Auditor's Report (P.85)	
G4-18	Process for defining report content and aspect boundaries	SR: About this Report (P.13)	
G4-19	Material aspects identified in the process for defining report content	SR: About this Report (P.14)	
G4-20	Aspect boundary within the organisation for each material aspect	SR: About this Report (P.14)	
G4-21	Material aspect outside the organisation for each material aspect	SR: About this Report (P.14)	

GRI G4	Description	Cross reference/Information (SR – Towngas Sustainability Report 2016; AR – Towngas Annual Report 2016; WEB – www.towngas.com)	External Assurance [#]
G4-22	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statements	No re-statements.	
G4-23	Significant changes from previous reporting periods in the scope and boundary	SR: About this Report (P.12)	
Stakeholder Engagement			
G4-24	List of stakeholder groups engaged by the organisation	SR: About this Report (P.13); Sustainability at Towngas (P.27)	
G4-25	Basis for identification and selection of stakeholders with whom to engage	SR: About this Report (P.13); Sustainability at Towngas (P.27)	
G4-26	Approaches to stakeholder engagement	SR: About this Report (P.13); Sustainability at Towngas (P.27)	
G4-27	Key topics and concerns that have been raised through stakeholder engagement, and how the organisation has responded to those key topics and concerns, including through its reporting	SR: Managing Director's Message (P.4); Sustainability at Towngas (P.27); Environmental Performance (P.39); Social Performance (P.69, 76)	
Report Profile			
G4-28	Reporting period (e.g. fiscal/calendar year) for information provided	SR: About this Report (P.12)	
G4-29	Date of most recent previous report	Our previous sustainability report was published in 2016 for the reporting year 2015.	
G4-30	Reporting cycle	We publish the Sustainability Report on an annual basis.	
G4-31	Contact point for questions regarding the report or its contents	SR: About this Report (P.15)	
G4-32	GRI Content Index, the 'in accordance' option the organisation has chosen and the reference to the External Assurance Report	SR: GRI Content Index (P.92)	

GRI G4	Description	Cross reference/Information (SR – Towngas Sustainability Report 2016; AR – Towngas Annual Report 2016; WEB – www.towngas.com)	External Assurance [#]
G4-33	Policy and current practice with regard to seeking external assurance for the report	SR: About this Report (P.12); Verification Statement (P.114)	
Governance			
G4-34	Report the governance structure of the organisation, including committees of the highest governance body. Identify any committees responsible for decision-making on economic, environmental and social impacts	SR: Our Company (P.21) AR: Corporate Governance Report (P.73) WEB: Corporate Governance	
Remuneration and Incentives			
G4-51	Remuneration policies for the highest governance body and senior executives. How performance criteria in the remuneration policy relate to the highest governance body's and senior executives' economic, environmental and social objectives	SR: Our Company (P.21) AR: Corporate Governance Report (P.73) WEB: Corporate Governance	
G4-52	Process for determining remuneration. Indicate whether remuneration consultants are involved in determining remuneration and whether they are independent of management. Indicate any other relationships which the remuneration consultants have with the organisation	AR: Corporate Governance Report (P.73) WEB: Corporate Governance	
G4-53	How stakeholders' views are sought and taken into account regarding remuneration, including the results of votes on remuneration policies and proposals	AR: Corporate Governance Report (P.73) WEB: Corporate Governance	

GRI G4	Description	Cross reference/Information (SR – Towngas Sustainability Report 2016; AR – Towngas Annual Report 2016; WEB – www.towngas.com)	External Assurance [#]
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Ethics and Integrity

G4-56	The organisation's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics	SR: Our Company (P.22) WEB: Code of Conduct	
G4-57	Internal and external mechanisms for seeking advice on ethical and lawful behaviour, and matters related to organisational integrity, such as helplines or advice lines	SR: Our Company (P.22) AR: Corporate Governance Report (P.73)	
G4-58	The internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity	SR: Our Company (P.22) WEB: Code of Conduct	

Specific Standard Disclosures

Economic

Economic Performance

G4-DMA	Generic disclosures on management approach	SR: Our Company (P.18) AR: Chairman's Statement (P.8)	
G4-EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments	SR: Our Company (P.23) AR: Report of the Directors (P.66)	
G4-EC2	Financial implications and other risks and opportunities for the organisation's activities due to climate change	SR: Environmental Performance (P.39) AR: Risk Factors (P.60)	
G4-EC3	Coverage of the organisation's defined benefit plan obligations	Not Applicable.	
G4-EC4	Significant financial assistance received from government	No financial assistance from HKSAR Government was received.	




GRI G4	Description	Cross reference/Information (SR – Towngas Sustainability Report 2016; AR – Towngas Annual Report 2016; WEB – www.towngas.com)	External Assurance [#]
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Market Presence





G4-DMA	Generic disclosures on management approach	SR: Our Company (P.18)	
G4-EC5	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation	In 2016, all standard entry level wages fulfilled the regulatory requirement.	

Environmental

Materials





G4-DMA	Generic disclosures on management approach	SR: Environmental Performance (P.36) WEB: The Towngas Environmental Purchasing Policy	
G4-EN1	Materials used by weight or volume	SR: Key Statistics (P.84)	
G4-EN2	Percentage of materials used that are recycled input materials	SR: Key Statistics (P.86)	

Energy

G4-DMA	Generic disclosures on management approach	SR: Environmental Performance (P.40)	
G4-EN3	Energy consumption within the organisation	SR: Key Statistics (P.84, 89)	
G4-EN6	Reduction of energy consumption	SR: Environmental Performance (P.40); Key Statistics (P.85) WEB: Green Office	
G4-EN7	Reductions in energy requirements of products and services	We acquired energy labels for all models of domestic gas cooking appliances covered by the Voluntary Energy Efficiency Labelling scheme.	
G4-OG3	Total amount of renewable energy generated by source	SR: Environmental Performance (P.40); Key Statistics (P.84) The SENT Landfill Gas Utilisation Project installation was substantially completed in 2016 and will be fully operational in 2017.	

GRI G4	Description	Cross reference/Information (SR – Towngas Sustainability Report 2016; AR – Towngas Annual Report 2016; WEB – www.towngas.com)	External Assurance [#]
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Water







G4-DMA	Generic disclosures on management approach	SR: Environmental Performance (P.45)	
G4-EN8	Total water withdrawal by source	SR: Key Statistics (P.84) There was no issue in sourcing water that is fit for purpose in our Hong Kong operations.	
G4-EN9	Water sources significantly affected by withdrawal of water	There is no withdrawal of surface or groundwater. All water consumed in Hong Kong is either collected through our rainwater harvesting system and purchased and distributed by the HKSAR Water Supplies Department.	
G4-EN10	Percentage and total volume of water recycled and reused	SR: Environmental Performance (P.45); Key Statistics (P.85)	

Emissions

G4-DMA	Generic disclosures on management approach	SR: Environmental Performance (P.40) WEB: Carbon Audit	
G4-EN15	Direct GHG emissions (Scope 1)	SR: Environmental Performance (P.43, 44)	
G4-EN16	Energy-related indirect GHG emissions (Scope 2)	SR: Environmental Performance (P.43, 44)	
G4-EN18	GHG emissions intensity	SR: Environmental Performance (P.43)	
G4-EN19	Reduction of GHG emissions	SR: Environmental Performance (P.40)	
G4-EN21	NOx, SOx, and other significant air emissions by type and weight	SR: Key Statistics (P.84, 89)	




GRI G4	Description	Cross reference/Information (SR – Towngas Sustainability Report 2016; AR – Towngas Annual Report 2016; WEB – www.towngas.com)	External Assurance [#]
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Effluents and Waste



G4-DMA	Generic disclosures on management approach	SR: Environmental Performance (P.40)	
G4-EN22	Total water discharge by quality and destination	SR: Key Statistics (P.86, 89)	
G4-EN23	Total weight of waste by type and disposal method	SR: Key Statistics (P.86, 89) WEB: Waste Management	
G4-EN24	Total number and volume of significant spills	No significant spill was recorded.	
G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	None.	
G4-EN26	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organisation's discharges of water and runoff	No water bodies are significantly affected by our Hong Kong operation.	
G4-OG5	Volume and disposal of formation or produced water	In 2016, our Hong Kong operation does not involve formation or produced water, which is a byproduct that commonly brought to the surface during the production of hydrocarbons.	
G4-OG7	Amount of drilling waste (drill mud and cuttings) and strategies for treatment and disposal	In 2016, our Hong Kong operation does not involve drilling waste.	

GRI G4	Description	Cross reference/Information (SR – Towngas Sustainability Report 2016; AR – Towngas Annual Report 2016; WEB – www.towngas.com)	External Assurance [#]
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Products and Services




G4-DMA	Generic disclosures on management approach	SR: Environmental Performance (P.40)	
G4-EN27	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	SR: Environmental Performance (P.40) WEB: Green Products We take environmental considerations into the development of new gas appliance models. Energy efficiency and the choice of packaging materials are considered.	
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.	

Compliance

G4-DMA	Generic disclosures on management approach	SR: Environmental Performance (P.36)	
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	In 2016, Towngas received no fines or non-monetary sanctions for incidences of non-compliance.	




Social: Labor Practices and Decent Work

Employment





G4-DMA	Generic disclosures on management approach	SR: Social Performance (P.68) WEB: Code of Conduct	
G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region	SR: Key Statistics (P.82, 90)	
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	SR: Social Performance (P.70)	

GRI G4	Description	Cross reference/Information (SR – Towngas Sustainability Report 2016; AR – Towngas Annual Report 2016; WEB – www.towngas.com)	External Assurance [#]
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Occupational Health and Safety

G4-DMA	Generic disclosures on management approach	SR: Safety Performance (P.53) WEB: Health, Safety and Environmental Management	
G4-LA5	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programmes	SR: Sustainability at Towngas (P.26)	
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	SR: Key Statistics (P.81, 89)	

Training and Education

G4-DMA	Generic disclosures on management approach	SR: Safety Performance (P.57); Social Performance (P.70)	
G4-LA9	Average hours of training per year per employee by gender, and by employee category	SR: Key Statistics (P.83)	
G4-LA10	Programmes for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	SR: Social Performance (P.70)	
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender	SR: Key Statistics (P.83)	

GRI G4	Description	Cross reference/Information (SR – Towngas Sustainability Report 2016; AR – Towngas Annual Report 2016; WEB – www.towngas.com)	External Assurance [#]
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Social: Society

Local Communities

G4-DMA	Generic disclosures on management approach	SR: Social Performance (P.76)	
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programmes	SR: Environmental Performance (P.37); Social Performance (P.76)	
G4-SO2	Operations with significant actual or potential negative impacts on local communities	SR: Safety Performance (P.54)	
G4-OG11	Number of sites that have been decommissioned and sites that are in the process of being decommissioned	In 2016, our Hong Kong operation does not involve such sites.	

Social: Product Responsibility



Customer Health and Safety


G4-DMA	Generic disclosures on management approach	SR: Safety Performance (P.62) WEB: Health and Safety	
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	SR: Safety Performance (P.62) During 2016, we conducted 1,312,275 inspections of domestic gas facilities.	

Product and Service Labelling

G4-DMA	Generic disclosures on management approach	SR: Safety Performance (P.62); Social Performance (P.73)	
G4-PR5	Results of surveys measuring customer satisfaction	SR: Social Performance (P.74) WEB: Towngas Service Pledge	

Marketing Communications

G4-DMA	Generic disclosures on management approach	SR: Social Performance (P.73)	
G4-PR6	Sale of banned or disputed products	Towngas does not sell products that are banned in other markets or are subject of stakeholder questions or public debate.	

GRI G4	Description	Cross reference/Information (SR – Towngas Sustainability Report 2016; AR – Towngas Annual Report 2016; WEB – www.towngas.com)	External Assurance [#]
G4-PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes	In 2016, there were no recorded incidents of non-compliance.	


Customer Privacy

G4-DMA	Generic disclosures on management approach	SR: Social Performance (P.75) WEB: Privacy Policy Statement	
G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	In 2016, there were no recorded incidents of non-compliance.	



Compliance

G4-DMA	Generic disclosures on management approach	SR: Safety Performance (P.62)	
G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	In 2016, there were no recorded incidents of non-compliance.	


Emergency Preparedness

G4-DMA	Generic disclosures on management approach	SR: Safety Performance (P.61)	
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Asset Integrity and Process Safety

G4-DMA	Generic disclosures on management approach	SR: Safety Performance (P.54)	
G4-OG13	Number of process safety events, by business activity	SR: Safety Performance (P.54)	

Fossil Fuel Substitutes

G4-OG14	Volume of biofuels produced and purchased meeting sustainability criteria	SR: Environmental Performance (P.41, 42)	
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[#] These KPIs have been assured by HKQAA.

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

This Report was in compliance with the “comply or explain” provisions and reported on the “recommended disclosures” of ESG Guide as detailed in Appendix 27 of the Listing Rule.

Subject Areas, Aspects, General Disclosures and KPIs	Cross reference/Information (SR – Towngas Sustainability Report 2016; WEB – www.towngas.com)
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A. Environmental

Aspect 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.	SR: Environmental Performance (P.33, 36) WEB: Carbon Audit
KPI A1.1	The types of emissions and respective emissions data.	SR: Environmental Performance (P.43, 44); Key Statistics (P.86, 89)
KPI A1.2	Greenhouse gas emissions in total (in tonnes) and, where appropriate, intensity.	SR: Environmental Performance (P.43)
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity.	SR: Key Statistics (P.86, 89)
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity.	SR: Key Statistics (P.86, 89)
KPI A1.5	Description of measures to mitigate emissions and results achieved.	SR: Environmental Performance (P.40, 43)
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, reduction initiatives and results achieved.	SR: Environmental Performance (P.36, 46); Key Statistics (P.86) WEB: Waste Management

Subject Areas, Aspects, General Disclosures and KPIs	Cross reference/Information (SR – Towngas Sustainability Report 2016; WEB – www.towngas.com)
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Aspect A2: Use of Resources

General Disclosure	Policies on the efficient use of resources, including energy, water and other raw materials.	SR: Environmental Performance (P.33)
KPI A2.1	Direct and/or indirect energy consumption by type in total and intensity.	SR: Key Statistics (P.84, 89)
KPI A2.2	Water consumption in total and intensity.	SR: Environmental Performance (P.45); Key Statistics (P.84, 89)
KPI A2.3	Description of energy use efficiency initiatives and results achieved.	SR: Environmental Performance (P.41, 45); Key Statistics (P.85) We acquired energy labels for all models of domestic gas cooking appliances covered by the Voluntary Energy Efficiency Labelling scheme.
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency initiatives and results achieved.	SR: Environmental Performance (P.45) There was no issue in sourcing water that is fit for purpose in our Hong Kong operations.
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	SR: Key Statistics (P.84)

Aspect A3: The Environment and Natural Resources

General Disclosure	Policies on minimising the issuer's significant impact on the environment and natural resources.	SR: Environmental Performance (P.37, 42)
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	SR: Environmental Performance (P.37, 44) WEB: Environmental Protection

B. Social

Employment and Labour Practices

Aspect B1: Employment

General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	SR: Social Performance (P.68) WEB: Corporate Governance
KPI B1.1	Total workforce by gender, employment type, age group and geographical region.	SR: Social Performance (P.69); Key Statistics (P.82, 90)
KPI B1.2	Employee turnover rate by gender, age group and geographical region.	SR: Key Statistics (P.82, 90)

Aspect B2: Health and Safety

General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	SR: Safety Performance (P.53) WEB: Health, Safety and Environmental Management
KPI B2.1	Number and rate of work-related fatalities.	SR: Key Statistics (P.81, 89)
KPI B2.2	Lost days due to work injury.	SR: Key Statistics (P.81, 89)
KPI B2.3	Description of occupational health and safety measures adopted, how they are implemented and monitored.	SR: Safety Performance (P.57) WEB: Health, Safety and Environmental Management

Subject Areas, Aspects, General Disclosures and KPIs	Cross reference/Information (SR – Towngas Sustainability Report 2016; WEB – www.towngas.com)
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Aspect B3: Development and Training

General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	SR: Safety Performance (P.57); Social Performance (P.70)
KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	SR: Social Performance (P.70); Key Statistics (P.83)
KPI B3.2	The average training hours completed per employee by gender and employee category.	SR: Social Performance (P.70); Key Statistics (P.83)

Aspect 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.	SR: Our Company (P.22); Social Performance (P.68)
KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	We fully complied with local laws and regulations to avoid child and forced labour in locations where we operate. Our managers are entrusted to observe and practise in full compliance with matters related to these two areas. Ongoing monitoring and regular auditing are also in place.
KPI B4.2	Description of steps taken to eliminate such practices when discovered.	There has not been any single record of malpractice on child and forced labour across our operating locations due to strict compliance in these two areas.

Subject Areas, Aspects, General Disclosures and KPIs	Cross reference/Information (SR – Towngas Sustainability Report 2016; WEB – www.towngas.com)
Operating Practices	

Aspect B5: Supply Chain Management

General Disclosure	Policies on managing environmental and social risks of the supply chain.	SR: Sustainability at Towngas (P.30) WEB: CSR Code of Practice for Suppliers
KPI B5.1	Number of suppliers by geographical region.	SR: Sustainability at Towngas (P.31)
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, how they are implemented and monitored.	SR: Sustainability at Towngas (P.30)

Aspect 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.	SR: Safety Performance (P.54, 62); Social Performance (P.73) WEB: Privacy Policy Statement
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	No relevant case was recorded.
KPI B6.2	Number of products and service related complaints received and how they are dealt with.	SR: Social Performance (P.74); Key Statistics (P.88)
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	SR: Our Company (P.21) WEB: Corporate Governance
KPI B6.4	Description of quality assurance process and recall procedures.	SR: Safety Performance (P.54) WEB: Customer Service
KPI B6.5	Description of consumer data protection and privacy policies, how they are implemented and monitored.	SR: Social Performance (P.75) WEB: Privacy Policy Statement

Subject Areas, Aspects, General Disclosures and KPIs	Cross reference/Information (SR – Towngas Sustainability Report 2016; WEB – www.towngas.com)
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Aspect 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.	SR: Our Company (P.22)
KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	In 2016, there were no concluded legal cases regarding corrupt practices.
KPI B7.2	Description of preventive measures and whistle-blowing procedures, how they are implemented and monitored.	SR: Our Company (P.22) WEB: Corporate Governance

Community

Aspect B8: Community Investment

General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	SR: Social Performance (P.76) WEB: Community Care
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	SR: Social Performance (P.76)
KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	SR: Social Performance (P.76); Key Statistics (P.88, 91)

APPENDICES

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 PE joint testing and gas meter calibration

Mainland Utilities Business

Hong Kong & China Gas Investment Limited	<ul style="list-style-type: none"> • Management of Towngas investments in mainland China
Hong Kong & 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"> • LPG, LNG and 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
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Diversified Businesses

GH-Fusion Corporation Limited (a joint venture with British Fusion Group)	<ul style="list-style-type: none"> • Manufacture and supply of polyethylene 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 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"> • Specialists 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 • Provides cloud computing solutions and other information technology products as well as consulting services to companies

Appendix II: Memberships in Associations

Below is a list of examples of the memberships held by Towngas.

Hong Kong and mainland China

- Association of Engineering Professionals in Society Ltd.
- British Chamber of Commerce in Hong Kong
- Business Environment Council Ltd.
- China Gas Association (Beijing)
- China Association for Quality
- 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 Institute of Human Resources Management
- Hong Kong Institute of Marketing
- Hong Kong Management Association
- Hong Kong Productivity Council
- Hong Kong Quality Management
- 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 Hong Kong Advertisers' Association

International

- 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 followed by Towngas

Charters and Initiatives	Issuing Bodies
Corporate Governance	
Companies Ordinance, Chapter 622 of the laws of Hong Kong	The Government of the Hong Kong Special Administrative Region
Securities and Futures Ordinance, Chapter 571 of the laws of Hong Kong	
Corporate Governance Code, Appendix 14 to the Listing Rules	The Stock Exchange of Hong Kong Limited
Environment	
Carbon Footprint Repository for Listed Company in Hong Kong	Environment Bureau
Carbon Reduction Charter: Carbon Audit • Green Partners	
Energy Saving Charter	Environment Bureau and Electrical and Mechanical Services Department
Hong Kong Green Organisation	Environmental Campaign Committee
IAQwi\$e Certificate	
Wastewi\$e Certificate	
“Let’s save 10L Water” Campaign	Water Supplies Department
CarbonCare® ESG label	Carbon Care Asia
Hong Kong Green Purchasing Charter	Green Council
Hong Kong Zero Carbon Partnership	The University of Hong Kong
Innovation Partner of CarbonCare Open Innovation Lab	CarbonCare InnoLab
Green Office Label (GOALS)	World Green Organisation
“Order Less Waste Less, More Blessings” Light Banquets Campaign	Friends of the Earth (HK)
COOL Corporate Membership Scheme	
Green Bottle Charter	The Green Earth
Safety	
Safety Charter	Occupational Safety and Health Council
Charter on Preferential Appointment of OSH Star Enterprise	
Joyful@Healthy Workplace Charter	
Social Responsibility	
Barrier-free Company	The Hong Kong Council of Social Service
Family-Friendly Employers Award Scheme	Family Council
Talent-Wise Employment Charter and Inclusive Organisations Recognition Scheme	Labour and Welfare Bureau

VERIFICATION STATEMENT

Scope and Objective

Hong Kong Quality Assurance Agency (HKQAA) has been commissioned by The Hong Kong and China Gas Company Limited (Towngas) to conduct an independent verification of its Sustainability Report 2016 (the Report). The Report outlines the economic, safety, environmental and social performance of Towngas for the period 1st January 2016 to 31st December 2016 for its operations within and outside Hong Kong.

The aim of this verification is to provide reasonable assurance of the information stated in the Report in terms of the principles for defining report contents and report quality. The Report is prepared in accordance with the Core Option of the Global Reporting Initiative (GRI) G4 Sustainability Reporting Guidelines and the Oil and Gas Sector Disclosures as well as the Environmental, Social and Governance Reporting Guide (ESG Guide) of The Stock Exchange of Hong Kong Limited.



Methodology

The verification methodology was reference to practices such as:

- International Standard on Assurance Engagement 3000 (Revised) – “Assurance Engagement Other Than Audits or Reviews of Historical Financial Information” issued by the International Auditing and Assurance Standards Board;
- GRI G4 Sustainability Reporting Guidelines and the Oil and Gas Sector Disclosures; and
- ESG Guide

The verification procedure included reviewing relevant documentation, interviewing responsible personnel with accountability for preparing the Report and verifying the selected representative sample of data and information consolidated in the Report. Raw data and supporting evidence of the selected samples were thoroughly examined.





Independence

HKQAA was not involved in collecting and calculating data, or in the development of the Report. HKQAA's activities are independent from Towngas. There is no relationship between Towngas and HKQAA beyond the contractual agreement for providing the verification service.



Conclusion

HKQAA confirms that the Report has been prepared in accordance with the Core Option of the GRI G4 Sustainability Reporting Guidelines, the Oil and Gas Sector Disclosures and the ESG Guide.

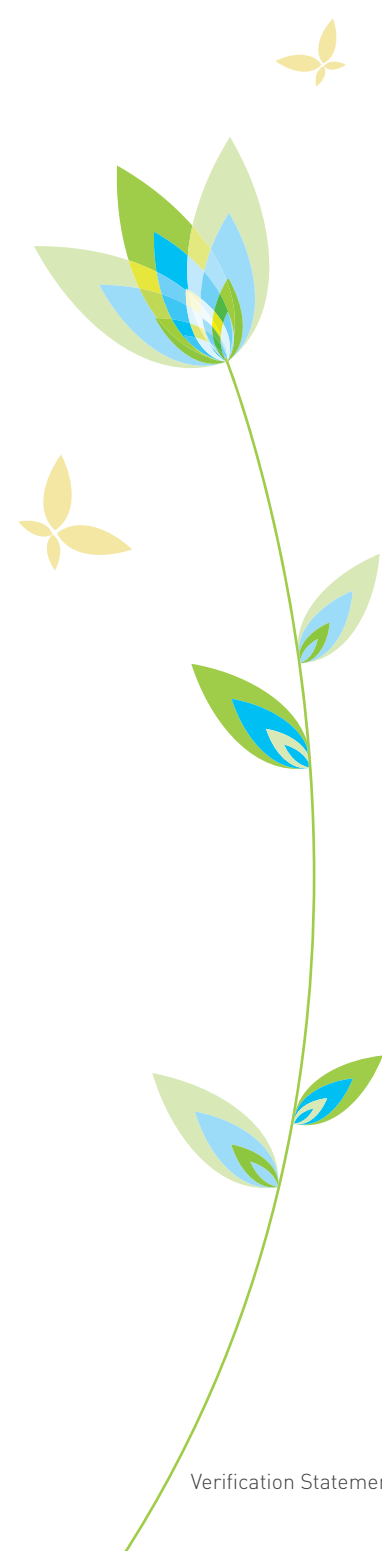
The information presented in the Report fulfills the principles for defining report contents with respect to stakeholder inclusiveness, sustainability context, materiality and completeness as well as the principles of report quality in terms of accuracy, timeliness, comparability, clarity, reliability and balance. The Report provides a truthful representation of Towngas sustainability performance in 2016 covering its operations within and outside Hong Kong. Towngas maintains a systematic materiality assessment and stakeholder engagement process to identify the most relevant and significant sustainability aspects for compiling the Report.

In conclusion, Towngas actively embraces its commitments to communicate transparently with stakeholders. Through the disclosure of this Report, Towngas responds timely to the needs and expectation of its stakeholders.

Signed on behalf of Hong Kong Quality Assurance Agency



Connie Sham
Head of Audit
March 2017





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 the [online questionnaire](#) or contact us:

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