

# 2014

## Sustainability Report



煤氣  
Towngas

Greening up your life

# 1

# MANAGING DIRECTOR'S MESSAGE

With the looming threats posed by climate change and pollution forcing a major reassessment of priorities across the energy economy, Tawngas has shown itself to be a pioneer in developing new energy projects with reduced emissions. Our commitment to environmental and social sustainability fits hand in glove with our approach to business development. Rooted in our corporate vision and mission, our focus is on providing reliable energy supplies via an environmentally conscious approach that fulfils our commitment to stakeholders on long-term sustainable development. As we seek to provide environmentally-friendly energy solutions, we remain dedicated to caring for the environment, our employees and our community.



2014 was an exciting year for the company, one full of challenges and opportunities. Against a market backdrop of flux and uncertainty, we were able to sustain business growth while also improving our sustainability performance. During the year, one of our major achievements in promoting sustainability was hosting the Gas Information Exchange in the Western Pacific Area (GASEX) Conference and Exhibition, which aims to contribute to the progress and healthy development of the gas industry and the promotion of clean and efficient energy.

## SUSTAINABLE GROWTH

Enhancing the efficiency of our gas operations is also an indispensable part of our sustainability efforts. To enhance the performance and efficiency of our gas production, pipelines, plants and other fixed assets, we have continued to make considerable capital investment in upgrading our production facilities.

In addition to operational efficiency, innovation and implementation also play a significant role in the sustainable development of our business. The theme "Growth = Innovation X Implementation" was introduced to encourage employees to exert their creativity to build sustainable business growth by putting new ideas into practice. In fact, many employees have, in recent years, fully demonstrated their initiative and ability to create and implement a variety of solutions – including tools and equipment such as our Riser Inspection Quadcopter and our Laparobot, which is used for cleaning old metallic pipes. These tools not only enhance work efficiency and safety levels, but also promote development and innovation in the gas industry.

**G**rowth =

**i**nnovation X

**i**mplementation



## CLEAN PRODUCTION

Since the early 1970s, Towngas has gradually replaced coal and heavy oil with naphtha, and in turn naphtha with natural gas, for gas production. As a result, airborne emissions relating to our gas production, such as those of sulphur and carbon dioxide, have been greatly reduced, helping us to combat air pollution and climate change. In 2014, we recorded carbon dioxide emissions of 0.60kg per unit of town gas, our lowest level since the introduction of natural gas as a feedstock in 2005.

The modification of our Ma Tau Kok plant to use natural gas for town gas production made good progress. Furthermore, an agreement was reached to build a new facility in the South East New Territories that expands our collection of landfill gas (containing methane and carbon dioxide) generated from municipal waste for use in our gas supply system. This new expansion will help conserve more energy resources and is expected to reduce carbon emissions by 56,000 tonnes each year. Our goal is to obtain 5 per cent of our annual energy input from this renewable energy source.

## NEW ENERGY

Towngas strives to develop and exploit opportunities relating to emerging energy technologies, which constitute an important route to strengthening both our business development and environmental performance. As of the end of 2014, we have initiated 39 new energy projects in total.

Through our wholly-owned subsidiaries, we have been looking for ways to convert low-grade resources and waste into high-value energy products. In recent years, our focus on researching and implementing new technologies for producing liquefied natural gas (LNG) through upgrading coalbed methane, coke oven gas, agricultural and forestry waste has shown promising results. For instance, our coalbed methane liquefaction facility in Shanxi province produced 250 million cubic metres of LNG in 2014.

With the urbanisation of mainland China continuing at a rapid pace, our city utility services offer enormous environmental benefits. Regarded as a major clean energy resource in the mainland, LNG utilisation has been promoted through the central government's national clean energy policy in order to reduce air pollution and mitigate the formation of haze. Towngas has taken steps to secure supplies from overseas to prepare for the anticipated increased demand for natural gas on the mainland.



## DRIVING DEVELOPMENT

The significant capital investment we have made on upgrades to our facilities supports our mid- to long-term development in Hong Kong and mainland China. In 2014, we recorded an encouraging increase of over 10 per cent in both gas sales and customer numbers in mainland China. By the end of 2014, our projects in mainland China rose to 202, across 24 provinces, autonomous regions and municipalities. One of these projects involved the commencement of construction of a gas storage facility in underground salt caverns in Jiangsu province, which will help supplement and regulate gas supplies in eastern China.

We are well aware of the impact of climate change on our business development. To better address the potential implications, Towngas engaged an external party in 2014 to kick off a climate change risk assessment, with the aim of reviewing our current emergency plan and formulating appropriate adaptation measures, allowing us to secure our operations and future gas supply. As part of our climate change adaptation strategy, we have installed water dams and auto-start submersible pumps at important buildings to minimise potential disturbance to our operations during extreme weather.

## SOCIAL CITIZENSHIP

Putting safety first, Towngas has established comprehensive guidelines and measures to ensure its safety performance meets the highest standards in the industry. We were honoured to have our efforts and achievements recognised as we received a total of 10 awards in the 13th Hong Kong Occupational Safety & Health Awards. Also in 2014, which was themed the "Year of Safety Re-inspection" across Towngas China, we conducted comprehensive production safety re-inspections at our gas facilities, installations and networks around mainland China.

We believe the professional, proficient and caring people who work for us are among our most valuable assets. Any success Towngas achieves is owed to the dedication and expertise of Towngas employees, and therefore one of our sustainability priorities is to provide employees with opportunities to grow with Towngas. To name a few examples, our Graduate Trainee Programme, Executive Development Programme and Towngas Engineering Academy all continued to serve to nurture talents in 2014. Moreover, in 2014 our Fun Living Series was launched with the aim of promoting work-life balance among employees.

We also regard caring for customers and the community as indispensable to our overall sustainability strategy. Over the years, a variety of in-house programmes have been developed to drive continuous enhancement of our service delivery and customer experience. Our community and volunteer programmes include a number of flagship social initiatives such as our scheme to install electrical toilet washlets in elderly hostels, providing educational assistance to children in rural areas of mainland China, and our food

donation and sharing programmes. In 2014, we delivered 250,000 rice dumplings and 260,000 mooncakes to the less fortunate in Hong Kong alone. Towngas maintains close relationships with local community representatives and is constantly seeking new opportunities to make new contributions through various outreach channels. In 2014, more than 990 employees volunteered approximately 79,500 hours.

With our aspiration to be a pioneer in the field of sustainability innovation, we will continue to diversify our business, particularly in mainland China, facing down the challenges posed by a changing energy economy with sustainable solutions that drive business growth. We will also continue to review and increase the scope of disclosure relating to our sustainability programmes and initiatives wherever appropriate.

On behalf of the management team, I would like to express our heartfelt thanks to our staff and other stakeholders for their valuable contributions. I look forward to another positive year for Towngas in pursuit of sustainable development.

**Alfred WK Chan**  
Managing Director



# 2 ABOUT THIS REPORT

At Towngas, we believe our sustainability report is more than a summary of our performance over the year. Such reporting has indeed been a part of our sustainability strategy for more than a decade. The process of preparing each year's report, and reviewing our sustainability performance, provides us with insights about emerging risks and opportunities, thus enabling us to better plan our future sustainability journey. This report also serves as an effective communication platform, allowing various stakeholders to gain a thorough understanding of and provide feedback on our business operations and their associated social and environmental impacts.

This is Towngas' eleventh annual sustainability report and covers our sustainability performance from 1 January 2014 to 31 December 2014, unless otherwise specified. Chapters 3 and 4 provide brief information about our businesses and our financial performance, with statistics that are presented in absolute figures, having been normalised to present a comparable picture where appropriate and applicable. For further details of our financial data and operations, please refer to the [Towngas Annual Report 2014](#) published on the Towngas website.

A third-party verification was also conducted to ensure the completeness, accuracy and reliability of the Report, and its adherence to the selected reporting guidelines. This third-party verification, together with the verifier's opinion and views, can be found in the verification statement of this report.

This report is prepared in accordance with the Core Option of the Global Reporting Initiative (GRI) G4 Guidelines, the associated Oil and Gas Sector Disclosures, and the Hong Kong Stock Exchange Environmental, Social and Governance Reporting Guide (the ESG Guide).

**Click to view**  
**G4**  
**Guidelines**

## Scope and Boundaries

As in previous years, the report was prepared with the intention of primarily covering all material aspects arising from our Hong Kong operations. This is mainly due to the diverse nature of our mainland China businesses, making the determination of organisation boundaries beyond Hong Kong a difficult exercise. Despite this challenge, we are making attempts to increase our level of disclosures regarding our mainland businesses and are taking a gradual approach to expanding the scope of our reporting in this respect. In the report, readers will find highlights of the issues relating to and performance of our mainland operations disclosed mainly in the form of case studies. Interested readers may also refer to the [2014 CSR Report of TOWNGAS CHINA](#) and [HUA YAN WATER](#) for more information.

## Materiality Assessment

This year, in order to align with the reporting principles stipulated in the GRI G4 Guidelines, we have revisited our approach to defining report content and increased the report's emphasis on stakeholder engagement and materiality.

We have reviewed and updated our list of material topics in an attempt to focus on reporting the most important aspects. An independent consultant was engaged to specifically design and carry out a series of stakeholder engagement exercises, followed by a materiality assessment. During the process, incumbent material aspects were reviewed to assess their materiality and importance to TOWNGAS and its stakeholders. At the same time, aspects which were previously considered as being of lower priority were reassessed to gauge whether they had gained substantial importance over the reporting period.

## Stakeholder Engagement

To order for us to understand their feedback and concerns regarding TOWNGAS' sustainability performance, stakeholders were invited to express their views through focus group meetings, face-to-face interviews, phone interviews and questionnaires. They were asked to evaluate the relative importance of various aspects relating to TOWNGAS' sustainability performance.

Seven stakeholder groups were engaged including management staff, frontline staff, non-governmental organisations, investors, contractors, business partners and residential customers

## Benchmarking Exercise

Apart from inviting stakeholders to evaluate the materiality of sustainability issues, our peer companies' sustainability disclosure practices were used as another assessment criterion for determining materiality. A list of gas and power utilities based both locally and overseas was identified for benchmarking purposes.

After the results from the stakeholder engagement and peer disclosure practices were compiled, material aspects were then identified for final review and endorsement by TOWNGAS' senior management.

# Our Materiality Assessment Process



## Acknowledgement

This report was prepared with a high level of commitment and support from various departments, as well as endorsed by senior management. We would like to extend our thanks to everyone who contributed to this report and to everyone at Towngas who shared the objective of enhancing our corporate sustainability performance.

## Feedback

The full version of this report is published online, while printed copies of the summary version are also available. Readers are welcome to provide their feedback on our sustainability performance or reporting approach by completing the [Feedback Questionnaire](#) or by contacting us directly at [ccd@towngas.com](mailto:ccd@towngas.com).

## Material Aspects and the Corresponding Boundaries

Aspects	Boundaries	
	Internal	External
<b>Economic Performance</b>		
Economic Performance	●	●
Market Presence		●
<b>Environmental Performance</b>		
Materials	●	
Energy	●	
Water	●	
Emissions	●	●
Effluent and Waste	●	●
Products and Services	●	●
Compliance (Environmental Performance)	●	●
<b>Labour Practices and Decent Work</b>		
Employment	●	
Occupational Health and Safety	●	
Training and Education	●	
<b>Society</b>		
Local Communities	●	●
Emergency Preparedness	●	●
Asset Integrity and Process Safety	●	●
<b>Product Responsibility</b>		
Customer Health and Safety	●	●
Product and Service Labelling		●
Marketing Communications	●	●
Customer Privacy		●
Compliance (Product Responsibility)		●
Fossil Fuel Substitutes	●	

# 3 2014 HIGHLIGHTS

- Listed as a constituent stock on the Hang Seng Corporate Sustainability Index Series.
- Won the Gold Award in the Office of the Government Chief Information Officer's the Best Business Solutions (Application) Award.
- Hosted a major international gas industry event, the GASEX Exhibition and Conference.
- The Group's profit<sup>1</sup> after taxation for the year increased by about HK\$640 million to HK\$7 billion, an increase of 10 per cent compared to 2013.

## Hong Kong Operations

 **23%** since 2005



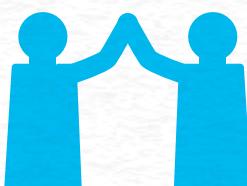
**Carbon intensity**  
(Town gas production)

**17,290,352** cubic metres  
Conserved more than  
**10,300** tonnes of naphtha



**Landfill gas utilised as heating fuel in gas production**

**79,551**  
 **10%** compared with 2013



**Annual voluntary service hours**  
(including employees and customers)

Rolled out for the inspection and replacements of gas risers to improve the safety and effectiveness of our services



**Total Riser Solution**

## Mainland Operations

**18.98** million



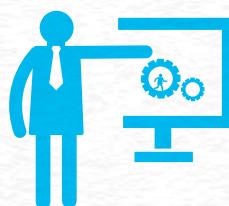
**Customer accounts**

**20,202** tonnes  
equivalent to the amount of CO<sub>2</sub> absorbed by  
**878,000** trees<sup>2</sup> in one year



**Annual carbon reduction achieved by the Carbon Reduction Project Competition**

**121,440**  
 **20%** compared with 2013



**Technical training man-hours**

The Institution of Gas Engineers and Managers (IGEM) and The Energy and Utilities Alliance (EUA)



**Company of the Year Award**

<sup>1</sup> Exclusive of the Group's share of a revaluation surplus from investment properties and unrealised exchange differences on the renminbi

<sup>2</sup> Based on the assumption that each tree absorbs 23 kg CO<sub>2</sub> / year

## Financial Indicators 2014

### Revenue

**HK\$31,615** million

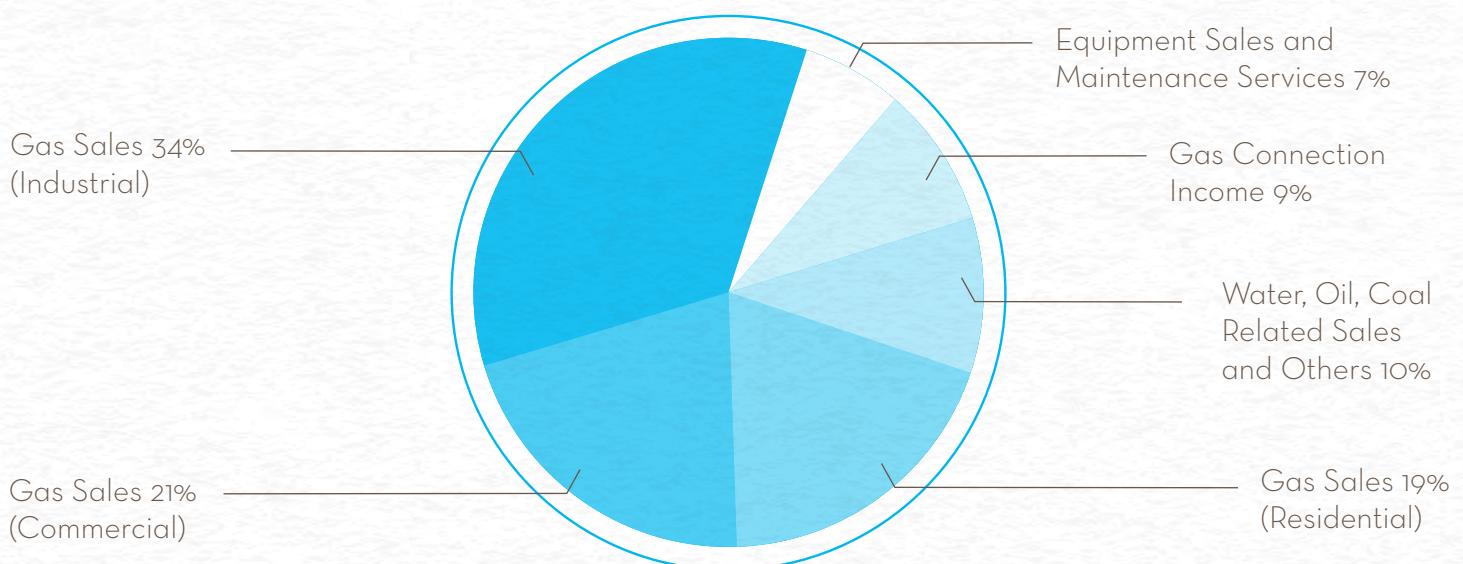
### Capital Expenditures

**HK\$6,365** million

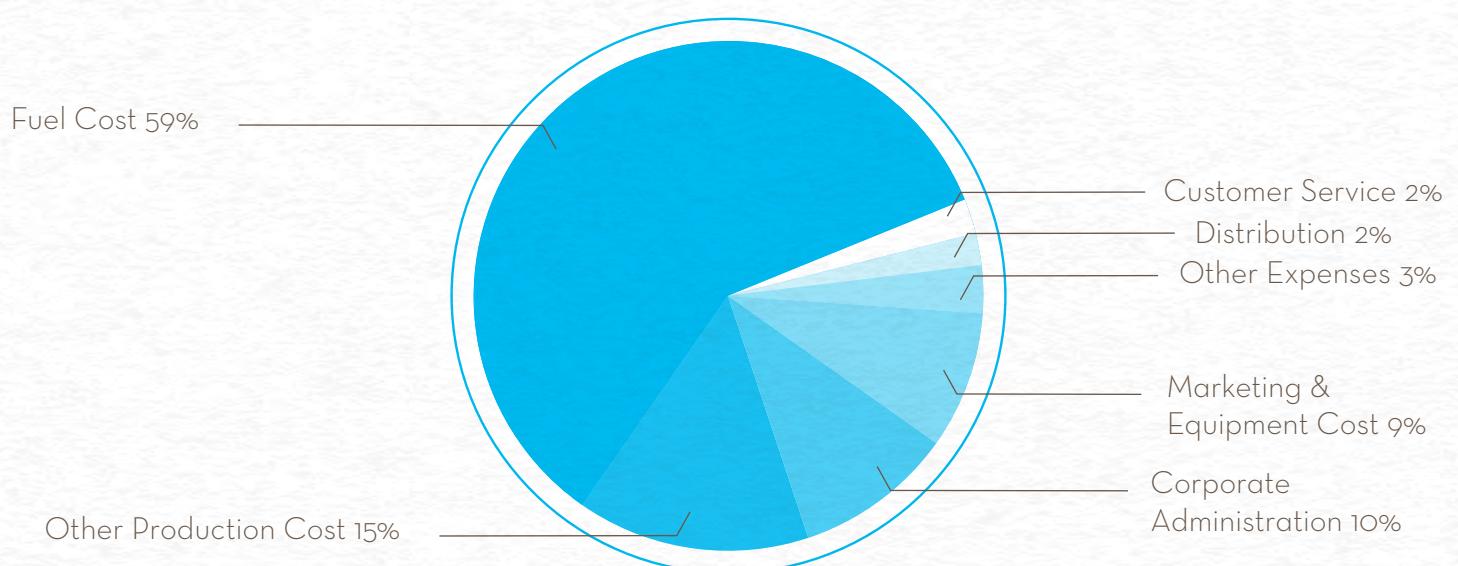
### Manpower Costs

**HK\$2,706** million

## Analysis of Revenue



## Analysis of Expenditures



# 4

## OUR COMPANY

The Hong Kong and China Gas Company Limited (Towngas) is a limited liability company incorporated and domiciled in Hong Kong and listed on The Stock Exchange of Hong Kong Limited. Founded in 1862, Towngas was the first public utility in Hong Kong. Keeping pace with the major social and economic changes over the past century and a half, we have evolved and expanded from a gas company supplying fuel for street lamps into a major supplier of energy, providing town gas to the residential, industrial and commercial sectors, not only in Hong Kong but also mainland China.

In Hong Kong, our core business consists of gas production and distribution, the marketing and sale of gas appliances, and comprehensive after-sales services. With a pipeline network stretching over 3,500 km, we currently supply town gas to over 1.8 million customers in the territory.

Headquartered in Hong Kong, we have a total of 46,980 employees based in Hong Kong and mainland China, and a portfolio that includes a total of 202 projects running in 24 mainland provinces, autonomous regions and municipalities, as well as in Thailand as at the end of 2014. For an overall summary of our roles and services, please refer to the table presented on p.14.

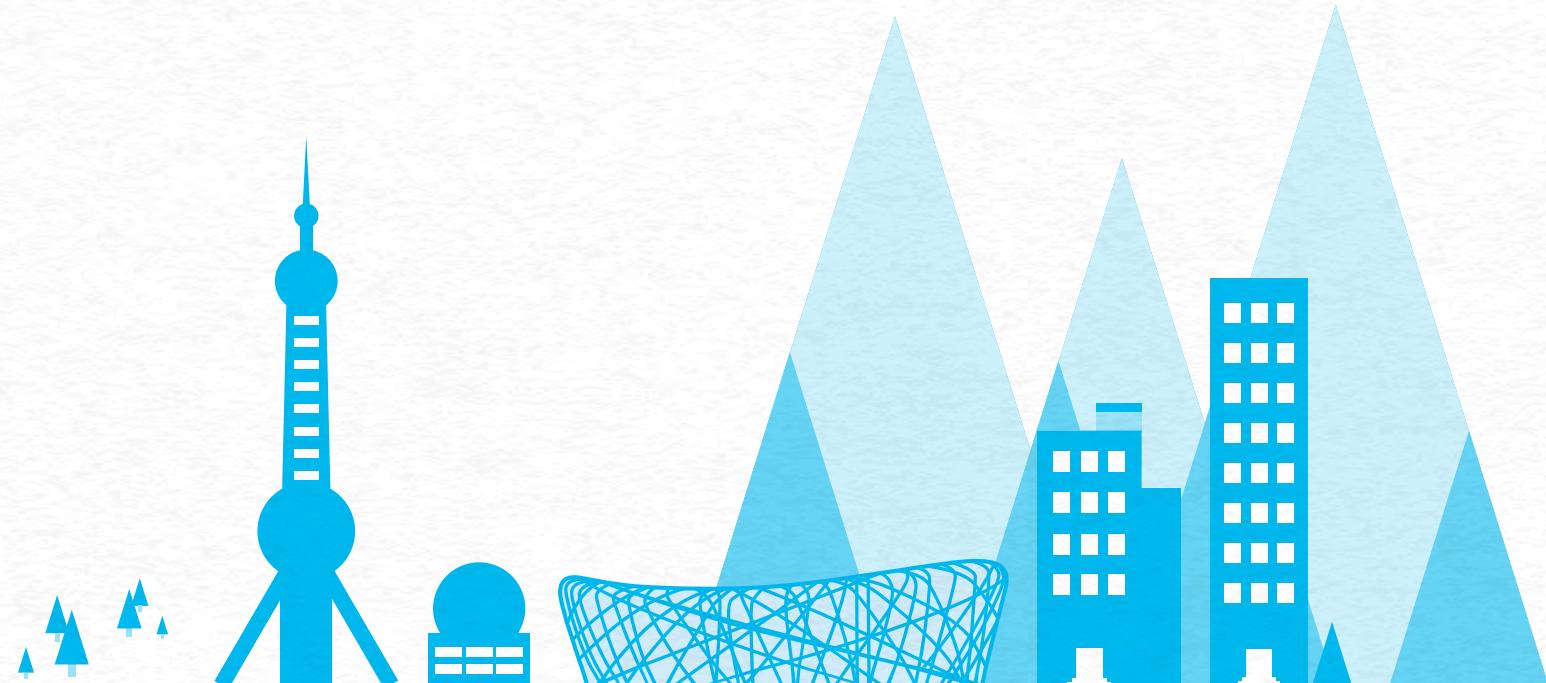
Building on the solid experience and knowledge we have gained over the decades, we consistently embrace innovative technology as a way of driving business excellence and sustainability. We have proactively diversified our business and transformed it to include eco-friendly energy projects, water management projects, civil and building services engineering, and telecommunications infrastructure. This diversification is a testament to our commitment to building a sustainable and profitable business and an affirmation that our business growth will not be achieved at the expense of the social and environmental well-being of our future generations.



## Major Corporate Awards and Recognitions in 2014

We received a number of awards and honours in 2014 recognising the efforts we made in achieving different sustainability objectives. A selection of these awards is highlighted below.

Awards / Recognitions	Issuing Bodies
Company of the Year Award (Towngas China)	Institution of Gas Engineers & Managers (IGEM) of the United Kingdom and the Energy and Utilities Alliance (EUA)
Global Chinese Business 1000	Yazhou Zhoukan
Constituent Company of the Hang Seng Corporate Sustainability Index Series	Hang Seng Indexes Company Limited
Hong Kong ICT Awards: Best Business Solutions (Application) Award – Gold Award	Office of the Government Chief Information Officer
2014 Outstanding Listed Company	HK Institute of Financial Analysts and Professional Commentators
13 <sup>th</sup> Hong Kong Occupational Safety and Health Award – Safety Culture Award (Gold)	Hong Kong Occupational Safety and Health Council
Environmental, Health and Safety Award (Corporate) – Platinum	Green Council



# Our Roles and Services

## Hong Kong Gas Business



### The Hong Kong and China Gas Company Limited

- Gas production and distribution
- Marketing and sale of gas and gas appliances
- Comprehensive after-sales services

### Towngas Engineering Academy

- Technical and professional training

### Quality Testing Services Limited

- Appliance and Polyethylene (PE) Joint testing and gas meter calibration

## Mainland Utility Business



### Hong Kong & China Gas Investment Limited (HCIL)

- Management of Towngas investments in mainland China

### Hong Kong & China Water Limited (Hua Yan Water)

- Management of water business investments in mainland China

### Towngas China Company Limited

- Focus on piped city gas projects in mainland China

### Towngas Engineering Academy

- Technical and professional training

## New Energy Business



### ECO Environmental Investments Limited (ECO)

- Liquefied Petroleum Gas (LPG), LNG and Compressed Natural Gas (CNG) filling stations in Hong Kong and mainland China
- Construction and operation of ECO Aviation Fuel Facility (EAFF) in Hong Kong
- Exploration, research, development and utilisation of new and environmentally-friendly energy sources, such as coalbed methane, coal-based chemical projects, coal tar oil and biomass activities
- Infrastructure and logistics projects in mainland China
- An oil exploration and production project in Thailand

## Diversified Businesses



### **GH-Fusion Corporation Limited (a joint venture with British Fusion Group)**

- Manufacture and supply of polyethylene products and equipment for gas and water piping systems

### **G-Tech Piping System (Zhongshan) Company Limited (G-Tech)**

- Manufacture of quality polyethylene piping

### **Towngas Telecommunications Company Limited (Towngas Telecom)**

- Provision of telecommunications infrastructure and quality network solutions in Hong Kong and mainland China

### **U-Tech Engineering Company Limited (U-Tech)**

- Specialists in a variety of projects, including building services, LPG projects, civil works, waterworks and other pipeline infrastructure projects

### **P-Tech Engineering Company Limited (P-Tech)**

- Plant design and construction
- Planning and operation of landfill gas utilisation projects in Hong Kong

### **M-Tech Metering Solutions Company Limited (M-Tech)**

- Development and supply of smart metering solutions for the gas industry

### **S-Tech Technology Holding Limited (S-Tech)**

- Product development, solution implementation and system integration
- Provision of cloud computing solutions and other IT products, and consulting services to companies

## The Hong Kong Gas Business

Our core business in Hong Kong involves the production and distribution of gas, its marketing and sale, the sale of gas appliances, and the provision of comprehensive after-sales services. In 2014, the Group's gas business in Hong Kong achieved a steady rate of growth, with the total volume of gas sales increasing by approximately one per cent to 28,835 million MJ compared to the previous year. We supply town gas to over 1.8 million customers in Hong Kong through our vast production capacity of 12.26 million standard cubic metres of town gas per day. Our customers enjoy a supply continuity rate of over 99.99 per cent. This exceptionally high service level is supported by two production plants at Tai Po and Ma Tau Kok, which are connected to the territory via a pipeline network over 3,500 km in length. In 2014, both our piped gas network and infrastructure were upgraded so as to cater to new and existing customers and further enhance supply reliability. These upgrades are expected to yield both economic and environmental benefits.

**Click to view our coverage in Hong Kong**

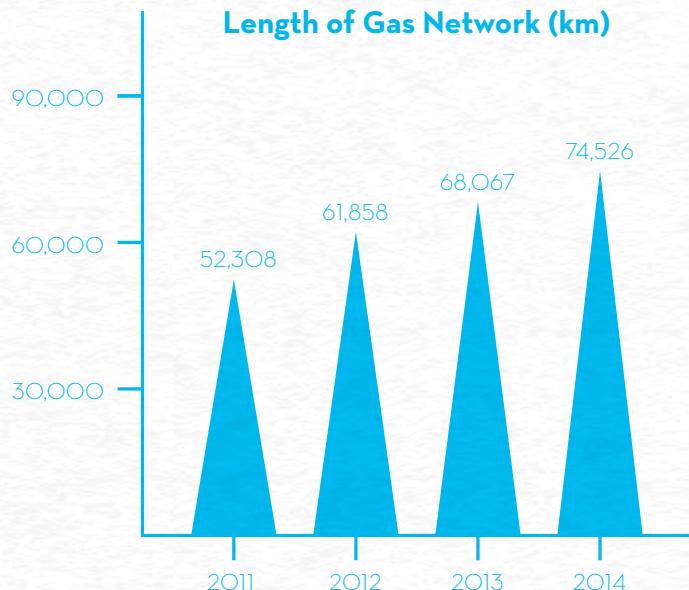
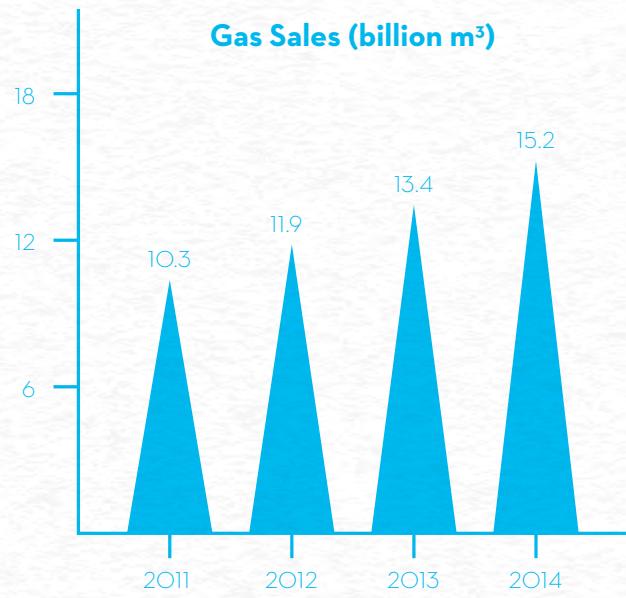
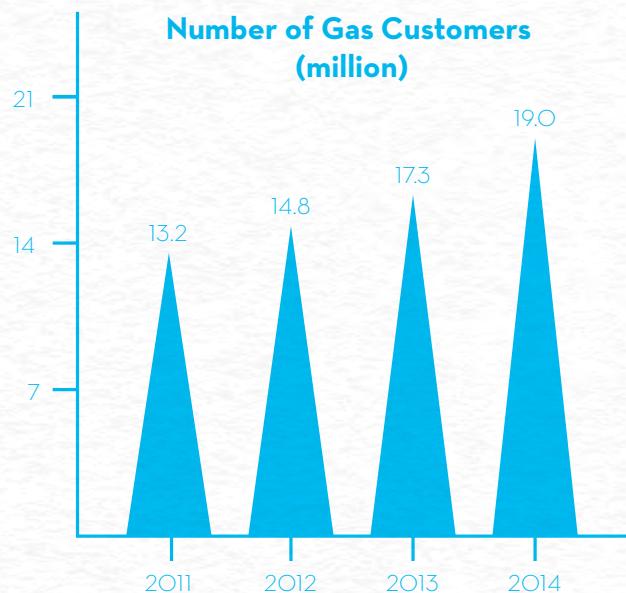
We also provide a diversified range of quality gas appliances, including hotplates, built-in hobs, water heaters, cookers, built-in ovens and kitchen cabinets, etc., under the brands of TGC, SIMPA, Scholtès and Mia Cucina. We have made every effort to cater to the market demands for better gas appliances. By conducting regular market research and using advanced technologies, we offer innovative appliances to meet our customers' evolving needs and modern lifestyles. In 2014, TGC appliances and Mia Cucina received the "Best Kitchen Appliance" and "Best Kitchen Design" awards respectively at the "GoHome Awards 2014", recognising our popularity with the public and the industry.

In addition to offering superior products and good service, we pledge to provide prompt installation and maintenance services to our customers – within one working day. We have also established various communications channels, including a 24-hour customer service hotline, regular customer surveys, customer focus team visits, a corporate website and our innovative smartphone apps. These channels enable us to collect customer feedback in a timely and comprehensive manner. For more information on our customer services, please refer to Chapter 8.

Operational Statistics	2014	2013	2012
<b>Number of customers as at 31 December</b>	1,819,935	1,798,731	1,776,360
<b>Town gas sales, million MJ</b>	28,835	28,556	28,360
<b>Installed capacity (thousands of cubic metres per hour)</b>	511	511	511
<b>Maximum daily demand (thousands of cubic metres)</b>	6,571	6,283	6,403
<b>Length of gas network, km</b>	3,545	3,520	3,506

## The Mainland Utility Businesses

Towngas' mainland utility business portfolio encompasses piped city-gas projects, upstream, midstream and downstream water sectors, environmentally-friendly energy applications, as well as telecommunications. The Group is now one of the largest city-gas enterprises in mainland China with operations across 24 provinces, autonomous regions and municipalities. In 2014, the number of customers we served increased to more than 18 million. With a supply network extending more than 74,000 km, annual gas sales now exceed 15 billion cubic metres.



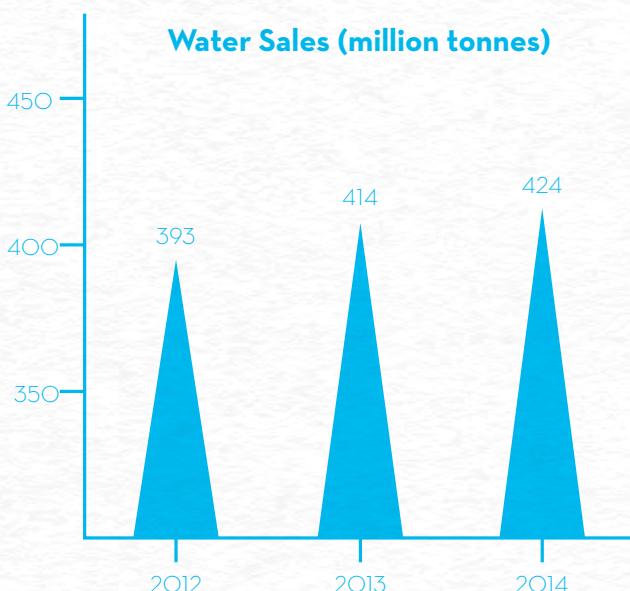
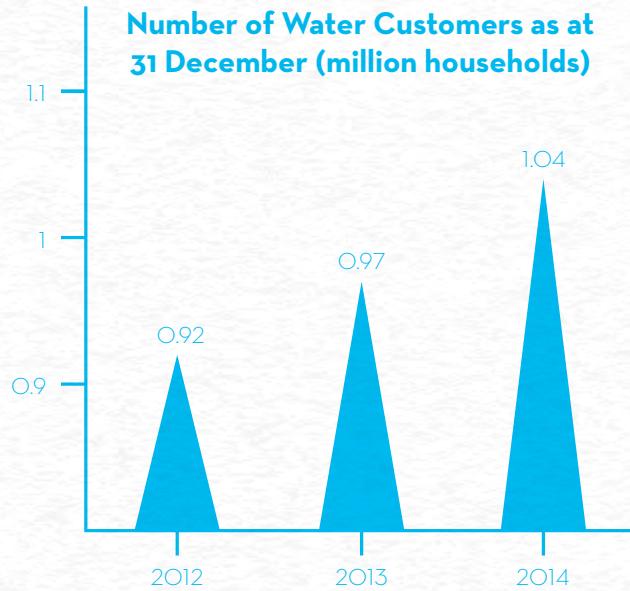


Leveraging on our strengths in utility management, the Group is involved in developing water infrastructure projects in several mainland cities. Our subsidiary, Hong Kong & China Water Limited (Hua Yan Water), manages our mainland water business investments to serve around 1.04 million customers. Following the rapid expansion of the Chinese economy, the demand for clean water has grown steadily. Currently, six water projects providing water supply and wastewater treatment services are in operation. We strictly monitor and analyse the quality of all raw water, processed water and piped water to ensure that customers receive clean and hygienic tap water. Both our water supply and wastewater operations enjoyed a successful year, as annual sales of city water increased by 2.4 per cent to 424 million tonnes in 2014.

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**Click to view our geographic reach in mainland China**

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## New Energy Businesses

Since 2000, ECO Environmental Investments Limited (ECO), a wholly-owned subsidiary of Towngas, has been primarily engaged in technological innovation and developing new energy businesses. Striving to become a “green leader” for the industry and bolstered by the Group’s century-old expertise in gas technology and world-class management, ECO has focused on exploring clean and efficient energy opportunities and driving them forward to become viable businesses. In Hong Kong, ECO’s businesses include liquefied petroleum gas (LPG) vehicular filling stations, landfill gas utilisation projects and an aviation fuel storage facility. ECO is now involved in 24 projects in Hong Kong, mainland China and overseas.

In response to the rapid growth in global demand for energy and the challenges caused by climate change, ECO’s business focus in China is on the development of new energy projects which minimise emissions and reduce pollution. The Group is involved in scientifically innovative projects which aim to turn low-grade resources into high-value energy, including the liquefaction of coalbed methane, the development of coal chemicals, biomass conversion, and the development and application of non-conventional energy sources. Other projects include the provision of eco-friendly logistics services and energy infrastructure development. For more information on these environmentally-friendly energy projects, please refer to Chapter 6.



# 5 SUSTAINABILITY AT TOWNGAS



## Towngas Corporate Sustainability

### Vision



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

### Mission



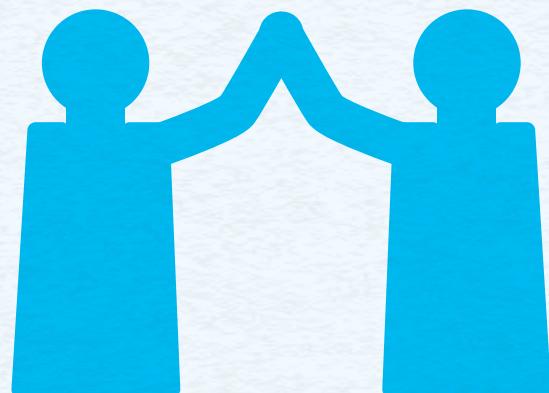
To provide our customers with a safe and reliable supply of energy and the caring, competent and efficient service they expect, while working to preserve, protect and improve our environment.

### Commitment



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

### Responsibility



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

Faced with increasing environmental challenges and elevating stakeholder expectations, a vision for sustainability is essential for driving long-term business success. Such a vision can inform corporate actions in ways that foster a more sustainable environment and community, both of which are fundamental to our business development. Striving to become Asia's leading energy supplier and service provider with an environmentally-friendly focus, environmental, social and economic considerations all influence our business strategies and corporate values. We recognise the importance of managing our

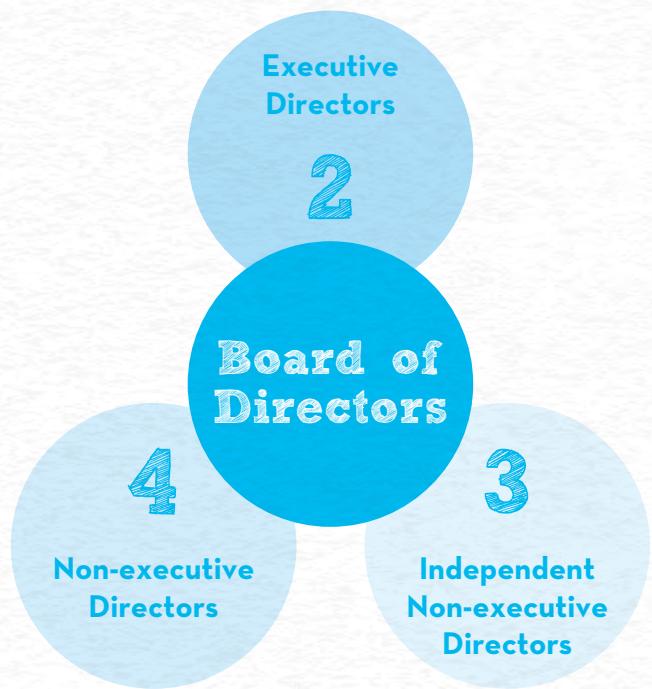
business operations in a responsible manner. Our long-established holistic corporate vision, mission and values clearly spell out our sustainability approach.

Eight business drivers propel our sustainability strategy. We are scrupulous in disclosing information on key areas of sustainability in order to demonstrate how essential they are to our core business operations, and in complying with all relevant laws, listing rules, regulations, standards and codes of practice.

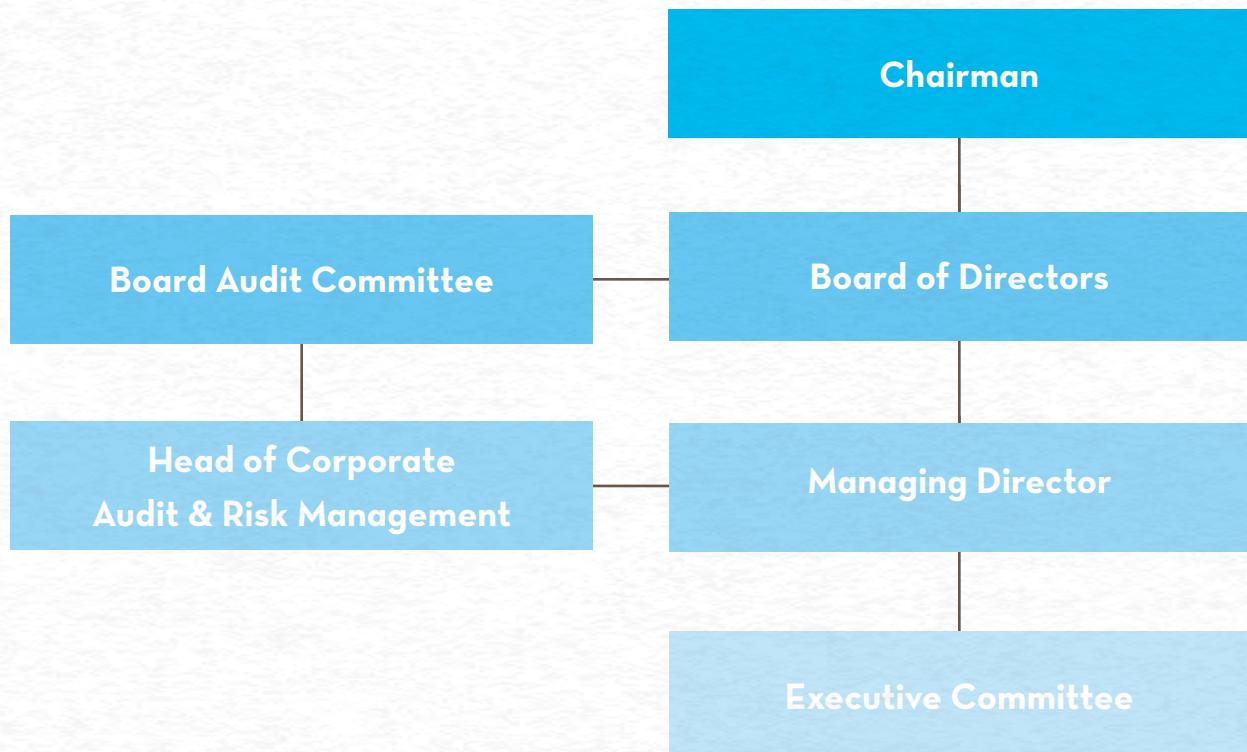


# CORPORATE GOVERNANCE

We believe being accountable, transparent and open to communication are imperative to achieving a high standard of corporate governance. Striving to safeguard stakeholders' interests, our corporate governance framework enshrines integrity in all our business activities. Governance structure, policies and procedures are well defined under the framework and relate to activities at all levels, with the Board of Directors acting as the highest governance body within Towngas. Consisting of nine members including two executive directors and seven non-executive directors, three of whom are independent, the Board is accountable for all activities and strategies, and for the financial performance of the Group.



## Towngas Organisational Structure



## Three Board Committees have been established to help the Board oversee and strengthen internal control

**The Audit Committee** reviews Towngas' current financial standing, considers the nature and scope of audit reports, and ensures that internal control systems operate in accordance with applicable standards and conventions.

**The Remuneration Committee** makes recommendations to the Board on Towngas' remuneration policy and structure for all directors and senior management (who are also executive directors of Towngas) and reviews and approves the special remuneration packages of all executive directors with reference to corporate goals and objectives resolved by the Board from time to time, and determines, with delegated responsibility, the remuneration packages of individual executive directors.

**The Nomination Committee** reviews the structure, size and composition (including the skills, knowledge and experience) of the Board and makes recommendations on any proposed changes to the Board to complement the Group's corporate strategy. It also makes recommendations to the Board on nominations and appointments of directors and assesses the independence of independent non-executive directors.

Meanwhile, the Corporate Audit & Risk Management Department provides independent assurance to the Board of Directors, via the Board Audit Committee, that the management controls are operating effectively and efficiently. Its major roles and responsibilities include the followings:

- Assisting in the evaluation of potential business projects or opportunities and determining how they will enhance the Company's value;
- Ensuring that the Group's assets are kept properly maintained and accounted for;
- Ensuring that the Group's policies and operations are carried out through proper procedures which adhere to quality standards, and in an efficient and cost effective way;
- Providing value-added consultancy and advisory services to the Group;
- Running the Whistleblowing Operation.

Directors' biographies, together with details of the composition and operation of the Board and its Committees, can be found in our [Annual Report 2014](#).

During the year ended 31 December 2014, we complied with all code provisions set out in the Corporate Governance Code contained in Appendix 14 to the Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited.



## Code of Conduct

We follow a strict internal Code of Conduct which provides guidelines on best practices and ethical behaviour in the areas of bribery and corruption, equal opportunities, fair practices, freedom of association, conflicts of interest and whistleblowing. We are highly cautious about misconduct relating to bribery and conflicts of interest. We have clearly explained to our employees that they must not request any advantage from or offer any advantage to people who have a stake in our business such as customers, suppliers, contractors and authorities.

Our Whistleblowing Policy, available on the website, aims to provide a formal channel for employees and other stakeholders to raise concerns about any misconduct, malpractice or irregularity particularly in relation to the violation of the Code of Conduct or business ethics principles.



## Supply Chain Management

As a major energy supplier in the region, we manage a diverse supply chain which involves a wide range of products and service suppliers. It is therefore important to manage and engage our supply chain effectively in order to leverage our effort to achieve sustainability.

Over the years, we have introduced a number of key measures which advanced sustainability elements in our supply chain management. For instance, we always support local suppliers who operate their business in an ethical, socially responsible and environmentally-friendly manner. Currently, over 85 per cent of our suppliers are local companies.

Since 2009, we have also encouraged suppliers to join us in reducing environmental impact through adopting an e-Procurement system, which provides a paperless platform for buyers and sellers to exchange information, purchase orders, shipment documents and invoices.

A Corporate Social Responsibility (CSR) Code of Practice has also been developed for our suppliers to ensure that they follow the highest ethical standards, and are not involved in any form of bribery or corruption. To ensure quality levels throughout the entire supply chain, we conduct routine checks, ongoing assessments, regular meetings and factory audits to ensure suppliers' compliance with the Code of Practice.

As a Group, we have extended our supply chain management measures beyond Hong Kong. Our procurement team in mainland China also conducts CSR Code of Practice audits to ensure that suppliers are meeting all required environmental, social and governance criteria.

# HSE POLICY AND GOVERNANCE

In addition to our corporate governance framework, a Health, Safety and Environment (HSE) policy and governance structure has been set up to promote a sustainability culture and sustainable practices at Towngas.

## HSE Policy

Under our HSE Policy, we pledge to conduct our operations in a manner that poses no risks to the health, well-being and safety of our employees, contractors, customers and the public at large. We also make every effort to protect the environment, address our climate change risk and ensure sustainable development.



**Ensure** health and safety at work, minimising HSE risks and climate change impact

**Achieve** a zero accident standard as well as a high standard of environmental care through continuous improvement

**Eliminate** HSE hazards in our operations, applications and services

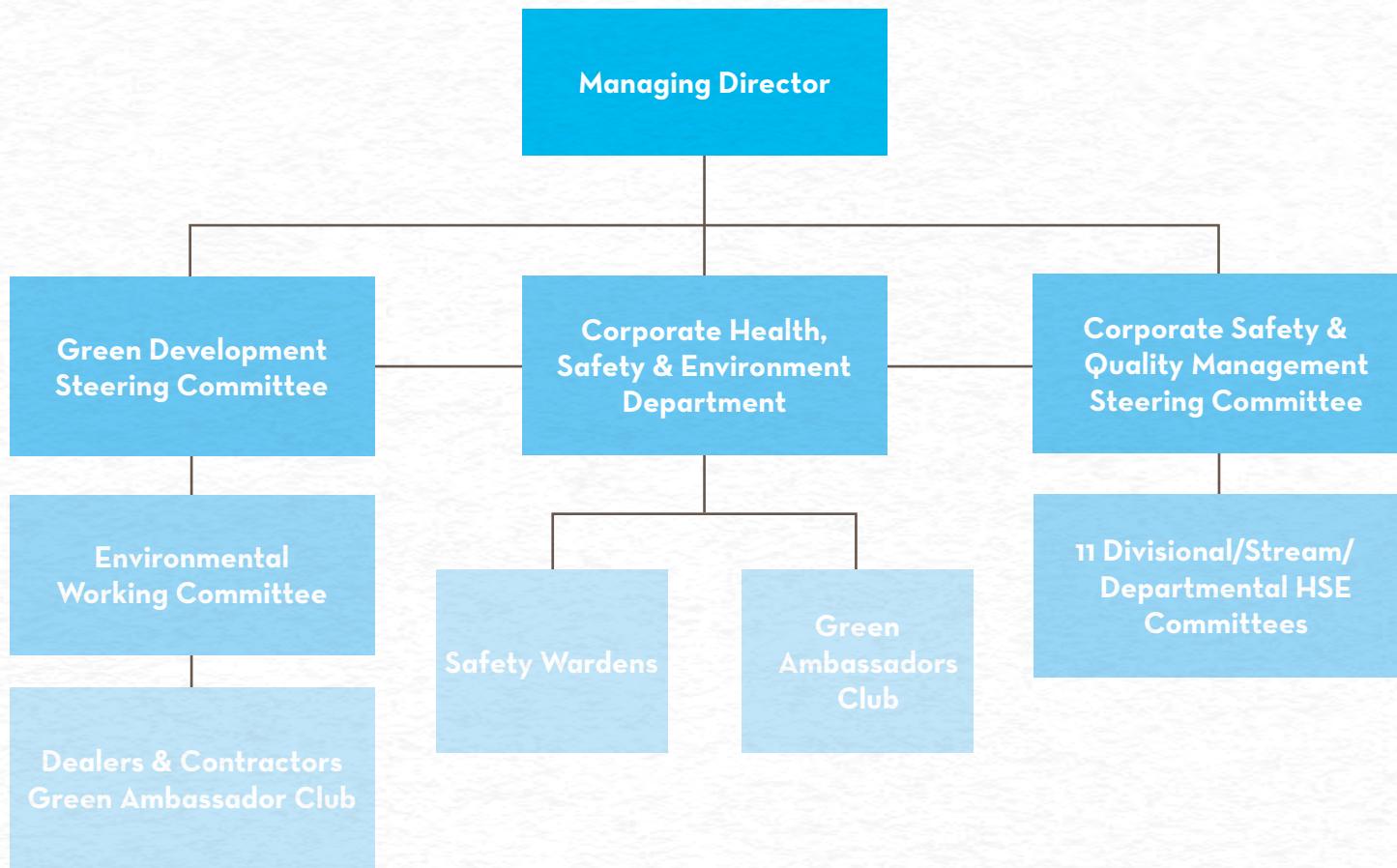
**Carry** out necessary HSE assessments for all major projects and conduct regular HSE audits in our operations

**Promote** HSE awareness and conscientiousness among employees, contractors and business associates through education and training

**Achieve** full compliance with all relevant legislation

**Use** environmentally-friendly materials and technologies, promote economic recycling of materials and conserve resources

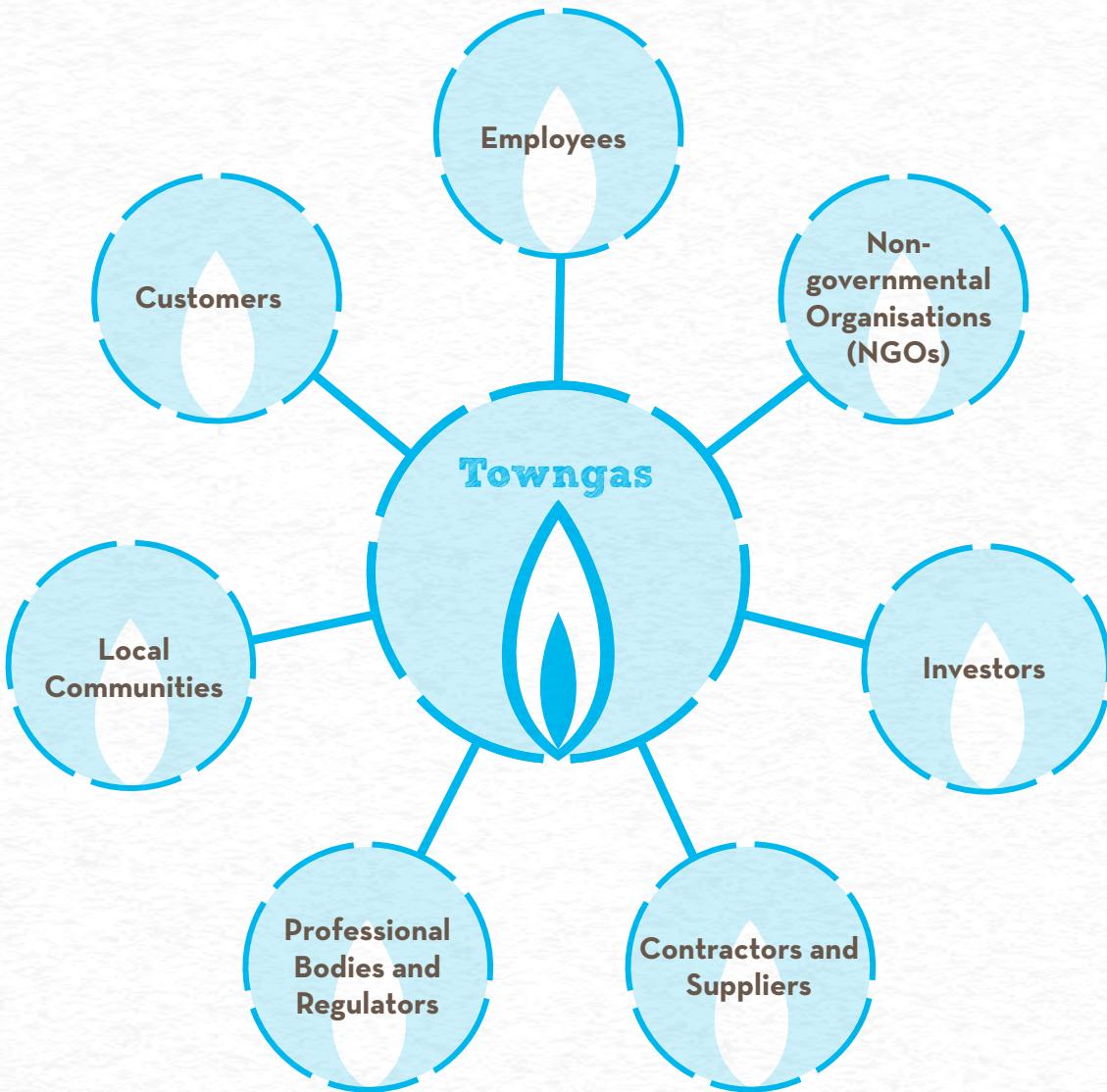
## HSE Management Structure



The Company's culture and robust HSE management structure allow HSE topics to be communicated effectively. Under our HSE management structure, the Corporate HSE Department (CHSED), directed and supported by a Corporate Safety & Quality Management Committee and a Green Development Steering Committee, is dedicated to coordinating, monitoring and evaluating all HSE Policies. The head of CHSED reports HSE and sustainability issues directly to the Managing Director.

We also try our best to keep our employees, suppliers and contractors well-informed of any updated information and measures. Through our Green Ambassadors, Safety Wardens and training programmes, safety and environmental awareness are further promoted to all relevant parties, including our contractors and dealers.

The HSE Departments in individual companies such as Hong Kong & China Gas Investment Limited (HCIL), Towngas China Company Limited (TCCL), ECO Environmental Investments Limited (ECO) and other joint ventures (JVs) in mainland China are responsible for their own HSE management and operations, with support from our Corporate HSE Department in Hong Kong. In each JV, the HSE Department reports directly to the General Manager, ensuring strict adherence to health and safety guidelines and also that safety and risk management are given the highest priority.



## Stakeholder Engagement

As a leading energy utility in Hong Kong, meeting customer and stakeholder needs is entrenched in our corporate identity. We fully recognise the importance of remaining responsive to external expectations in order to build trust among our customers and various stakeholders.

Interaction with stakeholders can take many different forms. For example, we actively participate in various professional bodies and social and environmental campaigns. These platforms provide us with opportunities to stay at the forefront of the sustainability issues facing our industries and society, and allow us to work together to tackle challenges and achieve our sustainability goals. We also support

government-led initiatives with the aim of practicing and demonstrating corporate sustainability through the prudent management of our operations.

We also strive to build mutual trust and partnership with different stakeholders through fostering effective two-way dialogue. To better understand stakeholders' concerns and expectations, we have established a range of communication channels to maintain active, on-going exchanges. Through these channels, stakeholders provide valuable feedback and information that enable us to review our sustainability performance and identify room for continuous improvement.

## Memberships in Associations

Participating in industry and professional associations is a way for us to gain insights on the latest market trends and requirements, and to solidify our technical competencies as we develop innovative new energy technologies. It also allows us to share our experience and knowledge in the business community.

International	Hong Kong
Institution of Gas Engineers and Managers (IGEM)	Hong Kong Association of Energy Engineers
International Gas Union (IGU)	Hong Kong General Chamber of Commerce
World LP Gas Association (WLPGA)	Federation of Hong Kong Industries
	Business Environment Council Ltd.
	Hong Kong Green Building Council
	Hong Kong Waste Management Association

## External Environmental, Social and Governance Charters and Initiatives

Charters/Recognitions	Issuing Bodies
Energy Saving Charter on Indoor Temperature	Environment Bureau and Electrical and Mechanical Services Department
Carbon Footprint Repository for Listed Companies in Hong Kong	Environment Bureau and Hong Kong Exchanges and Clearing Limited
Carbon Reduction Charter	Environmental Protection Department
Indoor Air Quality (IAQ) "Good" Class	Environmental Protection Department
IAQwi\$e Good Class Label	Hong Kong Awards for Environmental Excellence
Wastewi\$e Excellence Class Label	Hong Kong Awards for Environmental Excellence
CarbonCare® Label	Carbon Care Asia
Green Office Label	World Green Organisation

## Stakeholder Communication Channels and Concerns

Key Stakeholders	Communication Channels	Key Concerns / Expectations
<b>Employees</b>	<ul style="list-style-type: none"> <li>• Employee surveys</li> <li>• Suggestion box, bulletins, newsletters, intranet, screensavers</li> <li>• Meetings with employee union</li> <li>• Issue-specific consultative sessions</li> <li>• Superior Quality Service Programme</li> <li>• Strategy Ambassadors Club in Hong Kong</li> <li>• Green Ambassadors Club in Hong Kong</li> <li>• Healthy Living Every Day Series in 2014</li> <li>• iCandy Corner</li> <li>• Social media platforms such as Yammar in Hong Kong and Weibo in mainland China</li> <li>• Whistleblowing system</li> </ul>	<ul style="list-style-type: none"> <li>• Remuneration adjustment</li> <li>• Support on personal career development</li> <li>• Reduction of air pollutants and greenhouse gas emissions to safeguard public health</li> <li>• Integration and cooperation between Hong Kong and mainland employees</li> <li>• Provision of reporting channels on possible improprieties, misconduct, malpractices or irregularities</li> </ul>
<b>Local Communities</b>	<ul style="list-style-type: none"> <li>• District Council Focus Teams</li> <li>• Community programmes e.g. volunteer services, festive food delivery campaign, etc.</li> <li>• District Fire Safety Committees</li> </ul>	<ul style="list-style-type: none"> <li>• Community engagement</li> <li>• Emergency preparedness</li> </ul>
<b>Professional Bodies and Regulators</b>	<ul style="list-style-type: none"> <li>• Joint Utilities Safety and Occupational Health Policy Group (JU SOHPG)</li> <li>• Joint Utilities Policy Group (JUPG)</li> <li>• Climate Change Business Forum (Hong Kong)</li> <li>• China Gas Association</li> <li>• Gas Authority (GSO), EMSD</li> <li>• The Hong Kong Institution of Engineers</li> <li>• Polyethylene (PE) piping coalitions and International Organisation for Standardisation (ISO) Technical Committees on PE pipes and fittings</li> <li>• Other professional institutions and business chambers</li> </ul>	<ul style="list-style-type: none"> <li>• Performance against targets and standards set by professional or regulatory bodies</li> <li>• Gas infrastructure safety</li> <li>• Risk mitigation and adaption</li> <li>• Gas supply reliability</li> </ul>

Key Stakeholders	Communication Channels	Key Concerns / Expectations
<b>Customers</b>	<ul style="list-style-type: none"> <li>Newsletters and leaflets</li> <li>Bi-monthly bill inserts</li> <li>Company websites, social media and mobile phone networks</li> <li>Regular maintenance visits, safety inspections and safety talks</li> <li>24 visits annual by Customer Focus Team for residential customers</li> <li>Monthly surveys and focus group research on specific programmes</li> <li>Year-round publicity and community campaigns</li> <li>Management Offices/Incorporated Owners' Associations</li> <li>24-hour Customer Service Hotline and 19 customer centres</li> <li>Social media: Facebook page</li> <li>Towngas smartphone app</li> <li>Provision of reporting channels on possible improprieties, misconduct, malpractices or irregularities</li> </ul>	<ul style="list-style-type: none"> <li>Price adjustment</li> <li>Customer service quality</li> <li>Communication of Towngas' sustainability performance and initiatives</li> <li>Provision of reporting channels on possible improprieties, misconduct, malpractices or irregularities</li> </ul>
<b>Investors</b>	<ul style="list-style-type: none"> <li>Annual general meetings and investors' briefings</li> <li>Interim, Annual and Sustainability Reports</li> </ul>	<ul style="list-style-type: none"> <li>New energy project</li> <li>Research and development, and long-term planning of regarding the replacement of traditional energy sources</li> <li>Factors affecting development potential of gas business in the mainland</li> </ul>
<b>Contractors and Suppliers</b>	<ul style="list-style-type: none"> <li>Ongoing audits</li> <li>Regular management meetings</li> <li>Green Ambassadors Clubs for dealers and contractors</li> <li>Seminars and workshops</li> <li>Mass communications</li> <li>Whistleblowing system</li> </ul>	<ul style="list-style-type: none"> <li>Latest requirements relating to operations</li> <li>Provision of reporting channels on possible improprieties, misconduct, malpractices or irregularities</li> </ul>
<b>Non-governmental Organisations (NGOs)</b>	<ul style="list-style-type: none"> <li>Year-round green partnership programmes and community programmes</li> </ul>	<ul style="list-style-type: none"> <li>Funding requirements to support sustainability initiatives</li> <li>Long-term strategy/planning on funding allocation to support sustainability initiatives</li> </ul>

# 6 ENVIRONMENTAL PERFORMANCE

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# 5Rs PRINCIPLE



Recycle



Replace



Recover

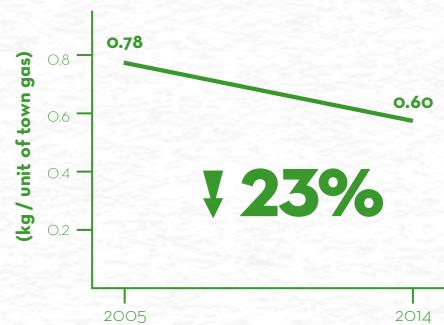


Reuse



Reduce

## CARBON INTENSITY



## PAPER SAVED



≥1,200 tonnes

## WATER SAVING

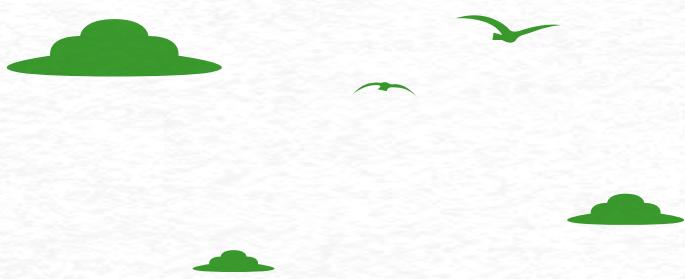


≥500 m<sup>3</sup>  
at Towngas Headquarters

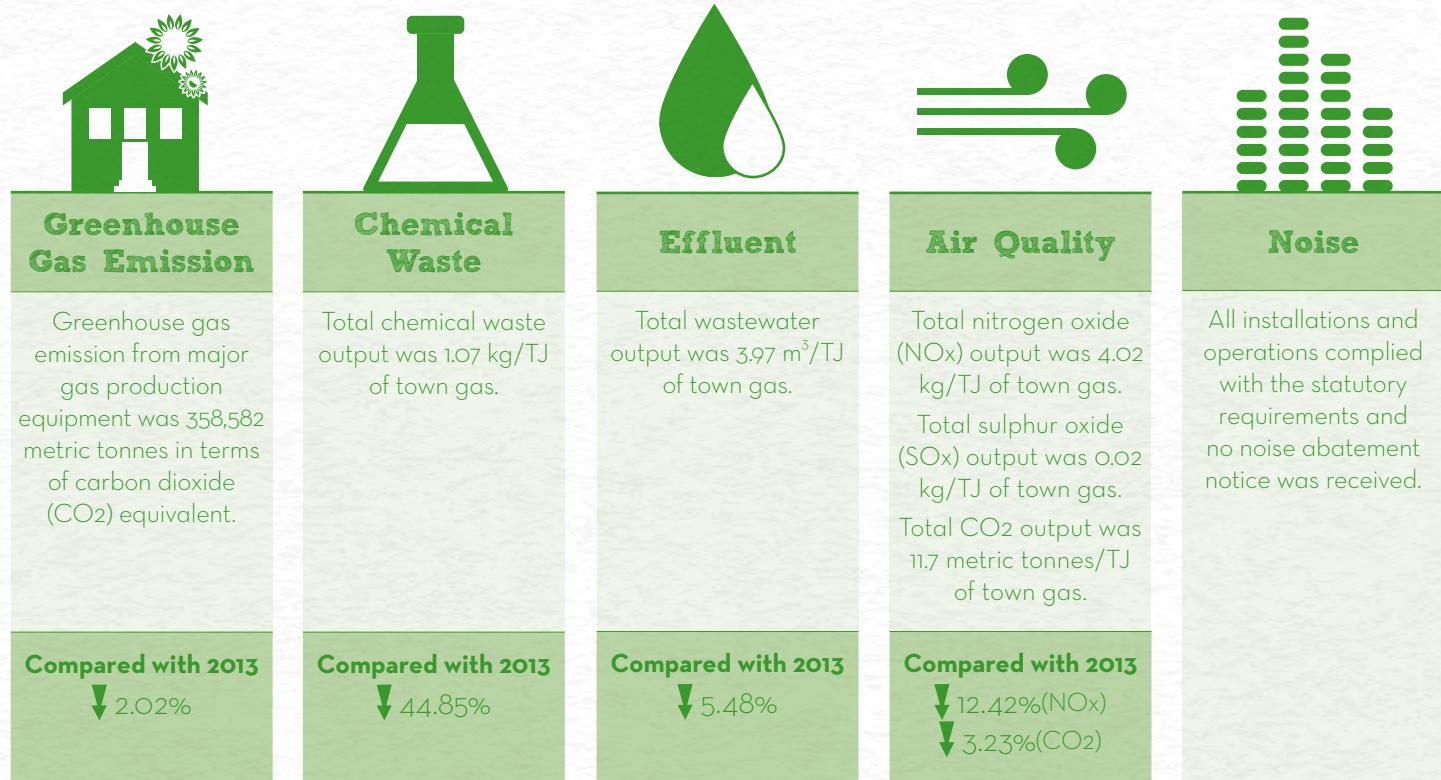
As a leading utility provider, we are fully committed to taking actions that safeguard the environment and have integrated environmental considerations fully into our business model. With regards to the nature of our operations, combating climate change, reducing environmental impact and protecting local areas are our main priorities. Additionally, as the environmental challenges and regulatory standards intensify, we have bound ourselves to implementing, operating and management actions to reduce greenhouse gas emissions and to continuously improve our waste management through the adoption of the 5Rs principle – Replace, Reduce, Reuse, Recover and Recycle.

Under a strong governance framework, we formulate environmental strategies, monitor our progress in meeting targets and review our performance regularly. To address the environmental risks and challenges we face,

we continually identify measures to improve operational efficiency, develop new facilities for landfill gas utilisation, encourage innovative environmental initiative, and enhance the environmental awareness of our management, employees and contractors. With the ultimate aim of reducing our environmental footprint, we also reach out to and solicit support from stakeholders and external partners in order to bring about far-reaching change.



## Key Environmental Performance 2014 (Hong Kong)



## Stakeholder Dialogue

“ Over the years, Towlngas has actively participated in and demonstrated full support for environmental campaigns and initiatives launched by external parties, whether through donating money, gift sponsorships or staff volunteering. While these activities have all served different purposes, they are collectively aimed at enhancing Hong Kong's environmental sustainability. By supporting external activities, Towlngas can act beyond its own organisational boundaries and contribute to positive impact on the environment. One example is through the “Green Leaders Bloc”, which aims to nurture environmental awareness among university and secondary students. To better utilise Towlngas' organisational resources, it is suggested that instead of supporting one-off activities, Towlngas should develop long-term partnerships with other organisations such as non-governmental organisations and green groups in order to better address specific environmental issues. ”

“ We conduct on-going reviews of the financial and human resources we allocate to supporting external environmental activities. We understand the importance of developing long-term partnerships with other organisations to benefit the wider community. We will continue to identify potential partners who share similar values for the purposes of long-term collaboration. ”

**Peter Wong**

Executive Director and  
Chief Operating Officer - Utilities Business

The Hong Kong and China Gas Company Limited

## Major Awards and Recognitions

Awards / Recognitions	Issuing Bodies
<b>U Green Awards - Public Utilities</b>	U Magazine
<b>Prime Awards for Eco Business</b>	MetroBox
<b>Hong Kong Green Awards 2014 - Environmental, Health and Safety Award (Corporate) - Platinum</b>	Green Council
<b>Hang Seng Pearl River Delta Environmental Awards - (Green Medalist, 5 years + entrant)</b>	Hang Seng Bank and Federation of Hong Kong Industries
<b>Wastewi\$e Label - Class of Excellence</b>	Hong Kong Awards for Environmental Excellence
<b>IAQwi\$e Label - Class of Good</b>	Hong Kong Awards for Environmental Excellence
<b>Commercial Organisation and Shopping Centre-Gold</b>	Yan Oi Tong Plastic Recycling Partnership Scheme
<b>Carbon Care® Label</b>	Carbon Care Asia
<b>Green Office Label</b>	World Green Organisation

## Review of 2014 Targets

	Targets	Progress	Achieved / In Progress
<b>Green Certification</b>	To achieve a Wastewi\$e label for 13 consecutive cycles.	Wastewi\$e Excellence Class label was received.	Achieved
<b>Energy Efficiency &amp; Conservation</b>	To save material and reduce electricity consumption by minimising the number of Data Transit Stations (DTSs) installed in Automatic Meter Reading (AMR) projects.	The new configuration was installed in buildings.	Achieved
	To acquire energy labels for all models of domestic gas cooking appliances covered by the Voluntary Energy Efficiency Labelling Scheme.	The energy labels for the eligible models were acquired.	Achieved
	To complete the upgrade of the Central Chiller Plant Phase 2 to further reduce electricity consumption at our headquarters.	The upgrade was completed.	Achieved
	To explore the feasibility of utilising landfill gas from the SENT landfill.	A contract was signed with a contractor to construct landfill gas treatment facilities at the SENT landfill.	Achieved
<b>Water Recycle &amp; Reuse</b>	To install and commission a rainwater harvesting system at a naphtha tank farm.	The rainwater harvesting system was installed.	Achieved
<b>Gas Production Plant Modification</b>	To commission the natural gas system at Ma Tau Kok gas production plant to enable making town gas from natural gas as feedstock and fuel.	Commissioning work was started in Q1 2015.	In Progress
<b>Customer Promotion</b>	To promote green gas cooking tips to customers via leaflets and bill inserts.	Green gas cooking tips were promoted to customers via various channels, e.g. leaflets, bill inserts and website.	Achieved
<b>Carbon Management</b>	To complete the study of carbon footprints for various pipelaying methods.	This study was completed and offered a quantified greenhouse gases (GHGs) and pollutants emission analysis for different popular pipe laying methods.	Achieved
	To disclose information on our carbon footprint and share successful stories relating to carbon management and practices.	Information is disclosed on the website of “Carbon Footprint Repository for Listed Companies in Hong Kong”.	Achieved
	To organise the 5th mainland carbon reduction project competition.	20 submissions were received from our operational units in the mainland.	Achieved

# OUR PURSUIT OF ENVIRONMENTAL EXCELLENCE

To entrench our commitment to environmental protection in the corporate identity of Towngas, we acknowledge that both top-down and bottom-up approaches are of equal importance and serve complementary functions. While stakeholders' participation is vital to driving environmental excellence, many actions could only be achieved with the support of high-level environmental governance and leadership. At Towngas, a number of components make up our environmental leadership framework, which essentially governs all aspects of our impact on the environment, and identifies risks and opportunities for continual improvement.

## Environmental Governance

As a governing body that oversees our organisational resources and efforts to uphold our commitment to environmental protection, our Environmental Working Committee was established in 1992 as part of our corporate HSE Management Structure in order to formulate and implement environmental programmes. The Committee is further supported by 12 functional sub-committees with well-defined functions. These sub-committees set environmental objectives to continually improve the environmental performance of the Company. In 2014, over 40 environmental objectives were completed and meetings were held quarterly to monitor all progress.

## Environmental Working Committee

The 12 Functional Sub-committees		
Management and Administration	Education and Awareness	Publicity and Promotion
Environmental Information and Training	Building Environment and Energy Conservation	Environmental Assessment
Waste Management	Purchasing and Office Services	Environmental Auditing
Environmental Technology Services	Environmental Risk Management	Environmental Liaison with Contractors and Dealers

## Environmental Management Systems and Project Management

We always make reference to international environmental standards and management systems to ensure that our operations comply with global industry norms. Our Environmental Management System in Hong Kong, which covers all our operations and operating systems at our Tai Po plant, has been accredited under the internationally recognised ISO 14001 standard since 1999. It strengthens the environmental management of our gas production processes and identifies room for continual improvement. To maintain a management system of high quality, we will further extend certification to our subsidiaries as well.

Assessments of the effects on the surrounding environment throughout a project's lifecycle are crucial to minimising environmental impact. In accordance with Hong Kong's Environmental Impact Assessment Ordinance (EIA Ordinance), we carry out EIA studies before initiating any major gas infrastructure projects. These studies look into a project's possible impact in terms of air quality, noise, construction waste, water quality and biodiversity, as well as any potential effects on our cultural heritage.

In addition, we have established a checking system that involves regular inspections and audits on our offices and contractor operations. These include:

**Green Office Audits** which are conducted by Green Ambassadors on a monthly basis to assist in developing a green office culture. The inspections cover a number of areas, including energy and water conservation, as well as waste reduction.

**Contractor Audits** which assist contractors in meeting our requirements and further improving their environmental performance. Customised environmental checklists were developed for different categories of contractors, in order for site supervisory staff to monitor contractors' environmental performance.

## Climate Change Risk Assessment and Mitigation Measures

Climate change has significant business implications that should not be overlooked. It is widely accepted that climate change may pose economic risks to businesses. Accordingly, we continue to identify potential risks associated with climate change and review the effectiveness of our measures to protect our operations and assets against these risks. In 2014, we reviewed the flooding threat at our Tai Po Plant and carried out some improvement measures, such as installing water dams and auto-start submersible pumps at important buildings to minimise disturbance to our operations caused by extreme weather. In order to devise comprehensive solutions that address business risks that may be brought by climate change, an external consultant was commissioned to conduct a company-wide climate change risk assessment and to draw up an action plan including relevant emergency response and adaptation measures. The assessment process has helped identify and categorise possible climate risks that might affect Towngas' operations, particularly in relation to gas production, gas transmission and distribution, customer service and supporting departments.

## Environmental Education and Training

Employee participation is key to achieving success in our pursuit of environmental excellence. Environmental training sessions and a Corporate Environmental Manual are provided to employees in order to enhance their environmental awareness and technical know-how. In 2014, we placed emphasis on climate change, and invited local academics to deliver talks to our staff in order to enhance their understanding of this critical issue.

In addition, our employees are always encouraged to organise activities to help protect the environment and improve the Company's environmental performance. In particular, the Towngas Green Creativity Fund provides such encouragement and sponsorship. For instance, with aid from this fund, an eco-driving programme was organised to encourage contractors to drive less and adopt green driving habits.

# CLEAN ENERGY

Our environmental performance is fundamentally intertwined with our choice of energy resources. With this realisation in mind, switching to cleaner energy sources has been part of our strategy to continually improve our environmental performance. Through our relentless search for cleaner fuel and alternative feedstock options, we have begun mitigating our impact on the environment, particularly in terms of air quality and carbon emissions, as we transit towards a cleaner energy business.

## Natural Gas as Feedstock

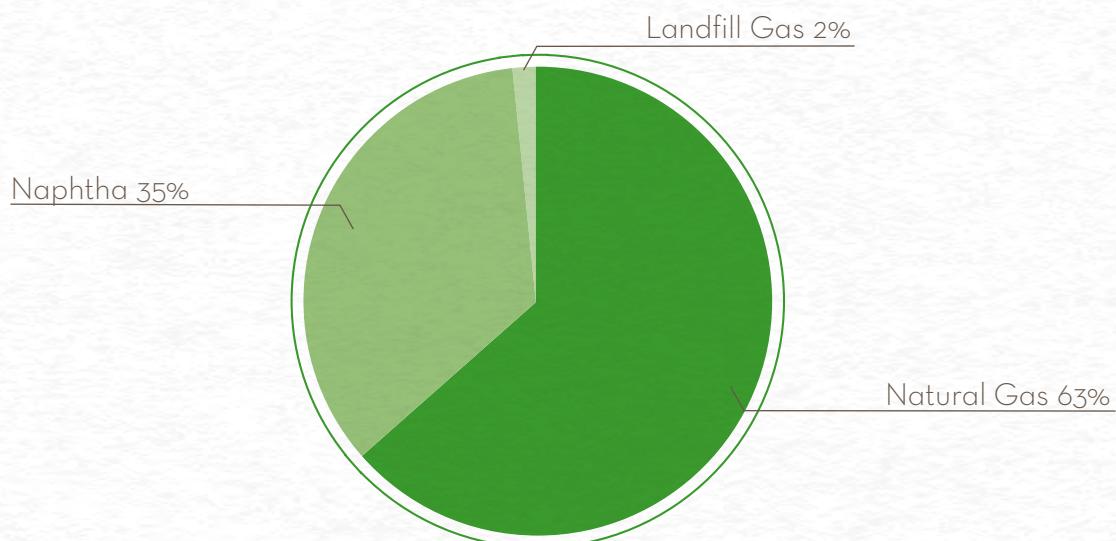
The development of our clean energy business began in 1967 when we abolished the use of coal in the gas production process. Later, in 1973, naphtha was introduced, replacing heavy oil, thereby significantly reducing emissions of sulphur dioxide. In 2006, we moved forward again, initiating the use of natural gas as part of our feedstock in the production of town gas for Hong Kong with the opening of LNG Receiving Terminal in Guangdong province. Since then, naphtha and natural gas have been the primary feedstocks in our gas production, with natural gas accounting for about 60 per cent in Hong Kong.

Natural gas is a much cleaner source of energy than many of the alternatives. Air emissions of nitrogen oxide (NOx), sulphur oxide (SOx) and respirable suspended particulates (RSP) are also greatly reduced, contributing greatly to improved air quality locally.

In 2014, modifications to our Ma Tau Kok plant were in progress. Once these are complete, natural gas will replace naphtha as the feedstock for the production of town gas at that plant.

In mainland China, with the launch of national clean energy policies favouring natural gas by the Chinese Government, we continue to expand our piped city-gas business. In 2014 we added eight new city-gas ventures to our portfolio, including two in new provinces for us – Guizhou and Yunnan. The expansion of our piped-city gas business replaces more polluting fuels, primarily oil and coal, and contributes to decoupling China's economic development from environmental degradation.

## Fuel Mix for Town Gas Production in Hong Kong



## Renewable Energy

We are delighted that the use of renewable energy in our energy portfolio not only reduces reliance on non-renewable fossil fuels, but also lowers the carbon intensity of our energy products. The ability of energy companies, including Towngas, to adapt to future energy needs is undoubtedly important to ensuring sustainable economic development. Currently, we utilise landfill gas as a major renewable energy source and are looking for more opportunities in this area.

The major components of landfill gas are methane and CO<sub>2</sub>, which are the greenhouse gases

that can speed up climate change. To minimise wastage of this renewable energy source, we began harnessing landfill gas on a commercial basis from the Shuen Wan landfill site in 1999. Later in 2007, our landfill gas utilisation activities expanded to the significantly larger North East New Territories (NENT) site. The treated landfill gas is transferred to our Tai Po production plant where it has replaced some of the naphtha we use as a heating fuel in gas production. We are the first organisation in Hong Kong to use landfill gas on a commercial basis.

## Our Path Of Landfill Gas Utilisation

1999 Shuen Wan

2007 NENT

2016 SENT

## South East New Territories Landfill Gas Project

In 2014, a contract was signed with Green Valley Landfill Limited, the contractor of the Tseung Kwan O South East New Territories (SENT) Landfill site, regarding the SENT Landfill Gas Utilisation Project. In this project, landfill gas treatment facilities will be constructed to turn landfill gas into synthetic natural gas. The treated gas will be transmitted to a regulating station in Tseng Lan Shue through a 12 km pipeline and then integrated into the gas supply network. This project will be one of the largest energy conservation and emission reduction environmental projects in the territory.



**Expected CO<sub>2</sub> reduction:  
56,000 tonnes/year; equivalent to the planting of 2.4 million tree seedlings**

# NEW ENERGY DEVELOPMENT AND UNCONVENTIONAL ENERGY

In our fast-changing energy economy, we continue to look for new ways to provide clean energy products and turn low-grade resources and waste into high-grade products.

## Vehicular Clean Fuel

In support of the Hong Kong Government's initiative to improve local air quality, we have built and operated five LPG filling stations in Hong Kong since 2000, serving 18,000 LPG taxis and most LPG minibuses. The stations collectively sold approximately 65,000 tonnes of LPG in 2014, accounting for about 30 per cent of Hong Kong's auto LPG market. The use of LPG reduces the emission of respirable suspended particulates and helps improve air quality.

In mainland China, ECO has extended its gas filling station business, and currently has 38 vehicular fuel stations in operation or under planning or construction. ECO also has plans to provide LNG filling stations for heavy-duty trucks and vessels in the port that links a railway upstream with the nearby downstream Beijing-Hangzhou canal in Jining, Shandong province.



## Coalbed Methane

Coalbed methane (CBM) is formed when biochemical hydrogenation takes place in coal under high temperatures and high pressure. Extracting CBM before mining activities commence yields multiple benefits. Properly collecting and utilising the methane gas - a greenhouse gas with a global warming potential 20 times higher than carbon dioxide - can prevent it from escaping to the atmosphere as a byproduct of coal mining.

In 2014, the liquefied coalbed methane (LCBM) plant in Shanxi province, our signature project in this area, recorded a significant increase in production, with annual capacity reaching 250 million cubic metres. It is currently the largest CBM liquefaction plant in the mainland. We are seeking more natural gas and coalbed gas supply sources at different strategic locations in order to expand our production capacity and distribution networks.

## Clean Coal Energy

Unlike the traditional burning of coal, which is polluting, coal gasification is free from SO<sub>x</sub> and NO<sub>x</sub> emissions, and any CO<sub>2</sub> generated is in such pure form that it can be captured and stored for other purposes. Capitalising on the abundant stores of coal in China, we have been using coal gasification techniques to create syngas, which can be further synthesised into methanol.

Methanol has dual applications as a chemical feed as well as being a highly efficient and clean fuel. ECO's methanol production plant in the Inner Mongolia Autonomous Region operated smoothly in 2014, with a total production of 240,000 tonnes. A new processing unit in the plant, which can further upgrade methanol into 140,000 tonnes of natural gasoline annually using self-developed technology, was commissioned at the end of 2014.



## Coke Oven Gas

There is substantial demand for coke for steelmaking in mainland China. During the industrial process to convert coking coal to coke, a large quantity of coke oven gas is generated. ECO is proactively investing in projects utilising coke oven gas for the production of LNG. ECO has recently concluded agreements with two coking plants in Xuzhou city, Jiangsu province and in Heze city, Shandong province to produce LNG by using coke oven gas from these plants. The commissioning of both projects is expected to conclude in late 2015.

## Agricultural Waste

With a large quantity of agriculture waste generated in mainland China, it is another unconventional resource that we have started to utilise. ECO is developing new technologies to convert agricultural and forestry waste into natural gas. One of these involves the production of syngas through the gasification of agricultural waste, while a second process converts the syngas into methane. Construction of a plant for this purpose is expected to commence in the second half of 2015.

A processing unit, which converts coal-based methanol into natural gasoline (a higher value automobile fuel), was commissioned in November 2014.

# SUSTAINABLE OPERATIONS

We always look for opportunities to enhance our environmental performance. In Hong Kong, our operations mainly consist of gas production and general office work, with both of these having their own specific environmental issues.

## Gas Production

### Emissions Management

In 2008, we endorsed the Carbon Reduction Charter, becoming one of the first organisations to be a Carbon Audit Green Partner of the Hong Kong Government. In that function, we have completed carbon audits for operations related to our gas production in Hong Kong, with the results verified against ISO 14064-1 specifications. Continuing this practice in 2014, we obtained a thorough understanding of our carbon emissions profile and the sources of direct and indirect emissions. Key indicators, including direct and indirect greenhouse gas emission, as well as carbon intensity, have been reviewed annually to keep track of our performance and allow us to formulate and prioritise improvement measures. Compared with 2013, our plant achieved a reduction of over 3 per cent in carbon intensity in 2014.

### Carbon Intensity (Hong Kong) CO<sub>2</sub> emission per unit of town gas



\* Revised figure for 2005 due to the power company-specific emission factor has been adopted in the calculation.

We continuously upgrade our processes and techniques to minimise these emissions. One of the measures that we have implemented to reduce carbon emissions is the installation of a heat recovery system at our Tai Po gas production plant. The system recovers and uses waste heat generated from gas production processes, and has contributed to reductions in carbon emissions of 2,800 tonnes and in fuel costs of around HK\$7 million.

## Direct and Indirect Greenhouse Gas (GHG) Emissions <sup>1,2</sup>

	2014	2013
<b>Scope 1</b> Direct GHG Emissions (Tonnes-CO <sub>2</sub> e)	331,466	342,568
<b>Scope 2</b> Energy-related Indirect GHG Emissions (Tonnes-CO <sub>2</sub> e)	27,116	23,413

1. Standard: GHG Protocol Corporate Standard Reported Gases: CO<sub>2</sub> CH<sub>4</sub>, N<sub>2</sub>O, HFCs & PFCs. Only gas production and storage facilities' GHG emissions are reported.
2. Data on GHG emission due to the consumption of electricity are obtained from the sustainability reports of the two local electricity companies, which are released one year prior to our reporting year.

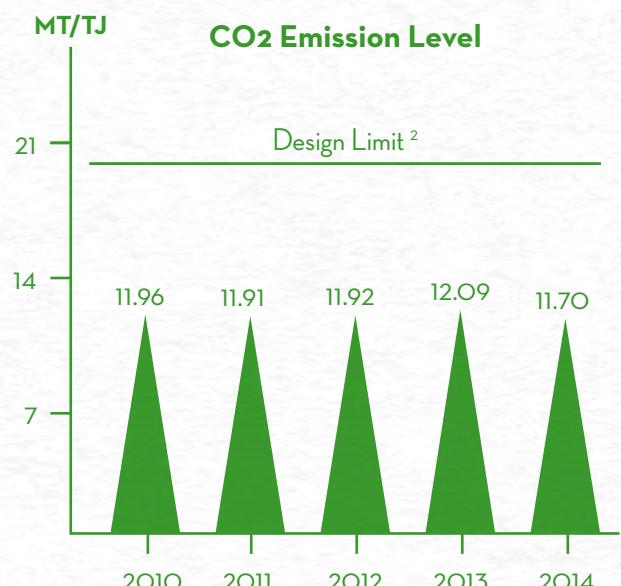
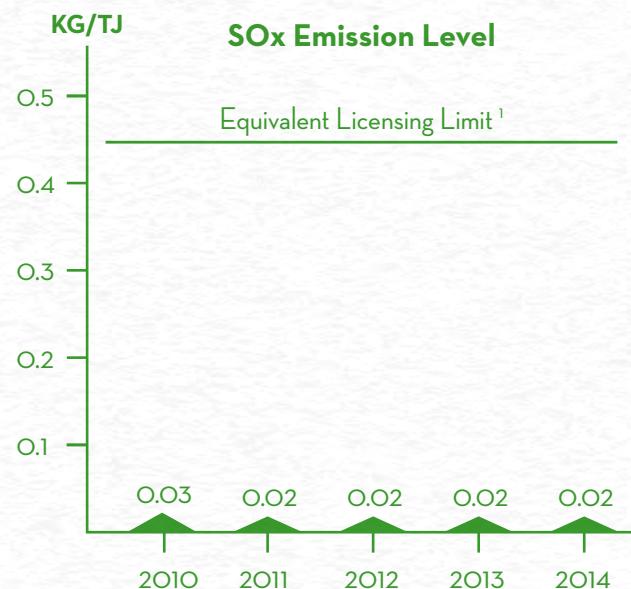
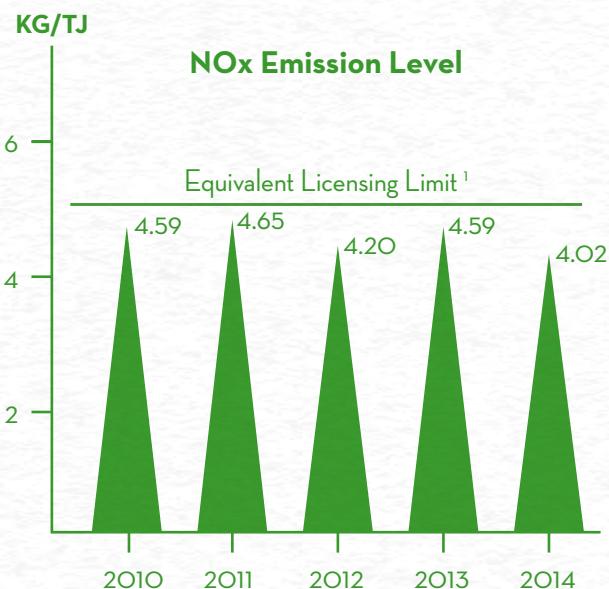
## Water Resources Conservation

Water resource scarcity is a global risk facing humankind. We are aware of our responsibility to conserve the planet's precious water resources. Sustainable water management is upheld as one of our core operating principles and constitutes a major commitment in our environmental management system. Through various water saving measures, our gas production plants have achieved significant improvements in their use of water resources.

## Water Resources Conservation Efforts at the Tai Po Gas Production Plant

Installing the reverse osmosis facility led to a reduction of more than 121,000 cubic metres of effluent water being discharged in 2014. In 2014, the rainwater collecting system at the Tai Po gas production plant was installed. This system is expected to save an average of 28,000 cubic metres of raw water (which is approximately 11 times the volume of a standard swimming pool) per year.

## Emission Level of Gas Production Plants (Hong Kong)



**1.** "Equivalent Licensing Limit"(kg/TJ) = "Weighted average of actual licensing limit" (kg/hr or m<sup>3</sup>/hr)  $\div$  production rate of the plants for the year 2014 (TJ/hr).

**2.** As there is no Licensing Limit for the emission levels of the substance, we apply the design limit of our production plants as a reference point for the emission level.

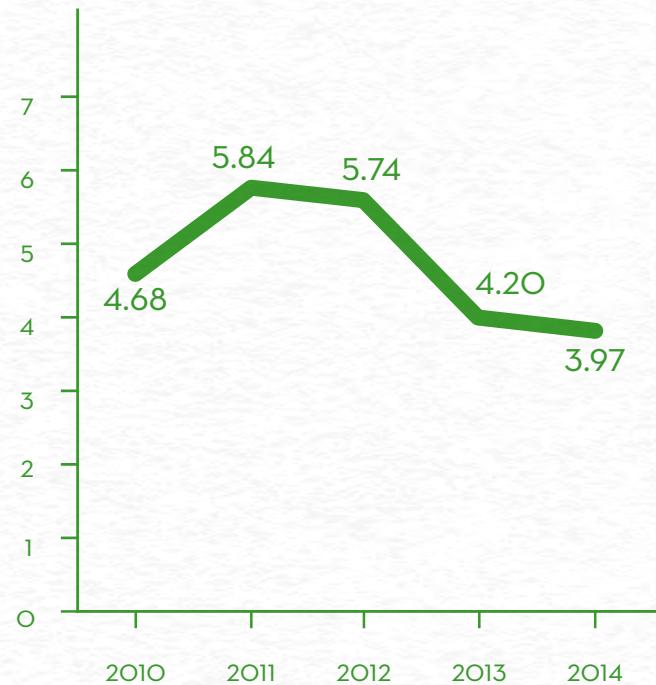
## Effluent and Waste Management

In order to safeguard public health, the environment, and the integrity of our sewage collection and disposal systems, we have implemented a number of controls to ensure that any wastewater discharged from our gas production plants is in compliance with the regulatory effluent discharge standard as specified in the effluent discharge license issued by the Hong Kong SAR Government.

At our gas production plants, we have established general procedures for handling waste. This is to ensure regulatory requirements are well communicated with the persons responsible for the operations, and to encourage our employees to handle waste in line with 5Rs principle. Typical waste collected and reused at our plants includes metal drums, plastic chemical drums and spent catalyst.

Chemical waste is handled with special care and in line with regulatory requirements. It is collected by a waste collector licensed by the Environmental Protection Department.

### Wastewater Discharge per MJ of town gas (cubic metres)



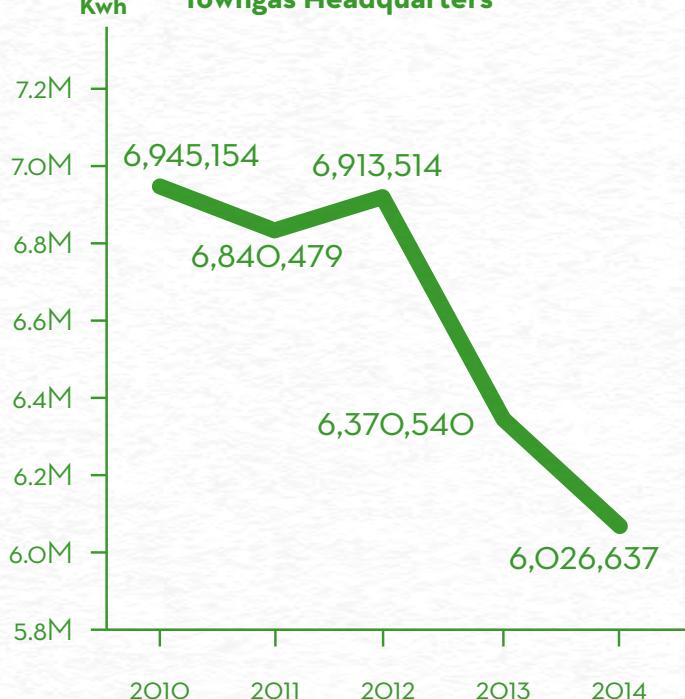
## Green Office Operations

Despite the fact that our environmental footprint is mainly associated with gas production, we actively seek ways to implement green measures for our office operations.

### Saving Electricity

We implement various energy saving measures in our premises to enhance energy efficiency, thereby reducing operational costs and greenhouse gas emissions. Our headquarters in Hong Kong was granted Platinum Grade (version 5/04) Building Environmental Assessment Method (BEAM) certification in 2010, a recognition of the overall quality of the building's environmental profile, including its energy efficiency. The building is also classified as an Energy-efficient Building under Hong Kong's Energy-efficiency Registration Scheme.

### Electricity Consumption at Towngas Headquarters



# Energy Conservation Measures Implemented at Towngas Headquarters

## Technological Measures

- Rooftop chiller systems upgraded with the installation of more environmentally-friendly, high-efficiency and oil-free water-cooled chillers
- Timers deployed to control lighting and eliminate excessive lighting
- Electrical appliances, including computers, switched off after office hours
- Motion sensors installed in low usage areas such as pantries, staircases, conference rooms, corridors and toilets
- Ongoing replacement, phase by phase, of conventional lighting with energy-efficient lighting
- Office temperatures kept at 25°C
- Environmentally-friendly office appliances procured
- Solar reflective paint applied on the roof to reduce indoor temperatures

## Awareness Initiatives

- Staff educated on energy conservation measures
- Staff engaged in energy saving activities

## Monitoring and Audit

- Green office audits regularly conducted by Green Ambassadors

In 2014, we completed a two-phase programme to upgrade our rooftop chiller systems into a more environmentally-friendly, water-cooled model. Over 800,000 kWh of electricity (about 560 tonnes of CO<sub>2</sub>-e) has been saved annually through this programme. Also, we applied solar reflective paint to the roof of our headquarters in order to minimise heat absorption and reduce demands on our air-conditioning system.



**Saved over  
800,000 kWh  
of electricity through upgrading  
rooftop chiller systems**

## Case Study **Towngas Telecom (TGT) Data Centre**

As a global hub for information and communication technology, the demand for data centre services is immense in Hong Kong. In response to the industry's needs, the new TGT Hong Kong Data Centre 2 became operational in the second quarter of 2014. The building was granted Leadership in Energy and Environmental Design (LEED) Gold certification, The United States Green Building Council's world-renowned green building recognition. The environmental features of the building include:

- Solar panel on the rooftop for renewable energy;
- An oil-free chiller for saving energy and noise mitigation;
- A green wall and green roof to reduce heat absorption from the building, and thus reduce the load on the cooling system;
- A rainwater harvesting system for irrigation and toilet flushing, etc.



TGT Hong Kong Data Centre 2 became operational in the Tseung Kwan O Industrial Estate in the second quarter of 2014.

## Saving Water

Water use is an essential component of sustainable operations. Accordingly, we always look for new opportunities to ensure the efficient use of water in our buildings. The following actions were taken to conserve water:



Water-saving faucets and water closets installed.



Flow restrictors and automatic shut-off systems installed in toilets.



Staff encouraged to turn off faucets after use and report any water pipe leaks.



Monitoring and repair programme established to ensure pipes are in good working condition.



Environmentally-friendly cleaning products adopted.

## Resource Conservation

We are committed to minimising the volume of materials we use and maximising our use of recycled materials along our value chain, from production to end-users.

Across Towngas, we seek ways to reduce and recycle the waste wherever possible. In 2014, we received the “Class of Excellence” Wastewi\$e Label organised by the Environmental Campaign Committee for the 13th consecutive year. We have cumulatively achieved over 30 goals under this scheme. To better manage our waste, we commenced a waste audit project which was undertaken by a third party specialist at our headquarters in 2014.

## Green Purchasing

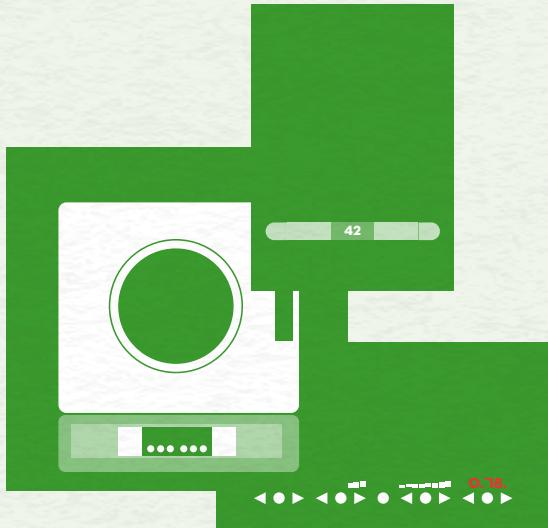
To put green purchasing into practice, we have formulated an Environmental Purchasing Policy to govern our procurement process. Guidelines are in place for purchasing environmentally-friendly products including recycled or FSC printing paper, company letterheads and envelopes, as well as toners manufactured using recycled cartridges. We have purchased green products with improved recyclability, high recycled content, reduced packaging, greater durability, reduced water consumption and fewer toxic substances, etc.

## Recycling Programme

We launched and took part in a number of recycling programmes to raise the awareness of our staff as regards to waste management. These induced the following:

- Used Lai See Packets Recycling Programme
- Rechargeable Battery Recycling Programme
- Plastic Recycling Partnership Programme Scheme organised by the Yan Oi Tong EcoPark Plastic Resources Recycling Centre

**Our Used Appliance Recycling Programme** was launched in 2003 in order to prevent old appliances from ending up in landfills. We offer the free removal of unwanted gas appliances when installing new appliances in customer premises. The old appliances collected are sent to contractors for recycling. The revenue generated from this programme is used to support green partnership programmes.



- nearly **80,000** pieces of used appliances were collected in 2014
- over **1,000** tonnes of metal recovered in 2014
- **10,477** tonnes of used appliances collected since the launch of this programme

### Saving Paper

In line with the increasing trend of using digital communications, we are working towards a paperless operation. In addition to educating employees to reduce paper use, we have implemented e-Procurement and e-Billing practices in our value chain. Our e-Procurement practice

reduces the need for paper specifications and contracts, while the e-Billing system provides customers with their gas account statements electronically. Apart from saving paper, the system also helps reduce postage costs and fuel consumption for bill delivery.



- **81,505** customers have been registered for our e-Billing system  
( $\uparrow 13\%$  compared with 2013)
- **12.22** tonnes of paper saved annually through e-Billing
- **1,289** tonnes of paper saved through extending the billing practices from monthly to bi-monthly in 2014

# GREEN PARTNERSHIP

In 2014, we continued to support a wide range of environmental initiatives organised by green groups in Hong Kong, including the Clean Air Network's "The Airmazing Race", the Conservancy Association's "Green Leaders Bloc", Green Sense's "No Air-Con Night", Greeners Action's "Lai See Packet Reuse and Recycle Programme", the Green Council's "Hong Kong Green Day", WWF's "Earth Hour", etc. Other major green activities are as follows:

## Tree Planting Challenge 2014

Towngas has supported the Tree Planting Challenge organised by Friends of the Earth for ten consecutive years, since the programme launched. This year, the challenge was held in Ma On Shan Country Park and three teams from our company participated in the event. Since 2005, over 83,000 trees have been planted through this initiative to help conserve the landscape and alleviate global warming.



Towngas team members get ready for the Tree Planting Challenge.

## Zero Food Waste @ Campus 2014

Towngas sponsored an educational programme called "Zero food waste @ Campus", which was organised by Greeners Action. More than 10,000 students from 10 primary schools took part in this programme. Through a variety of activities, students were taught to cherish food, develop the habit of minimising food waste, and how to turn food waste into nutrients for plants. In addition, food waste composters were installed in these schools to allow teachers and students to easily turn food waste into organic fertiliser for use in the school gardens.



Students participate in food waste recycling programme.

# ENVIRONMENTAL INITIATIVES IN MAINLAND OPERATIONS

## Carbon Reduction Competition

We strive to reduce our carbon footprint in mainland China, particularly in relation to our joint ventures, through organising carbon reduction competitions. In 2014, we received 20 submissions from our operational units in the mainland resulting in the saving of about 20,200 tonnes of carbon emissions in a year, which is equivalent to the total carbon dioxide absorbed by 878,000<sup>1</sup> trees every year. Since the launch of the annual competition in 2010, a total of 153 submissions have been received, saving approximately 65,000 tonnes of carbon emissions annually.

<sup>1</sup>Based on the assumption that each tree absorbs 23kg CO<sub>2</sub>/year

The winning entry for 2014 was from ECO's Inner Mongolia Coal Chemical Technology Company Limited, which proposed using low-temperature argon (one of the by-products of the air separation process) to capture the heat of incoming air prior to its entrance to the air separation unit (ASU). This modification increases the efficiency of the ASU, thereby reducing the coal consumption of the boiler that supplies it with energy.



Annual savings  
**¥1,580,000**  
in operational costs



Carbon reduction  
**↓ 13,900 tonnes**  
per year

## Towngas Suzhou Bauhinia Building

Completed in 2014, the Towngas Suzhou Bauhinia Building was designed in accordance with the "2-star" Green Building Evaluation Standard set by the People's Republic of China's Ministry of Construction. It incorporates a number of green features in its design. A rainwater harvesting system is installed in the building. It is expected to save over 5,000 tonnes

of water annually for irrigation and landscaping. The building also incorporates various energy saving installations, including light pipes that introduce daylight into the interior of the building and energy efficient LED lighting. In addition, a solar water heating system provides a quarter of the hot water used for catering within the building.

## Future Targets and Initiatives

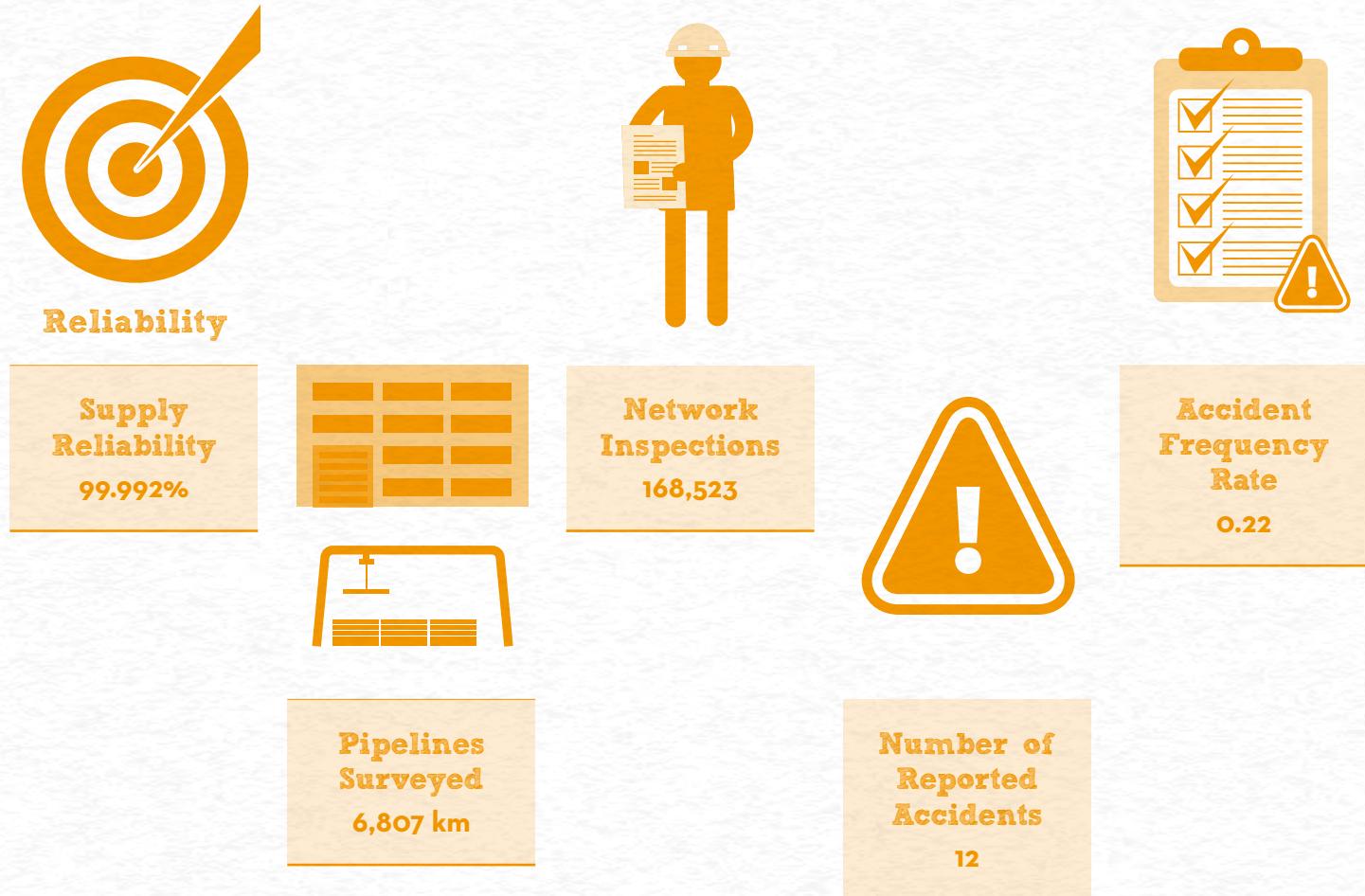
	2015 Targets	Medium Term Targets (Two to Three Years)
<b>Green Certification</b>	To achieve a Wastewise label for 14 consecutive cycles.	
	Renew BEAM Plus certification for Tawngas Headquarters.	
<b>Waste Management</b>	To enhance our waste management by commencing a waste audit project at the Tawngas Headquarters.	Implement measures to enhance waste reduction and recycling in the building.
<b>Climate Change Adaption</b>	To complete our company-wide climate change risk assessment and present the results across all departments.	
<b>Carbon Management</b>	To organise the 6th mainland carbon reduction project competition.	Continue to upgrade our corporate ESG data management system to cater for increase demand for ESG data and information disclosure.
		Identify and explore new initiatives relating to emissions reduction and resource conservation.
<b>Technological Improvement</b>	To study hydroelectric technology and its application for reducing electricity consumption at our Tai Po plant.	
	To further extend our rainwater collecting system.	
	To study the feasibility of reusing concentrate from our reverse osmosis plant as make-up water for our cooling towers.	
<b>Other Environmental Initiatives</b>	To increase the use of environmentally-friendly cleaning products.	Prepare a feasibility study to improve the energy efficiency of the lift system at our Headquarters.
	To set up an organic farm on the rooftop of our Headquarters to promote a green and healthy lifestyle.	

# 7

## SAFETY PERFORMANCE



## Key Safety Performance 2014 (Hong Kong)



As an energy supplier and service provider, we fully embrace our responsibility to ensure the highest levels of safety for our staff, contractors, customers and the general public. To uphold this responsibility, we always put safety first – constantly identifying and communicating safety risks in order to ensure that workplace health and safety is embedded in our operations and corporate culture. We also encourage the growth of technical knowledge and development of innovative ideas in order to ensure that TOWNGAS remains a safe and reliable source of energy for everyone. Our well-established and comprehensive company-wide safety management system ensures we have a world-class safety

culture and practices. This commitment to safety is not limited to TOWNGAS, but also extends to our contractors and our customers. We have developed mid- and long-term goals and continuously monitor performance to improve safety levels, while various programmes and initiatives are in place to engage stakeholders and enhance safety performance in a broader context.

During the reporting period, our activities in Hong Kong once again met all relevant health and safety legislation requirements, with no alerts or warnings received from any regulatory authorities.

## Stakeholder Dialogue

### “ How would you describe Tawngas' efforts to enhance its safety performance?

Over the years, Tawngas has actively supported and participated in various initiatives organised by the Occupational Safety and Health Council (OSHC). For example, to enhance overall safety culture and awareness, Tawngas encourages its staff to take part in our OSH training programmes. The company also adopts stringent housekeeping measures to better manage safety risks in the workplace. With all these safety standards, programmes and measures in place, Tawngas' safety performance is among the best in the industry. Tawngas' tremendous efforts in promoting health and safety and its high level of safety performance were recently recognised when it received 10 awards at the 13th Hong Kong Occupational Safety and Health Forum and Award Presentation Ceremony.

To further enhance its safety performance, Tawngas may consider putting more effort into educating its customers about the safety risks associated with the use of gas appliances, as well as its response procedures to gas leak emergencies.

”

“ We are honoured to have our efforts recognised by external parties. By participating in external programmes and initiatives, we are able to benchmark our performance against our peer companies, look for safety best practices, and constantly improve our safety performance. In future, we will put more emphasis on developing specific approaches to engage target stakeholder groups, including our customers, in order to reduce the overall safety risks associated with our operations, products and services.

”

**Victor Kwong**

**Head of Corporate Health, Safety and Environment**  
**The Hong Kong and China Gas Company Limited**

## Major Awards and Recognitions

### Hong Kong Occupational Safety & Health Awards:

- **Occupational Safety and Health Annual Report Award - Gold Prize**  
**for the 5<sup>th</sup> consecutive year**
- **Safety Culture Award- Gold Prize**  
**for the 2<sup>nd</sup> year**
- **Safety Performance Award**  
**for the 4<sup>th</sup> consecutive year**



## Review of 2014 Targets

	Target	Progress	Target achieved / In Progress
<b>Safety Training and Promotion</b>	To organise the HSE Quiz and hold the HSE Month and Contractor Programme to promote safety awareness and foster safety culture among our colleagues and contractors.	The HSE Quiz and HSE Month were held in November 2014. Activities included a series of sharing sessions and seminars on occupational safety and health and fire safety. The Contractor HSE Programme was organised to enhance two-way communication between TOWNGAS and its contractors.	Achieved
	To revamp the HSE Resource Centre for workers to experience acceptable hazards.	The HSE Resource Centre was enhanced to incorporate interactive elements into HSE Training, including working at height, fire safety and others.	Achieved
	To further promote safety awareness and safety culture in ECO mainland JVs through education, training and experience-sharing visits.	Two Hong Kong experience-sharing visits were organised to promote safety awareness, with 46 employees from mainland JVs taking part in the visits. These visits and training courses will continue over the coming years.	Achieved
	To achieve the certification of all managerial staff in our mainland JVs' Risk Management Departments as Certified Safety Engineers.	Managerial staff in the Risk Management Department of newly-formed mainland JVs will become certified safety engineers in 2-3 years.	In Progress
	To conduct a survey to gauge the "safety culture" among employees and identify improvement opportunities in our corporate safety performance.	A Safety Culture Index Survey was successfully completed with more than 1,500 colleagues participating. Data analysis will be conducted in 2015 to formulate an improvement programme.	In Progress

	<b>Target</b>	<b>Progress</b>	<b>Target achieved / In Progress</b>
<b>Safety Audit</b>	To conduct the second safety audit, with scoring, for ECO mainland CNG/LNG filling stations.	A total of seven mainland ECO CNG/LNG filling stations completed their second safety audit.	Achieved
	To implement a safety audit scoring system for our ECO mainland chemical business.	The first safety audit with scoring for two chemical plants at our ECO mainland chemical business was successfully conducted.	Achieved
<b>Safety Procedure / Guideline</b>	To publish a pocket-sized safety Golden Rules Handbook for our ECO mainland chemical business	A total of 367 copies of the Safety Golden Rules handbook were distributed to employees at our ECO methanol plant.	Achieved
	To conduct comprehensive production safety re-inspections on our gas facilities, installations and networks around mainland China.	2014 was themed the “Year of Safety Re-inspection” across Towngas China, and comprehensive production safety re-inspections were conducted on our gas facilities, installations and networks around mainland China. During the year, we also held our first Pipeline Network Operation Competition amongst our mainland companies. The competition aimed to test participants' technical knowledge, their knowledge of emergency procedures, work regulations and procedures, and the proper handling of equipment.	Achieved

# OCCUPATIONAL HEALTH AND SAFETY

Occupational Health and Safety (OHS) is a crucial component of the Group's overall safety performance. Reducing health and safety risks in the workplace that are directly or indirectly under our control, and thus providing a safe working environment for our staff and contractors, is one of the Group's highest priorities.

In 2014, we continued to reinforce our strong leadership, management system and training and educational programmes in order to strengthen our safety culture and enhance our overall OHS performance.

We have established and are continuing to implement a safety management system in accordance with the OHSAS 18001 standard to ensure the occupational safety of Towngas employees. In 2011, We were the first utility company in Hong Kong to be designated as an "International Safe Workplace" (ISWP) under the framework of the World Health Organisation's Safety Community. Supported by the Occupational Health and Safety Council in Hong Kong, the designation involves adhering to seven ISWP indicators which strengthen safety practices while fostering a safe and healthy workplace.

## ISWP indicators:



- 1. Safe Workplace Infrastructure**
- 2. Safe Workplace Policies**
- 3. Programme Implementation and Promotion**
- 4. Target High-risk Groups and Environments**
- 5. Accident/Incident Record and Analysis**
- 6. Evaluation of Effectiveness of Policies, Programmes, and Processes**
- 7. Experience Sharing and Benchmarking**

Best practices are progressively promoted not only among staff internally within Towngas, but also to our contractors. We regularly conduct relevant technical and professional safety training in order to instil a safety culture amongst our staff and contractors. During the year, the overall safety training hours undergone by our staff (including in-house and external training) exceeded 26,000, accounting for an increase of approximately 9 per cent compared to the previous year.

In 2014, a series of safety activities focusing on the health and safety culture of our employees and contractors was designed and launched. These activities consisted of some repeated initiatives and some new programmes, all of which were well-supported by our staff and contractors. Highlights of some of the 2014 activities are as follows.

## Case study 1

### Towngas Senior Management Health, Safety and Environment Inspection Programme

To strengthen safety management at Towngas, we strive to reinforce our top-down safety culture. The Senior Management Health, Safety and Environment Inspection Programme was launched in mid-2014. The programme involves senior management conducting regular HSE inspections in the workplace to monitor safety and environmental conditions. At the same time, two-way communication between frontline colleagues and senior management on HSE issues was strengthened. In the first year of implementation, senior management conducted about a hundred HSE inspections, greatly improving HSE performance. We received positive feedback on the programme from both senior management and frontline staff.



Senior Management conducting an on-site HSE audit to identify improvement areas and strengthen communication with frontline staff.

## Case study 2

### 2014 Health, Safety and Environment Climate Index Survey

To assess the HSE awareness of our staff and provide evidence-based improvement suggestions, Towngas rolled out a Health, Safety and Environment (HSE) Climate Index Survey in 2014. Through the survey, we demonstrated Towngas' commitment to HSE and encouraged staff to become involved in HSE initiatives. We gauged their level of HSE awareness by analysing and evaluating the survey results to identify contributing factors and relevant improvement actions.

## Case study 3

### Progressive Safety Enhancement for Working at Height

Towngas' comprehensive Working at Height Control Programme addresses safety issues across all stages of riser inspection and replacement work, from the provision of installation services to preventive maintenance. We have initiated various innovative projects to enhance working at height conditions through safety tools such as the Riser Inspection Quadcopter, Safety Box, Smart Pipe and others. In 2014, we rolled out our new Total Riser Solution for the inspection of gas risers attached to high-rise buildings. Using a quadcopter developed in-house, inspections can be carried out efficiently without the need to erect scaffolds or use gondolas to scale the outside of premises. This inspection solution was honoured with the Safety Enhancement Programme Silver Award at the 13th Hong Kong Occupational Safety and Health Award.

In 2014, we also strengthened the knowledge, awareness and compliance of our frontline workers through training and monitoring programmes, including the Interactive Working at Height Training Class and our Comprehensive Active Monitoring System. With the development and application of progressive safety measures for working at height, technicians can now work in a safer working environment.



## Case study 4

### Contractor HSE Programme 2014

As an on-going contractor engagement initiative, we continued our Contractor HSE Programme, which aimed to raise HSE awareness at work. The programme consists of three main initiatives - a Contractor Occupational Safety and Health Forum, the Contractor Safety Foreman Award and a Contractor HSE Quiz. The forum covered OSH topics which were closely related to a contractor's daily work activities; this year it attracted over 300 participants. The latter two initiatives rewarded contractors who displayed outstanding HSE performance to encourage them in their pursuit of continuous improvement.



Contractors actively involved in the quiz.

We continue to maintain stringent standards and work practices to ensure that our employees enjoy a safe, healthy and pleasant workplace. In 2014, we maintained a low accident frequency rate of 0.22, representing a 8 per cent decrease from 0.24 in 2013. This encouraging result brings us closer to our ultimate goal of achieving zero accidents throughout our operations.

### Key Occupational Health and Safety Statistics (Hong Kong)

	2014	2013	2012	2011	2010
<b>Number of accidents - all industrial injuries</b>	14	15	10	10	16
<b>Accident frequency rate</b>	0.22	0.24	0.19	0.19	0.31
<b>Number of reportable accidents</b>	12	12	7	9	14
<b>Accident incidence rate</b>	4.4	4.6	2.7	3.6	5.7
<b>Number of industrial injury person-days lost</b>	132	194	111	160	430

Remarks:

1. Accident - an accident that results in incapacity for one or more days.
2. Accident frequency rate - number of accidents per 100,000 man-hours.
3. Reportable accident - an accident that results in incapacity for more than 3 days.
4. Accident incidence rate - number of reportable accidents per 1,000 employees.
5. Contractor employees are excluded.
6. From 2014 onwards, accident incidence rate include the employees of our subsidiaries. The figures for 2010 to 2013 were revised accordingly.

# GAS INFRASTRUCTURE SAFETY

The Group is obliged to meet the energy needs of businesses and households every single day, while consumers understandably place great emphasis on receiving uninterrupted service. Currently, we supply town gas to over 1.8 million customers in Hong Kong. This gas is provided through a pipeline network that stretches over 3,500 km and is supported by our Grid Control Centre, which monitors the network 24 hours a day. As we provide a public service to the community, safety is of paramount importance in everything that we do. We are therefore constantly enhancing our safety management processes and procedures to provide an ever-safer and more reliable gas supply for our customers.

We believe that the design of our facilities and processes forms an important foundation for our safety operations. Our plants, equipment, networks and processes are regulated by the Electrical and Mechanical Services Department (EMSD) of the Hong Kong SAR Government. Working closely with the EMSD, we have developed a mutually agreed Strategic Plan that encompasses facilities utilisation as well as a preventive maintenance index to ensure the high standards of safety. All critical and large-scale projects or modifications of a complex



nature have to undergo a Process Hazard Analysis to analyse potential causes and consequences of any incidents that may occur. In addition, we adopt an internationally-recognised guideline to identify and document hazards that could potentially lead to major accidents, as well as detailed prevention and mitigation control measures, so as to prevent and minimise any undue risks.

## Network Safety Performance 2014

Area	Achievement	Target
<b>Gas Supply Reliability</b>	99.992%	>99.99%
<b>Emergencies Attended to within 30 Minutes</b>	95.69%	>95%
<b>Publicly-Reported Gas Seepage Incidents per 10 km of Gas Pipes</b>	0.226	<0.18
<b>Third Party Damage Incidents</b>	17	<11

Remarks: In 2014, there was a slight bounce-back in the rate of publicly-reported and third party damage incidents due to increased construction activity in Hong Kong. However, a downward trend has been observed over the past years and these incidents are at a relatively low level compared to other advanced countries.

## Frequency of Leakage Surveys

Type of pipelines	Frequency of leakage surveys
<b>Transmission pipelines:</b> <ul style="list-style-type: none"><li>• All HP &amp; IP mains</li></ul>	At least once a year
<b>Distribution pipelines:</b> <ul style="list-style-type: none"><li>• PE or steel pipes over or enclosed within structures</li><li>• Medium pressure ductile iron pipes or all galvanised iron pipes</li><li>• Low pressure ductile iron pipes</li><li>• Others</li></ul>	<p>At least twice a year</p> <p>At least six times a year</p> <p>At least three times a year</p> <p>At least once a year</p>

Remarks: HP-High Pressure IP-Intermediate Pressure PE-Polyethylene

We have great confidence in the safety, reliability and management systems at our gas production plants. Manned by competent and experienced operation and maintenance crews, in 2014 we achieved an outstanding supply reliability rate of over 99.99 per cent. In line with international best practice, we established an Asset Management System in 2006 and further upgraded it according to ISO55001 in 2014 to ensure that we optimally manage our assets, and the associated performance, risks and costs over their lifecycle.



To help safeguard our network operations, we have established a sophisticated Supervisory Control and Data Acquisition (SCADA) System. This system monitors and controls over 3,500 real-time telemetry points, both in our network and across all strategic pressure-regulating stations. Working in tandem with our Remote Control, Emergency Logging and Geographical Information systems, the SCADA system monitors and controls the smooth operation of our network and enhances the efficiency of tracking down and addressing any emergencies.

**In 2014, we completed approximately 168,500 inspections at 16,390 sites and surveyed over 6,800 km of pipelines.**

Along with our on going programme to replace old pipelines with more modern and durable materials, these inspections contribute to the high level of reliability of our pipeline network. We also employ new laser methane detectors to survey for leaks, and advanced detectors which check the condition of the coating on steel pipes.

# EMERGENCY PREPAREDNESS

On top of meeting stringent international standards, we make every effort to ensure our employees are prepared for any emergency that may arise from our operations.

**Average Emergency Team arrival time in 2014: 21.18 minutes (Service Pledge: within 25 minutes)**

The Group has a comprehensive emergency plan in place, providing guidelines and details on how Towngas responds to major emergency events including fires, major spills, damage to plants or gas transmission and distribution systems, severe accidents to personnel, civil disturbance, bomb threats, environmental pollution and more.



The effective handling of an incident requires effective communications and co-ordination between internal functional units, government departments and other stakeholders. Drills and exercises are periodically conducted with government agencies to practise and gain experience of emergency procedures. We also invite external stakeholders, including those from academia, to be involved in our corporate emergency table-top exercises and provide us with valuable advice and feedback. This familiarises personnel with emergency processes, allows them to check the availability of equipment and generally equips them to handle emergencies effectively.

To ensure that sufficient resources are available, we adopt a systematic approach to assessing and handling emergencies, which involves a three-tier procedure:

- Our Corporate Emergency Plan details how senior management commands the deployment of company resources, seeks assistance from government authorities and handles the media;
- Departmental Emergency Plan assigns responsibilities to plant managers and key emergency personnel and outlines general actions to take during emergency situations;
- Specific Emergency Procedures prescribe frontline actions to tackle particular incidents.

We have also introduced emergency vehicles equipped with computers which are capable of handling any gas emergency.



Fire drill at the Tai Po production plant

# CUSTOMER SAFETY

Customer safety is our primary concern. In pursuit of this goal, we offer customers safe appliances and provide them with a comprehensive suite of maintenance services. By disseminating safety information to our customers, we continue to raise public awareness on the safe use of our products and services through a variety of channels.

At Towngas, we offer our customers a diverse range of safe, convenient and energy-efficient home appliances. We also provide professional installation, warranties, after-sales service and free regular inspections. All our residential gas appliances comply with relevant international standards and the Code of Practice GU05 (Approval of Domestic Gas Appliances of the HKSAR). We have established a quality control mechanism to inspect and test incoming appliances and conduct compliance checks on or on behalf of our suppliers and vendors. Tailored for local markets, we have launched our own appliance brands, TGC and SIMPA in Hong Kong and Bauhinia on the mainland. In addition to meeting all established safety standards, these branded products also incorporate modern safety features such as flame failure devices. During the year, there were no incidents of non-compliance with respect to regulations and voluntary codes concerning the health and safety aspects of our products.



We conduct regular safety inspections on gas appliances in domestic premises every 18 months. During 2014, we conducted around 1,247,000 inspections of domestic gas facilities. Through these inspections, we not only identified potential problems and reduced the possibility of accidents, but we also delivered safety messages directly to our customers. After implementing this Regular Safety Inspection Programme, it is observed that urgent reports from the public regarding gas-related incidents have consistently been maintained at a low level.

We are committed to our social responsibility of educating the public on the safe and responsible use of gas products and services. We continuously hold safety exhibitions and safety talks, carrying on our long-standing and proven tradition of delivering safety messages directly to consumers. In addition to this, we also disseminate safety information and tips to customers through bill inserts, safety booklets, leaflets, websites and other channels.



## Future Targets and Initiatives

	2015 Targets	Medium Term Targets (Two to Three Years)
<b>Safety Training and Promotion</b>	To organise our HSE Day, HSE Month and Contractor HSE Programme to promote HSE awareness and foster a safety culture among our colleagues and contractors.	Develop Occupational Health and Safety key performance indicators.
<b>Safety Audit</b>	To conduct a third safety audit, with scoring, of our ECO mainland CNG/LNG filling stations.	Further promote safety awareness and a safety culture at our ECO mainland JVs through education, training and experience-sharing visits.
	To conduct a second safety audit, with scoring, of our ECO mainland chemical business.	Achieve certification for all managerial staff in our mainland JVs' Risk Management Departments, ensuring that they are all Certified Safety Engineers.
<b>Safety Procedure / Guideline</b>	To conduct an emergency drill for our ECO mainland business.	Develop a Safety Handbook for contractors, providing information on risk management and preventive measures.
	To establish a Health, Safety and Environmental (HSE) Management System for the Towngas Telecom Data Centre.	

# 8

# SOCIAL PERFORMANCE



## Key Social Performance 2014 (Hong Kong)



Compared with 2013 **↑11.3%**

Voluntary activities in which Towngas volunteers participated

**305**



Compared with 2013 **↑1.0%**

Programmes supported through active participation, donation or in-kind sponsorship

**106**



Compared with 2013 **↑8.3%**

Employees registered for voluntary services

**994**



Compared with 2013 **↑6.0%**

Towngas Customer Volunteer Team members

**178**



Compared with 2013 **↑6.1%**

Persons benefitted by our volunteer services

**575,203**



Compared with 2013 **↑10.4%**

Voluntary service hours (including employees and customers)

**79,551**



Compared with 2013 **↑8.7%**

Rice dumplings made

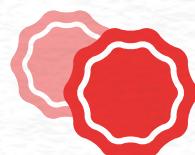
**250,000**



Compared with 2013 **↑4.0%**

Soup servings distributed

**52,350**



Compared with 2013 **↑4.0%**

Mooncakes made

**260,000**

Fuelling communities in Hong Kong for over 150 years, Towngas' services have become essential in many people's daily lives. Striving for long-term sustainability, we focus our business development both on people and for people. In this regard, we uphold strong corporate citizenship through

safeguarding the wellbeing and development of staff, practising a high standard of product responsibility, reaching out to the needy with a helping hand, and contributing through various channels to the overall sustainable development of society.

## Stakeholder Dialogue

“ Towngas offers abundant training opportunities to employees. For example, the training offered by the Towngas Engineering Academy allows us to develop essential skills required for further development. Towngas also provides a comfortable working environment and positive culture, one in which colleagues are helpful and caring in general. We have ensured support and resources are in place to retain talent; however we have noticed the turnover rate among younger employees (under 30) is higher than that of other age groups. To improve this situation, Towngas has proposed providing more assistance to junior employees in defining their personal career development paths. ”

“ Skilled and professional talent are of paramount importance to our business development. We closely monitor employment statistics and formulate strategies to nurture and retain talent. We have observed the relatively high turnover rate in the younger age group in recent years, and are preparing to refine the career paths for young technical staff not only for development and engagement purposes, but also to enable them to visualise their future prospects and how they can equip themselves along the path. ”

Kit Fan

Head of Corporate Human Resources  
The Hong Kong and China Gas Company Limited

## Major Awards and Recognitions

Awards / Recognitions	Issuing Bodies
<b>Highest Service Hour Award - Champion (Private Organisations - Best Customer Participation)</b>	Social Welfare Department
<b>Highest Service Hour Award - Merit Award (Private Organisations - Category 1)</b>	Social Welfare Department
<b>Best Multi-channel Media Customer Centre Representatives - Bronze and Merit Award</b>	Hong Kong Call Centre Association
<b>Excellent After-sales Services Award</b>	Sing Tao Daily
<b>2013/14 Distinguished Family-Friendly Employers - Corporations Category</b>	Family Council
<b>Highest Donation Award in the Community Assistance Raised by Employees (CARE) Scheme</b>	Community Chest of Hong Kong

## Review of 2014 Targets

	Targets	Progress	Achieved / In Progress
<b>Employee</b>			
<b>Talent Development</b>	<p>To strengthen leadership and management development by formalising Towngas' own leadership programmes for different management levels, and launching the 3rd Corporate Leadership Development (TLC) programme for talent development.</p> <p>To support new businesses in launching high potential employees' programmes to strengthen the Towngas leadership competencies of their young leaders.</p> <p>To continuously enhance all aspects of our corporate leadership and management development curriculum to support both business growth and employee development. Conduct Train-The-Trainer programmes to transfer skills to local JVs on various corporate programmes.</p>	<p>The core curriculum for developing Towngas leaders at different management levels was established. The 3rd TLC+ programme was launched in July 2014 with 18 selected middle level employees from different business units enrolling. The programme will last 18 months and will be completed by the end of 2015.</p> <p>Our Mainland Utilities business arm has kicked off a number of talent development programmes to meet the needs of various sub-regions and business segments, with the purpose of building up a healthy talent pipeline to support the continuous expansion of the mainland business.</p> <p>A structured corporate-level Learning &amp; Development Curriculum has been customised for our TGT business in mainland China. The pilot run will take place in 2015. In addition, a full set of training materials has been developed for a core management programme, and a Train-The-Trainer programme will be arranged in 2015.</p>	In Progress
<b>Information System Enhancement</b>	<p>To implement a web-based Employee Self Service system for streamlining work processes.</p> <p>To apply web-based and mobile technology to promote knowledge transfer from senior executives.</p>	<p>Our Employee Self Service system was launched in November 2014 to provide a user-friendly, efficient and environmentally-friendly way for employees to view and update their own information, and to perform HR related application and approval functions electronically.</p> <p>The soft launch of the platform is slated for mid-2015. We intend to include Towngas' Vision, Mission and Values (VMV), time management and core supervisory programmes in our pilot run.</p>	Achieved  In Progress

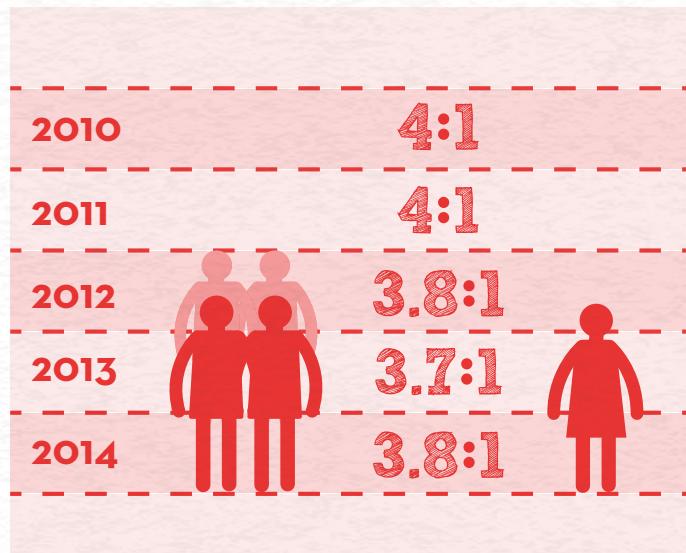
	<b>Targets</b>	<b>Progress</b>	<b>Achieved / In Progress</b>
<b>Employee Health and Safety</b>	To promote employee wellness through positive thinking, happy-at-work campaigns and programmes.	The Fun Living Series was launched, encouraging employees to cultivate a positive mindset regarding their health, work and family lives. Activities such as workshops on positive psychology, yoga at work and organic farming, as well as various health talks and seminars, were well received by colleagues.	Achieved
<b>The Community</b>			
<b>Social Project</b>	To reach a grand total of 2,050,000 rice dumplings, 1,560,000 mooncakes and 330,000 servings of hot soup distributed by the end of 2014.	Reached a grand total of 2,085,000 rice dumplings (since 2000), 1,620,930 mooncakes (since 2001) and 375,088 servings of hot soup distributed up to the end of 2014.	Achieved

# OUR PEOPLE

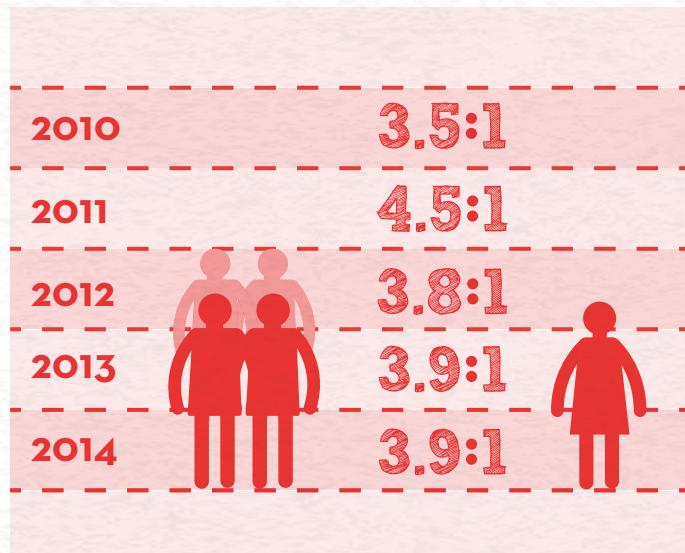
People are our most valuable asset to achieving business sustainability. To attract and retain talented professionals in the energy servicing industry, Towngas has established comprehensive recruitment policies and processes to recruit qualified candidates with suitable levels of competence and experience that match different job positions. For existing staff, a variety of training and development programmes is available for their career advancement, while recreational activities are organised to promote a balanced lifestyle.

## Key Employee Statistics

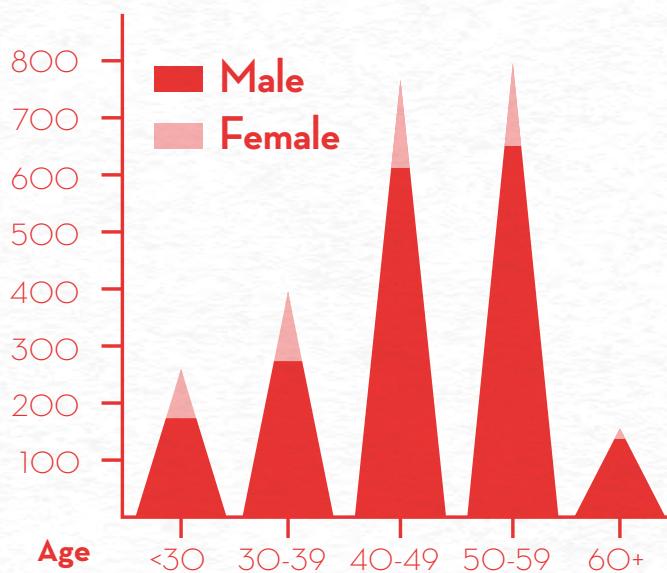
**Ratio of Male to Female in  
Hong Kong (Employees)**



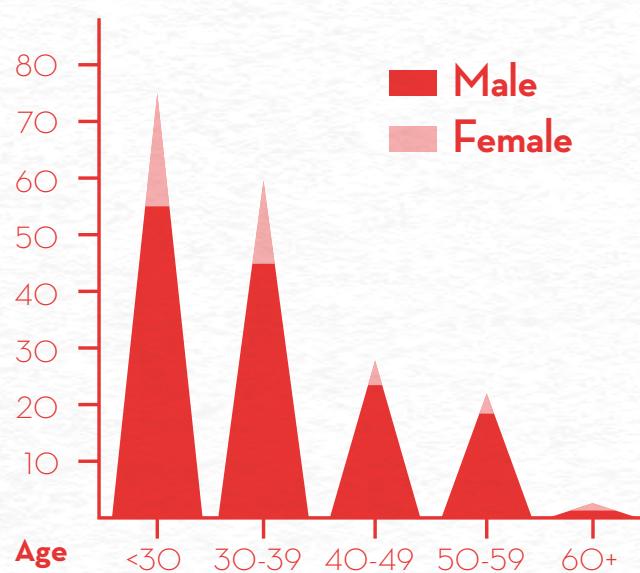
**Ratio of Male to Female in  
Hong Kong (Senior Managers)**



**Total Workforce by  
Age Group and Gender**



**Recruitment by  
Age Group and Gender**



As Towngas has been expanding rapidly in recent years outside of Hong Kong, we have also deployed our pool of talent to different locations to ensure leadership sustainability in the long run. People mobility is highly encouraged, for the purpose of individual development, transfer of know-how, sharing of best practices, reinforcement of corporate culture, and corporate governance, etc.

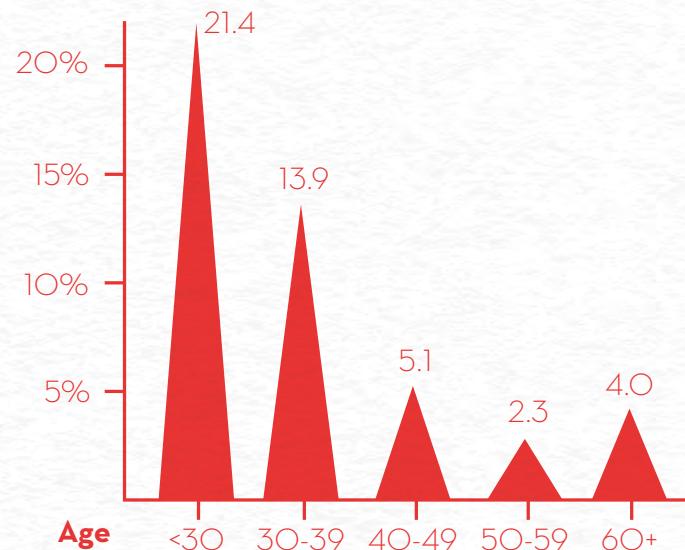
In all of the significant locations of our operation, the majority of the senior management team has been hired from the local community. Depending on business needs and the availability of local talent, Towngas will always strive for an optimal mix in the senior management team at different locations of operation.

## Employment Practice

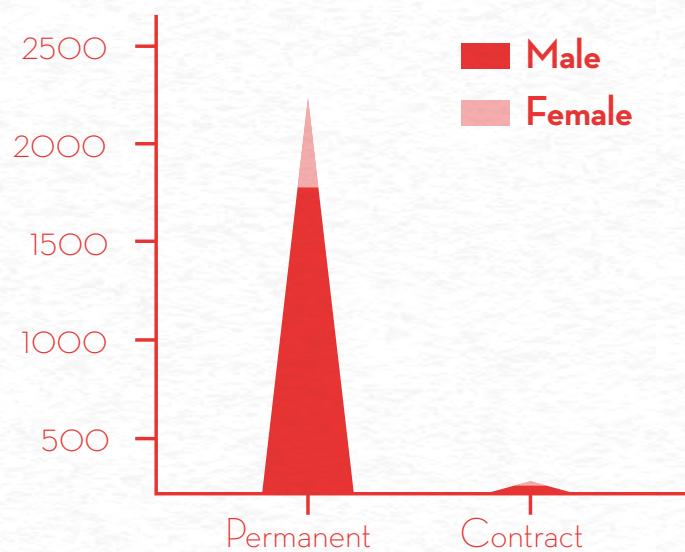
At Towngas, we adopt a rewards strategy that is market competitive and in full compliance with the legal requirements at the locations where we operate. Our full-time employees are provided with benefits such as medical insurance, dental scheme, group life insurance, gas allowance, education allowance and discretionary performance bonuses or incentives subject to individual performance. Our temporary or part-time employees are provided with clinic services at our North Point Headquarters as well as group life insurance. In general, our compensation and benefits are well above the local minimum requirements. The same set of remuneration principles and practices apply to all male and female employees.

We adhere strictly to all applicable regulatory requirements with regards to employment and labour practices, and prohibit the use of child or forced labour in our operations. Striving to provide a fair and caring work environment for staff, we have established comprehensive employment guidelines and procedures, as well as adopting equal opportunities policies to ensure that our workplace is free of any discrimination. Freedom of association for collective bargaining is respected according to local

**Turnover Rate by Age Group**



**Total Workforce by Contract Type and Gender**



regulations. Staff members are required to comply with professional codes of conduct, and any form of misconduct relating to corruption are sternly warned against and dealt with. During the reporting period, no case of misconduct was reported with regards to our employment processes and labour practices.

## Staff Development

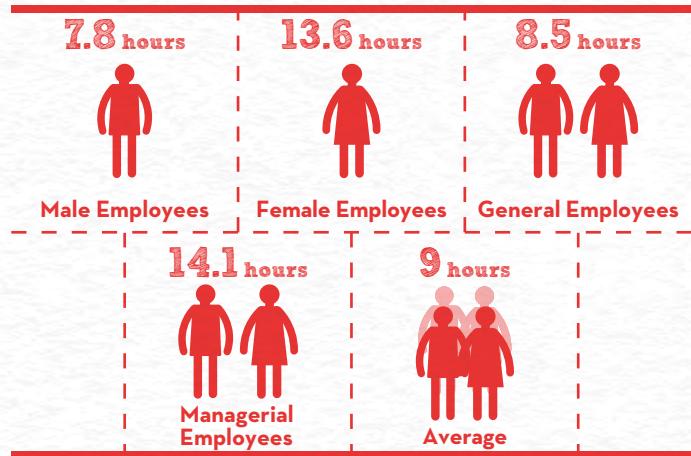
A critical part of our sustainability strategy lies in the continual development of the staff competencies and maintenance of the competitiveness of our workforce. The Group is supportive of staff undertaking external educational courses in pursuit of qualification advancement or in the development of other job-related skills, providing subsidies where appropriate. Besides updating our staff with the latest technical knowledge, Towntgas offers many types of programmes for improving personal skills. For employees demonstrating good performance, we encourage career advancement by providing training to sharpen their management and leadership abilities. Our comprehensive staff development system has won us recognition, including a “Manpower Developer” designation from the Employees Retraining Board.

Underscoring our management theme of “Expanding New Horizons”, which projects the path for the next stage of our business growth, Towntgas has continued to provide opportunities to develop the soft skills of staff and assist qualified staff in moving up the ladder.

The third round of our corporate leadership programme, the Towntgas Leadership Competency Acceleration Development Programme (TLC+), was carried out in 2014. It consists of an 18-month fast-track development programme for 18 selected middle management staff with high potential from different departments. The TLC+ is intended to build a strong internal pool of talent to support the Group’s mid- to long-term growth. For supervisory and managerial employees, we designed a Leading Others series, with a total of around 12,000 hours of management and leadership competence training delivered in the reporting period. This areas of focus included “Walking our VMV”, “Coaching for Excellence”, “Legal Compliance in People Management”, “Reward and Performance Management” and “Igniting Creativity and Innovation”.

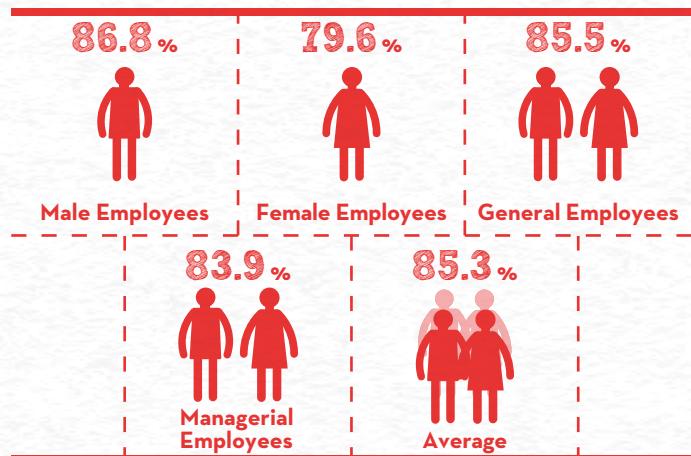
To facilitate the development of talent in other regions in which the Group operates, standardised courses were made available to staff located outside Hong Kong. For example, we collaborated with the Hong Kong Management Association to introduce a number of leadership workshops for managers in our mainland companies.

### 2014 Average Training Hours\*



\*HSE training hours are excluded

### 2014 Employee Performance and Career Development Reviews



In view of the importance of managers having the right hiring skills to identify suitable candidates for recruitment or promotion, a new workshop focusing on Competency-based Interviewing Skills was arranged in 2014 for senior executives. Additional training programmes were scheduled for later this year to further strengthen managers’ skills. Each year we conduct appraisals for staff on their performance, with the aim of both encouraging their personal development and enhancing the overall value of our human capital. Special training and communication sessions were organised for supervisors and managers to reinforce the relevant skills required to perform an appraisal effectively.

## Towngas Engineering Academy

In view of the unique technical and management skills required in the gas business, the Towngas Engineering Academy (TEA) was established in 2009 to provide more structured and professional training to our staff. In 2014, TEA provided 168,480 hours of training, with its engineering training system being expanded to meet the needs of our operations in both Hong Kong and mainland China, as well as international accreditation requirements. For instance, our existing TEA one-year apprenticeship training in Hong Kong was upgraded to a two-year programme, graduates of which are eligible to apply for a full Registered Gas Installer licence. In collaboration with local vocational institutions, we continue to cultivate new blood for the industry in Hong Kong and the mainland. During the year, a new training facility was established in Suzhou.

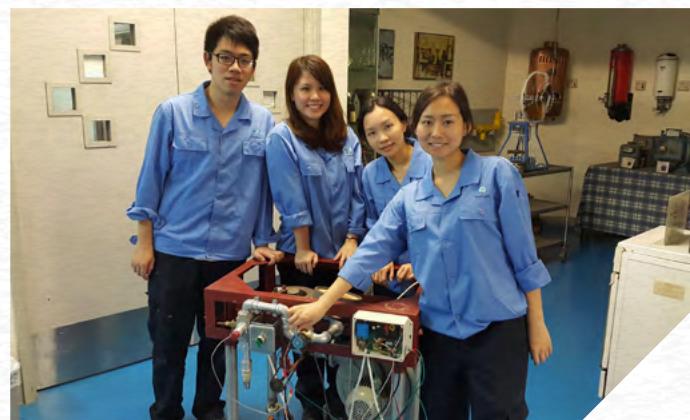
## Towngas Engineering Academy Training in 2014

	Training Man-hours	Number of Employees Trained
<b>Continuing Professional Development Seminars*</b>	2,208.5	1,927
<b>Gas Fitter Apprentice Training Scheme, Network Trainee Fitter Scheme, Registered Gas Installer Training for contractors, Technical Skills and Refresher Training Programmes</b>	47,040	4,145
<b>Technical Training in mainland China</b>	121,440	5,514

\* For Hong Kong staff only

## Graduate Trainee Programme

Our tailor-made programme for fresh graduates to develop their careers in gas engineering, known as the Graduate Trainee Programme, is both professionally recognised by the Institution of Gas Engineers and Managers (UK) and well received by young local talent over the years. During 2014, a total of 13 candidates were recruited through this programme. In view of its success, the Group plans to introduce similar programmes in other regions in the coming years.



## Executive Development Programme

For senior-level managers, an Executive Development Programme was provided in collaboration with tertiary institutions in the mainland such as Tsinghua University and the Chinese Academy of Governance. To help grow middle-level technical managers into more senior

roles, six sessions of a two-day management course were provided to 125 employees from all regions in 2014. In addition to a general manager training programme, a Train-the-Trainer programme has also been rolled out to strengthen our core management skills training in the mainland.

## Work-Life Balance

To cultivate a positive and supportive team spirit within the organisation, Towngas arranges different staff wellness programmes every year. Following the success of a “Healthy Living Every Day” programme in 2013, we initiated another internal campaign called “Fun Living Every Day” in 2014. It comprised workshops, talks and seminars on various topics such as harmonious working relationships and children’s emotional intelligence. Exercise activities including an indoor rowing competition were also organised. Aiming to promote good health and a balance between work and family life, our campaign focused on the wellbeing of staff in these four main aspects:

- Work – We treated staff to snacks and fruit on two Mondays during the year to cheer them up at work.
- Mind – We invited experts and role models to share with staff their positive attitudes to life through seminars.
- Health – We encouraged staff to choose a sustainable diet and lifestyle by arranging a workshop on organic farming and offering exercise opportunities such as Yoga@Work sessions and an indoor rowing competition.
- Family – To celebrate Christmas, we invited employees to bring their family members to our Towngas Family Day at our North Point Headquarters. Performances and presents were arranged.

As part of tradition, Towngas supports staff competing in the dragon boat races held around Hong Kong each year. This year, the Towngas Dragon Boat team won the top honour in three races: the Repulse Bay Dragons Contest – Men’s Small Dragon Charity Race, the Stanley Dragon Boat Warm-up Match – Men’s Standard Dragon Open, and the Eastern Dragon Boat Race – Men’s Standard Dragon Race (Corporate Race).

Apart from arranging activities for existing staff, we also take care of our retired staff. In 2014, our Towngas Buddy Club continued to draw retirees together and keep friendly connections among former employees alive through activities such as day trips, buffet lunches, dinners and seminars.



Our “Fun Living Every Day” campaign promoted a healthy and balanced lifestyle.



Towngas team excelled in their dragon boat competition.

# CUSTOMER SERVICES

At Towngas, we understand that in providing a gas service to the public, the nature of our business entails a high level of responsibility to customers. From our mission to provide “Caring, Competent and Efficient service”, we have derived a standardised ACE Model for providing customer service. Besides emphasising the importance of customer service delivery, this model accentuates the value of projecting a positive attitude and a good first impression. A number of guidelines and training programmes have also been developed to support its implementation across the Group. Starting from 2014, the ACE Model and its relation to Towngas’ mission have been explained as part of our orientation programme for all new staff.

## Sharpening Service Skills

Inspired by the traditional Chinese virtue of Courtesy (“禮”), a training programme was introduced in 2013 to reinforce the behaviours and mindset of staff with respect to the three elements of courtesy: etiquette, politeness and caring (“禮儀”, “禮貌”, “禮讓”).

In 2014, the programme was extended to cover frontline staff and contractors in departments including customer service, marketing and sales, and restaurants. A total of 30 sessions were delivered, with over 480 employees attending. The training was well received and participants found it useful in helping them maintain a positive attitude towards customer service and sharpen their techniques in delivering it.



When communicating with customers, we closely adhere to regulatory requirements to protect their legal rights and data privacy. Towngas has established comprehensive policies and provided training for staff to ensure conscientious handling of customer-related data and safeguard confidential or proprietary information. All departments and relevant subsidiaries are responsible for data protection in their own operations, and are required to make declarations to the Group on an annual basis. Moreover, our Data Privacy Departmental Committee and Data Protection Office are designated to oversee and coordinate operational matters in this regard. Our Data Privacy Standing Committee was set up to review corporate-wide strategies relating to personal data handling and make recommendations to our Executive Committee if an incident of non-compliance is discovered.

During 2014, there were no substantiated complaints regarding breaches of customer privacy or losses of customer data.

## Caring for Customers

Since 1994, we have evaluated our service to customers against the Towngas Service Pledge, which includes a number of targets for excellence in service reliability, safety, accessibility, convenience and quality, in addition to the handling of customer inquiries. We are glad to have achieved these targets in a consistent manner, and will continue to do our best to meet the expectations of customers.

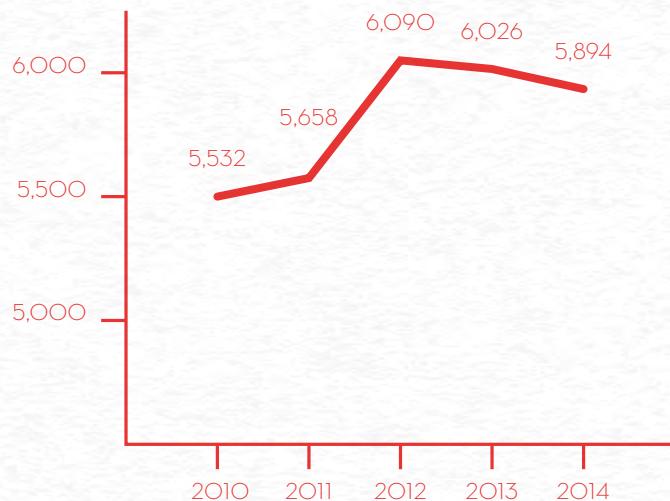
Our commitment to service excellence is often recognised through customer compliments and industry awards. In response to the quality of service delivery from our staff, a total of 5,894 complimentary letters were received from customers in 2014. Our all-around after-sales service was once again recognised with an "Excellent After-sales Services Award" in the "Excellent Services Brand Award" organised by Sing Tao Daily.

Besides engaging an external agent to conduct impartial customer satisfaction surveys every month, our Customer Focus Team, comprising senior staff from our Customer Services, Customer Accounts and Retail Marketing departments,

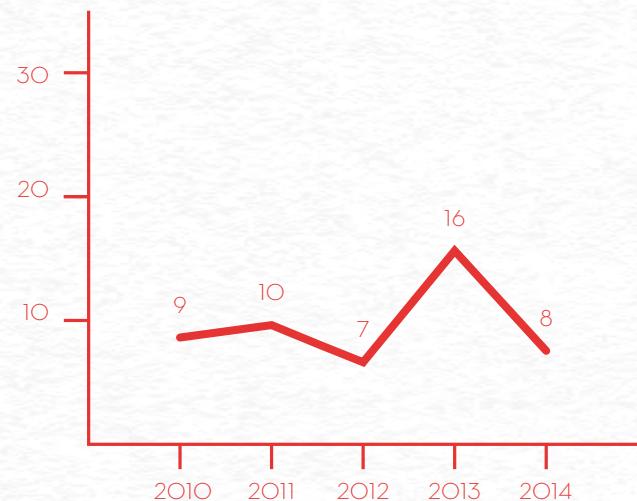


gauges customer expectations by paying two visits per month to local residential areas. As a critical driving force for the continuous improvement of the Towngas customer experience, the team analyses first-hand feedback gained from customers in order to facilitate service enhancement.

**Customer Compliments**



**Customer Complaints**



# COMMUNITY SERVICES

As a public utility, we strive to conduct our business in harmony with the community and are always mindful that we have the opportunity to touch many people's lives on a daily basis. In order to better understand the needs of local communities, our Towngas District Council Focus Teams were initiated in 2000. Currently, these teams consist of about 50 managers from different departments and have direct connections with district councillors and representatives of 18 districts in Hong Kong. The teams garner useful insights into the latest community issues and enable us to allocate resources where they are most useful, such as charitable efforts, household safety and environmental campaigns, and services for the elderly. In the reporting year, we continued to offer charity contributions for those in need, provide volunteer service to the community, and develop initiatives that foster synergy for positive social impact.

## Helping Those in Need

To provide support to disadvantaged or underprivileged individuals in the community, Towngas introduced its first tariff concession scheme for the elderly back in 1995. Since then, three more concession schemes have been launched to assist other target groups: people with disabilities, low income families, and single-parent families. In 2014, the number of households benefitting from these schemes exceeded 47,100.

We continued to carry out the Warmth and Care Fresh Food Aid Programme in 2014. In collaboration with the Salvation Army and Tung Wah Group of Hospitals, we provided fresh food in packs for 150 low income and single-parent families in Hong Kong twice a week, via the social enterprise CookEasy.

With our partners, we also promoted the "Heart Warming" Suspended Meals Scheme to help the

underprivileged. This involved Towngas and the Lucky House Group donating two extra coupons for every four Suspended Meals coupons sold online. Ten thousand suspended meals were donated by Towngas under the scheme. In addition, we make a daily donation of 100 meal-boxes to low-income families with children in Wong Tai Sin district.

During the year, we donated over HK\$1.3 million to the Community Chest of Hong Kong to make a positive impact to the lives of disadvantaged members of the community. In view of such contributions, we were honoured to receive a Platinum Award from The Community Chest of Hong Kong, after winning second place in the "Top Ten Fund-raising organisation" category and also the "Highest Donation Award" in the Community Assistance Raised by Employees (CARE) Scheme.

## Volunteer Service

Over the years, we have drawn together a group of more than 900 caring and altruistic employees to join our Towngas Volunteer Service Team, which plays an important role in carrying out our community activities in Hong Kong.

As of the end of 2014, 546,637 hours of community service had been accumulated by our volunteers since 1999. This brought us another top honour, the "Highest Service Hour Award - Champion (Private Organisations - Best Customer Participation)" from the Social Welfare Department.



Towngas continued to invite volunteers, family members and friends to take part in our Farming for Fun Programme during 2014. The programme provided an excellent opportunity for people to practice organic farming in their leisure time over weekends, while promoting the concepts of sustainable food and sharing resources in the community. The produce was collected for donation to the needy through local non-governmental organisations. The success of the programme was publicly recognised by the Social Welfare Department in its "2013-2014 Best Corporate Volunteer Service Project Competition."

In the mainland, over 70 per cent of the Group's joint-venture and wholly-owned enterprises have their own volunteer service teams. With several thousands of members collectively, our volunteers reach out to local communities having contributed over 100,000 hours of service, as of the end of 2014.

## Social Initiatives

Our signature social initiative, the annual Rice Dumplings for the Community scheme, has run for more than 14 years during the Tuen Ng festival. It is an expression of our care for elderly people who live alone, and for others in need. In 2014, we engaged over 240 Legislative Councillors and District Council members as well as 22 local organisations to create volunteering synergy across Hong Kong in implementing this large-scale social initiative. The kick-off event, Organic Rice Dumplings for the



Environment, was held at an organic farm in Yuen Long on 14 May. A number of students from the Hong Chi Association wrapped low-carbon organic rice dumplings and learned about organic farming from Towngas' volunteers. During the campaign in 2014, a total of 250,000 rice dumplings were made and distributed, representing an 8 per cent increase from the previous year and taking the total number of donated dumplings since the inception of the programme to over 2 million.



Similar to Rice Dumplings for the Community, another large-scale annual social initiative organised by Towngas, Mooncakes for the Community, was launched in 2001. Based on the same concept of “sharing and caring”, it involves volunteers helping to distribute mooncakes to the needy in celebration of the Mid-Autumn Festival. In August 2014, a kick-off event was held in collaboration with the Hong Kong Christian Service. Over 100 elderly people attended as a renowned artist teamed up with our volunteers to make mooncakes, while participants also enjoyed games and a yoga demonstration. With the support of over 500 Legislative and District Councillors and 58 local organisations, 260,000 mooncakes were donated to the community in the reporting year, taking our total number of donated mooncakes across Hong Kong to over 1.6 million since 2001.

Having initiated a scheme to install electrical toilet washlets in elderly homes in 2013, we extended the initiative in 2014. Mindful that many senior citizens suffer from limited mobility and eyesight, we selected high quality of washlets equipped with washing functions, reducing workloads for nursing staff. A special charity donation event, Mad Dog Café, was organised by the Towngas Executive Office to promote the initiative among staff while raising over HK\$200,000 for purchasing washlets. As of the end of 2014, 100 electrical toilet washlets have been installed in 38 elderly homes around Hong Kong.



The Gentle Breeze Movement was launched in mainland China in 2013 as the umbrella name for our community projects. In 2014, the Movement was extended to Xuzhou, in Jiangsu province; Chizhou, in Anhui province; and to Weifang and Jinan, both in Shandong province. The Group donated RMB 700,000 towards a number of education-related initiatives at a total of 13 schools in these cities. Projects include renovating teaching blocks in schools, building e-classrooms and donating resources such as teaching equipment, stationery and sporting goods to improve students' learning resources and conditions.

In addition, the Group launched a six-month Companionship for Resident Children Programme in 2014 in support of Loving Home - the Home of Happiness and Peace, a charity project organised by the China Glory Foundation and the Beijing Global Village Environmental Education Centre. Two groups of volunteers visited two villages in Wuxi Xian, a county of Chongqing, in February and October respectively. Besides offering the resident children homework tutorials and instruction in subjects including music, art and physical education, our volunteers also helped the students in their daily lives and provided psychological counselling. Towngas China is the first company to provide volunteers for the Home of Happiness and Peace charity project since its launch.

## Future Targets and Initiatives

	2015 Targets	Medium Term Targets (Two to Three Years)
<b>Employee</b>		
<b>Career Development</b>	To refine the career paths of young technical staff in our Commercial and Engineering Divisions to enable them to envision their future prospects and equip themselves accordingly.	To formulate career paths for key “job clusters” in the Company in order to further staff development and engagement.
<b>Knowledge Management</b>	<p>To promote a mobility programme that encourages employees to take up various types of mobility assignments, including assuming challenging roles and responsibilities across geographical locations, business segments and job functions, thereby facilitating knowledge transfer and sharing of best practices, and creating group synergies.</p> <p>To initiate learning and sharing between Mainland Utilities and Hong Kong Utilities colleagues on seven specific areas: maintenance, quality assurance, purchasing, tendering, warehousing, quality improvement and innovation.</p>	To increase knowledge transferred and best practices shared for all key processes across customer service, safety, engineering, procurement, quality assurance and improvement, partly through effecting year-on-year increases in the numbers joining the mobility programme.
<b>Learning and Development</b>	To launch a new Learning & Development curriculum that includes the standardisation of the on-boarding process and induction training for new joiners, an effective selling skills programme for general managers, and more.	To continuously enhance the content of our corporate leadership and management development curriculum to support both business growth and the development of our employees.
<b>Talent Management</b>	<p>To continue the development of our third TLC+ Programme, particularly with regards to action learning projects, workshops, forums, mentoring and performance reviews and feedback.</p>	<p>To support new businesses in launching high-potential employee programmes to strengthen the Towlgas Leadership Competencies of younger staff.</p> <p>To extend the Corporate TLC+ programme to more participants from across our mainland China businesses.</p>
<b>The Community</b>		
<b>Social Projects</b>	To distribute a grand total of 2,300,000 rice dumplings, 1,630,000 mooncakes and 400,000 servings of hot soup by the end of 2015.	To distribute a grand total of 2,550,000 rice dumplings, 1,800,000 mooncakes and 480,000 servings of hot soup by the end of 2017.

# 9

## KEY STATISTICS

<b>Business</b>						
Operations (Company)						
	<b>Unit</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
<b>Customers as at 31 December (Hong Kong)</b>	Number	1,819,935	1,798,731	1,776,360	1,750,553	1,724,316
<b>Town gas sales (Hong Kong)</b>	Million MJ	28,835	28,556	28,360	28,147	27,578
<b>Installed capacity (Hong Kong town gas production)</b>	Thousand Cubic metres per day	12,260	12,260	12,260	12,260	12,260
<b>Employees as at 31 December (Hong Kong gas business only)</b>	Number	1,972	1,966	1,943	1,938	1,923
<b>Average turnover of workforce (Hong Kong gas business only)</b>	%	6.4	5.1	4.6	4.6	4.5
<b>Average turnover of workforce (all Hong Kong staff)<sup>1</sup></b>	%	7.4	5.9	5.5	6	5.5
<b>Financial</b>						
<b>Revenue</b>	HK\$ million	31,615	28,246	24,923	22,427	19,375
<b>Manpower costs</b>	HK\$ million	2,706	2,282	2,013	1,700	1,467
<b>Taxation</b>	HK\$ million	1,771	1,655	1,485	1,344	1,039
<b>Dividends</b>	HK\$ million	3,680	3,346	3,042	4,148	2,514
<b>Safety Performance (Hong Kong)</b>						
Safety						
<b>Trench inspections</b>	Number	16,390	13,675	17,599	16,533	18,400
<b>Regular safety inspections - home visits</b>	Number	1,247,727	1,021,089	1,114,409	1,177,367	1,110,744
<b>Community safety exhibitions</b>	Number	12	12	12	13	12
<b>Community safety talks</b>	Number	10	5	6	5	6
<b>In-house safety training</b>	Number of man-hours	19,726	17,822	20,254	14,047	19,075
<b>External staff safety training</b>	Number of man-hours	6,385	6,181	6,720	7,071	8,002

	Unit	2014	2013	2012	2011	2010
<b>Accidents - all industrial for injuries<sup>2</sup></b>	Number	14	15	10	10	16
<b>Accident frequency rate<sup>2</sup></b>	Number of accidents per 100,000 man-hours	0.22	0.24	0.19	0.19	0.31
<b>Reportable accidents<sup>2</sup></b>	Number	12	12	7	9	14
<b>Accident incidence rate<sup>2,3</sup></b>	Number of reportable accidents per 1,000 employees	4.4	4.6	2.7	3.6	5.7
<b>Traffic accident injury rate<sup>2</sup></b>	Number of traffic accident injuries per 100 vehicles	1.68	1.47	3.74	3.11	3.71
<b>Industrial injury man-days lost</b>	Number of man-days	132	194	111	160	430
<b>Fatal accidents (Hong Kong employees)</b>	Number	0	1	0	0	0
<b>Social Performance (Hong Kong)</b>						
Customer Service						
<b>Customer compliments</b>	Number	5,894	6,026	6,090	5,658	5,532
<b>Customer complaints</b>	Number	8	16	7	10	9
Community Involvement						
<b>Employees participating in voluntary services</b>	Number	994	918	1,079	1,215	1,112
<b>Voluntary service hours (including employees and customers)</b>	Number of hours	79,551	72,025	68,508	64,956	48,815
<b>Environmental Performance (Hong Kong)</b>						
Resource Consumption / Conservation						
<b>Electricity consumption at headquarters</b>	kWh	6,026,637	6,370,540	6,913,514	6,840,479	6,945,157
<b>Town gas consumption at headquarters</b>	Units	28,180	33,051	86,142	85,545	100,666
<b>Water consumption at headquarters</b>	Cubic metres	16,735	14,006	13,470	14,033	13,229
<b>Fuel consumption (unleaded petrol)</b>	Litre	522,868	532,401	588,411	645,047	Figures not available
<b>Fuel consumption (diesel)</b>	Litre	226,235	194,535	158,825	126,903	Figures not available
<b>Packaging material used - carton</b>	Tonnes	824	798			Figures not available

	Unit	2014	2013	2012	2011	2010
<b>Packaging material used - wood</b>	Tonnes	24	23		Figures not available	
<b>Packaging material used - plastic</b>	Tonnes	1	1		Figures not available	
<b>Naphtha saved<sup>4</sup></b>	Tonnes	10,261	9,982	13,355	13,996	13,657
<b>Town gas saved<sup>4</sup></b>	Cubic metres	3,006,583	3,406,278	3,404,587	3,528,364	4,089,133
<b>Water saved<sup>4</sup> (gas production)</b>	Cubic metres	223,174	230,288	218,887	177,463	224,358
<b>Grid electricity saved through Photovoltaic (PV) panels</b>	kWh	86,850	86,700	86,500	86,600	86,600
<b>Electricity saved<sup>4</sup> (North Point headquarters and Ma Tau Kok office)</b>	kWh	5,161,414	4,823,309	4,254,325	4,234,225	4,142,825
<b>CO<sub>2</sub> reduction equivalent in electricity saved<sup>5</sup> (North Point headquarters and Ma Tau Kok office)</b>	Tonnes	3,613	3,376	2,981	2,963	2,900
<b>Landfill gas utilisation as heating fuel in gas production (from Shuen Wan)</b>	Cubic metres	2,164,000	2,526,000	2,362,000	2,364,000	2,761,000
<b>Landfill gas utilisation as heating fuel in gas production (from NENT SNG)</b>	Cubic metres	15,126,352	14,619,749	20,129,181	20,789,390	19,925,269
Air Emissions						
<b>Carbon dioxide (CO<sub>2</sub>)</b>	Daily average in tonnes (tonnes per million MJ of town gas)	904 (11.70)	931 (12.09)	904 (11.92)	913 (11.91)	896 (11.96)
<b>Nitrogen oxides (NO<sub>x</sub>)</b>	Daily average in kg (kg per million MJ of town gas)	310 (4.02)	353 (4.59)	318 (4.20)	356 (4.65)	344 (4.59)
<b>Sulphur oxides (SO<sub>x</sub>)</b>	Daily average in kg (kg per million MJ of town gas)	1.4 (0.02)	1.2 (0.02)	1.5 (0.02)	1.5 (0.02)	1.9 (0.03)
<b>Greenhouse gases<sup>6</sup> (gas production)</b>	Tonnes in terms of CO <sub>2</sub> equivalent	358,582	365,981	360,634	362,307	355,958
Effluent						
<b>Wastewater</b>	Daily average in cubic metres (cubic metres per million MJ of town gas)	307 (3.97)	323 (4.20)	435 (5.74)	447 (5.84)	351 (4.68)

	Unit	2014	2013	2012	2011	2010
Waste Avoidance/Recycling						
<b>Chemical waste generated<sup>7</sup></b>	Daily average in kg (kg per million MJ of town gas)	83 (1.07)	150 (1.94)	93 (1.23)	51 (0.67)	178 (2.37)
<b>Spent catalyst collected for metal recovery</b>	Tonnes	23.6	39.7	35.3	41.1	36
<b>Metal chemical drums reused</b>	Number	15	90	318	216	161
<b>Plastic chemical drums reused</b>	Number	1,030	914	969	1,064	818
<b>Spent lube oil recycled</b>	Tonnes	25.2	46.7	25.3	16.1	15.2
<b>Scrap metal recycled - old gas appliances</b>	Tonnes	1,229	1,278	926	840	989
<b>Scrap metal recycled - from construction and maintenance of plant and pipelines</b>	Tonnes	23	28	35	11	47
<b>PE pipe recycled</b>	Tonnes	17.8	12.6	10.7	27	11.7
<b>Gas appliances polyfoam packaging materials avoided</b>	Tonnes	1.29	1.31	1.52	2.19	4.33
Environmental Training						
<b>In-house environmental training</b>	Number of man-hours	1,012	1,420	1,951	549	4,008
<b>External environmental training</b>	Number of man-hours	349	818	1,120	255	773

## Remarks:

1. Hong Kong hired employees of HKCG, U-Tech, TGT, Manufacturing business, S-Tech, and ECO Stations.
2. Contractor employees are excluded.
3. From 2014 onwards, the accident incidence rate includes the number of employees of our subsidiaries. The figures for 2010 to 2013 have been revised accordingly.
4. These figures are the savings achieved compared with the data of a reference year before implementing the respective environmental initiative.
5. The default value to account for the GHG Emission Factor of electricity sold to customers in Hong Kong is 0.7 kg/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).
6. The emission factors of greenhouse gas emissions due to the consumption of electricity are obtained from the sustainability reports of the two local electricity companies which are released one year prior to our reporting year.
7. All chemical waste handling procedures comply with the Waste Disposal Ordinance (Cap. 354).

# 10 GRI AND HKEX CONTENT INDEX

GRI G4	HKEx ESG Reporting Guide General Disclosures	Description	Corresponding Chapters / Information	External Assurance
<b>GENERAL STANDARD DISCLOSURES</b>				
<b>Strategy and Analysis</b>				
G4-1		Statement from the most senior decision-maker of the organisation	Managing Director's Message	✓
<b>Organisational Profile</b>				
G4-3		Name of the organisation	Our Company	✓
G4-4		Primary brands, products, and/or services	In Hong Kong, our core business consists of gas production and distribution, the marketing and sale of gas appliances, as well as comprehensive after-sales services.	✓
G4-5		Location of organisation's headquarters	Our Company	✓
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	Our Company >> Our Roles and Services	✓
G4-7		Nature of ownership and legal form	Our Company	✓
G4-8		Markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries)	Our Company >> Our Roles and Services	✓
G4-9		Scale of the reporting organisation	- Our Company - Key Statistics >> Business >> Operations (Company)	✓
G4-10	A1.1	Employees statistics	Social Performance >> Our People >> Key Employee Statistics	✓

GRI G4	HKEx ESG Reporting Guide General Disclosures	Description	Corresponding Chapters / Information	External Assurance
G4-11		Percentage of employees covered by collective bargaining agreements	Social Performance >> Our People >> Employment Practice	✓
G4-12	C1, C1.1, C1.2	Description of the organisation's supply chain	<ul style="list-style-type: none"> <li>- Sustainability at Towngas &gt;&gt; Corporate Governance &gt;&gt; Supply Chain Management</li> <li>- Sustainability at Towngas &gt;&gt; Stakeholder engagement</li> </ul>	✓
G4-13		Significant changes during the reporting period regarding the organisation's size, structure, ownership or its supply chain	There were no significant changes during the reporting period.	✓
<b>Commitments to External Initiatives</b>				
G4-14		Explanation of whether and how the precautionary approach or principle is addressed by the organisation	<ul style="list-style-type: none"> <li>- Sustainability at Towngas &gt;&gt; Corporate Governance</li> <li>- Sustainability at Towngas &gt;&gt; HSE Policy and Governance</li> <li>- Safety Performance &gt;&gt; Gas Infrastructure Safety</li> </ul>	✓
G4-15		Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organisation subscribes or endorses	<ul style="list-style-type: none"> <li>- Sustainability at Towngas &gt;&gt; External Environmental, Social and Governance Charters and Initiatives</li> <li>- Environmental Performance &gt;&gt; Major Awards and Recognitions</li> </ul>	✓
G4-16		Memberships of associations	Sustainability at Towngas >> Memberships of Associations	✓
<b>Identified Material Aspects and Boundaries</b>				
G4-17		Entities included in the organisation's consolidated financial statements	About this Report >> Scope and Boundaries	✓
G4-18		Process for defining report content and aspect boundaries	About this Report >> Materiality Assessment	✓
G4-19		Material Aspects identified in the process for defining report content	About this Report >> Material Aspects and the Corresponding Boundaries	✓
G4-20		Aspect Boundary within the organisation for each material aspect	About this Report >> Material Aspects and the Corresponding Boundaries	✓
G4-21		Material Aspect outside the organisation for each material aspect	About this Report >> Material Aspects and the Corresponding Boundaries	✓

GRI G4	HKEx ESG Reporting Guide General Disclosures	Description	Corresponding Chapters / Information	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	There is no restatement of information provided in previous reports.	✓
G4-23		Significant changes from previous reporting periods in the scope and boundary	About this Report >> Scope and Boundaries	✓
<b>Stakeholder Engagement</b>				
G4-24		List of stakeholder groups engaged by the organisation	About this Report >> Materiality Assessment >> Stakeholder Engagement	✓
G4-25		Basis for identification and selection of stakeholders with whom to engage	About this Report >> Materiality Assessment	✓
G4-26		Approaches to stakeholder engagement	About this Report >> Materiality Assessment >> Stakeholder Engagement	✓
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	<ul style="list-style-type: none"> <li>- Sustainability at Towngas &gt;&gt; Stakeholder Communication Channels and Concerns</li> <li>- Environmental Performance &gt;&gt; Stakeholder Dialogue</li> <li>- Safety Performance &gt;&gt; Stakeholder Dialogue</li> <li>- Social Performance &gt;&gt; Stakeholder Dialogue</li> </ul>	✓
<b>Report Profile</b>				
G4-28		Reporting period	About this Report	✓
G4-29		Date of most recent previous report	Our previous sustainability report was published in 2014.	✓
G4-30		Reporting cycle	About this Report	✓
G4-31		Contact point for questions regarding the report or its contents	About this Report >> Feedback	✓
G4-32		GRI Content Index , the 'in accordance' option the organisation has chosen and the reference to the External Assurance Report	<ul style="list-style-type: none"> <li>- About this Report</li> <li>- P.86-97</li> </ul>	✓
G4-33		Policy and current practice with regard to seeking external assurance for the report	Verification Statement	✓

GRI G4	HKEx ESG Reporting Guide General Disclosures	Description	Corresponding Chapters / Information	External Assurance
<b>Governance</b>				
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	Sustainability at Towngas >> Corporate Governance, HSE Policy and Governance	✓
<b>Ethics and Integrity</b>				
G4-56		The organisation's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics	Sustainability at Towngas >> Towngas Corporate Sustainability, Corporate Governance, Code of Conduct	✓
<b>SPECIFIC STANDARD DISCLOSURES</b>				
<b>Economic</b>				
Economic Performance				
G4-DMA			Our Company	✓
G4-EC1	D1.2	Direct economic value generated and distributed	2014 Highlights >> Financial Indicators 2014	✓
G4-EC2		Financial implications and other risks and opportunities for the organisation's activities due to climate change	Environmental Performance >> Our Pursuit of Environmental Excellence >> Climate Change Risk Assessment and Mitigation Measures	✓
G4-EC3		Coverage of the organisation's defined benefit plan obligations	Not Applicable	✓
G4-EC4		Significant financial assistance received from government	Towngas has not received any financial assistance from any governmental bodies	✓
Market Presence				
G4-DMA			Our Company	✓
G4-EC5		Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation	Social Performance >> Our People >> Employment Practice	✓
G4-EC6		Proportion of senior management hired from the local community at significant locations of operation	Social Performance >> Our People	✓

GRI G4	HKEx ESG Reporting Guide General Disclosures	Description	Corresponding Chapters / Information	External Assurance
<b>Environmental</b>				
Materials				
G4-DMA	B2, B3		Environmental Performance	✓
G4-EN1	B2.5	Materials used by weight or volume	Key Statistics >> Environmental Performance (Hong Kong) >> Resource Consumption / Conservation	✓
G4-EN2		Percentage of materials used that are recycled input materials	Environmental Performance >> Resource Conservation >> Recycling Programme	✓
Energy				
G4-DMA	B2		<ul style="list-style-type: none"> <li>- Environmental Performance &gt;&gt; Clean Energy</li> <li>- Environmental Performance &gt;&gt; Sustainable Operations &gt;&gt; Gas Production &gt;&gt; Emissions Management</li> <li>- Environmental Performance &gt;&gt; Sustainable Operations &gt;&gt; Green Office Operations &gt;&gt; Saving Electricity</li> </ul>	✓
G4-EN3	B2.1	Energy consumption within the organisation	<ul style="list-style-type: none"> <li>- Environmental Performance &gt;&gt; Sustainable Operations &gt;&gt; Green Office Operations &gt;&gt; Saving Electricity &gt;&gt; Electricity Consumption at Towngas Headquarters</li> <li>- Key Statistics &gt;&gt; Environmental Performance (Hong Kong) &gt;&gt; Resource Consumption / Conservation</li> </ul>	✓
G4-EN6	B2.3	Reduction of energy consumption	<ul style="list-style-type: none"> <li>- Environmental Performance &gt;&gt; Sustainable Operations &gt;&gt; Green Office Operations &gt;&gt; Saving Electricity</li> <li>- Key Statistics &gt;&gt; Environmental Performance (Hong Kong) &gt;&gt; Resource Consumption / Conservation</li> </ul>	✓

GRI G4	HKEx ESG Reporting Guide General Disclosures	Description	Corresponding Chapters / Information	External Assurance
G4-EN7	B2.3	Reductions in energy requirements of products and services	<ul style="list-style-type: none"> <li>- Acquired energy labels for all models of domestic gas cooking appliances covered by the Voluntary Energy Efficiency Labelling scheme.</li> <li>- Environmental Performance &gt;&gt; Environmental Initiatives in Mainland Operations &gt;&gt; Carbon Reduction Competition</li> </ul>	✓
G4-OG3		Total amount of renewable energy generated by source	<ul style="list-style-type: none"> <li>- Environmental Performance &gt;&gt; Clean Energy &gt;&gt; New Energy Developments and Unconventional Energy</li> <li>- Environmental Performance &gt;&gt; Clean Energy &gt;&gt; Renewable Energy</li> <li>- Key Statistics &gt;&gt; Environmental Performance (Hong Kong) &gt;&gt; Resource Consumption / Conservation</li> </ul>	✓
Water				
G4-DMA	B2		<ul style="list-style-type: none"> <li>- Environmental Performance &gt;&gt; Sustainable Operations &gt;&gt; Gas Production &gt;&gt; Water Resources Conservation</li> <li>- Environmental Performance &gt;&gt; Sustainable Operations &gt;&gt; Green Office Operations &gt;&gt; Saving Water</li> </ul>	✓
G4-EN8	B2.2	Total water withdrawal by source	<ul style="list-style-type: none"> <li>- Key Statistics &gt;&gt; Environmental Performance (Hong Kong) &gt;&gt; Resource Consumption / Conservation &gt;&gt; Water consumption at headquarters</li> </ul>	✓
G4-EN9	B2.4	Water sources significantly affected by withdrawal of water	No withdrawal of surface or groundwater. All water is purchased and distributed by the HKSAR Water Supplies Department.	✓
G4-EN10	B2.4	Percentage and total volume of water recycled and reused	<ul style="list-style-type: none"> <li>- Environmental Performance &gt;&gt; Sustainable Operations &gt;&gt; Gas Production &gt;&gt; Water Resources Management &gt;&gt; Water Resources Conservation Efforts at Tai Po Gas Production Plant</li> <li>- Environmental Performance &gt;&gt; Environmental Initiatives in Mainland Operations &gt;&gt; Tenggas Suzhou Bauhinia Building</li> </ul>	✓

GRI G4	HKEx ESG Reporting Guide General Disclosures	Description	Corresponding Chapters / Information	External Assurance
Emissions				
G4-DMA	B1		Environmental Performance >> Sustainable Operations >> Gas Production >> Emissions Management	✓
G4-EN15	B1.1, B1.2	Direct greenhouse gas (GHG) emissions (Scope 1)	<ul style="list-style-type: none"> <li>- Environmental Performance &gt;&gt; Sustainable Operations &gt;&gt; Gas Production &gt;&gt; Emissions Management &gt;&gt; Direct and Indirect GHG Emissions</li> <li>- Key Statistics &gt;&gt; Environmental performance (Hong Kong) &gt;&gt; Air Emissions</li> </ul> <p>Only gas production and storage facilities' GHG emissions are reported.</p>	✓
G4-EN16	B1.1, B1.2	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	<ul style="list-style-type: none"> <li>Environmental Performance &gt;&gt; Sustainable Operations &gt;&gt; Gas Production &gt;&gt; Emissions Management &gt;&gt; Direct and Indirect GHG Emissions</li> <li>Only gas production and storage facilities' GHG emissions are reported.</li> </ul>	✓
G4-EN18	B1.2	Greenhouse gas (GHG) emissions intensity	Environmental Performance >> Sustainable Operations >> Gas Production >> Emissions Management	✓
G4-EN19		Reduction of greenhouse gas (GHG) emissions	<ul style="list-style-type: none"> <li>- 2014 Highlights</li> <li>- Environmental Performance &gt;&gt; Sustainable Operations &gt;&gt; Gas Production &gt;&gt; Emissions Management</li> <li>- Environmental Performance &gt;&gt; Sustainable Operations &gt;&gt; Green Office Operations &gt;&gt; Saving Electricity</li> <li>- Key Statistics &gt;&gt; Environmental Performance (Hong Kong) &gt;&gt; Air Emissions</li> </ul>	✓
G4-EN21	B1.1	NOx, SOx, and other significant air emissions by type and weight	<ul style="list-style-type: none"> <li>- Environmental Performance &gt;&gt; Sustainable Operations &gt;&gt; Gas Production &gt;&gt; Emissions Management &gt;&gt; Emission Level of Gas Production Plants (Hong Kong)</li> <li>- Key Statistics &gt;&gt; Environmental Performance (Hong Kong) &gt;&gt; Air Emissions</li> </ul>	✓

GRI G4	HKEx ESG Reporting Guide General Disclosures	Description	Corresponding Chapters / Information	External Assurance
Effluents and Waste				
G4-DMA	B1.5, B1.6		Environmental Performance >> Sustainable Operations >> Gas Production >> Effluent and Waste Management	✓
G4-EN22		Total water discharge by quality and destination	Environmental Performance >> Sustainable Operations >> Gas Production >> Effluent and Waste Management	✓
G4-EN23	B1.3, B1.4	Total weight of waste by type and disposal method	Key Statistics >> Environmental Performance (Hong Kong) >> Waste Avoidance / Recycling	✓
G4-EN24		Total number and volume of significant spills	In 2014, no significant spill was identified.	✓
G4-EN25	B1.3	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	In 2014, no water bodies are significantly affected by our Hong Kong operation.	✓
G4-OG5		Volume and disposal of formation or produced water	In 2014, our Hong Kong operation does not involve formation or produced water.	✓
G4-OG7		Amount of drilling waste (drill mud and cuttings) and strategies for treatment and disposal	In 2014, our Hong Kong operation does not involve drilling waste.	✓
Products and Services				
G4-DMA	C2		Environmental Performance >> Sustainable Operations >> Gas Production >> Emissions Management	✓
G4-EN27	B3.1	Extent of impact mitigation of environmental impacts of products and services	We take environmental considerations into the development of new gas appliance models. Energy efficiency and the choice of packaging materials are considered.	✓

GRI G4	HKEx ESG Reporting Guide General Disclosures	Description	Corresponding Chapters / Information	External Assurance
G4-OG8		Benzene, lead and sulfur content in fuels	No benzene and lead content in town gas. Sulphur content did not exceed the permitted level during the reporting period.	✓
<b>Compliance</b>				
G4-DMA			Environmental Performance >> Our Pursuit of Environmental Excellence >> Environmental Management Systems and Project Management	✓
G4-EN29		Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	In 2014, Towntgas received no fines or non-monetary sanctions for incidences of non-compliance.	✓
<b>Social: Labor Practices and Decent Work</b>				
<b>Employment</b>				
G4-DMA	A1, A4		Social Performance >> Our People	✓
G4-LA1	A1.2	Total number and rates of new employee hires and employee turnover by age group, gender and region	<ul style="list-style-type: none"> <li>- Social Performance &gt;&gt; Our People &gt;&gt; Key Employee Statistics</li> <li>- Key Statistics &gt;&gt; Business &gt;&gt; Operations (Company)</li> </ul>	✓
G4-LA2		Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	Social Performance >> Our People >> Employment Practice	✓
<b>Occupational Health and Safety</b>				
G4-DMA	A2, A2.3		Safety Performance>> Occupational Health and Safety	✓
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 programs	Sustainability at Towntgas >> HSE Policy and Governance	✓
G4-LA6	A2.1, A2.2	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	Key Statistics >> Safety Performance (Hong Kong)	✓

GRI G4	HKEx ESG Reporting Guide General Disclosures	Description	Corresponding Chapters / Information	External Assurance
Training and Education				
G4-DMA	A3		Social Performance >> Our People >> Staff Development	✓
G4-LA9	A3.1, A3.2	Average hours of training per year per employee by gender, and by employee category	Social Performance >> Our People >> Staff Development	✓
G4-LA10	A3	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	Social Performance >> Our People >> Staff Development >> Towngas Engineering Academy	✓
G4-LA11		Percentage of employees receiving regular performance and career development reviews, by gender	Social Performance >> Our People >> Staff Development	✓
<b>Social: Society</b>				
Local Communities				
G4-DMA	D1, D1.1		<ul style="list-style-type: none"> <li>- Sustainability at Towngas</li> <li>- Social Performance &gt;&gt; Community Services</li> </ul>	✓
G4-SO1		Percentage of operations with implemented local community engagement, impact assessments, and development programs	<ul style="list-style-type: none"> <li>- Environmental Performance &gt;&gt; Environmental Management Systems and Project Management</li> <li>- Social Performance &gt;&gt; Community Services</li> </ul>	✓
G4-SO2		Operations with significant actual or potential negative impacts on local communities	Safety Performance >> Gas Infrastructure Safety, Emergency Preparedness, Customer Safety	✓
G4-OG11		Number of sites that have been decommissioned and sites that are in the process of being decommissioned	In 2014, our Hong Kong operation does not involve such sites.	✓

GRI G4	HKEx ESG Reporting Guide General Disclosures	Description	Corresponding Chapters / Information	External Assurance
<b>Social: Product Responsibility</b>				
Customer Health and Safety				
G4-DMA	C2, C2.4		Safety Performance >> Customer Safety	✓
G4-PR1		Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	Safety Performance >> Customer Safety  During 2014, we conducted around 1,247,000 inspections of domestic gas facilities.	✓
G4-PR2	C2.2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	In 2014, there were no recorded incidents of non-compliance.	✓
Product and Service Labelling				
G4-DMA	C2, C2.4		Social Performance >> Customer Services	✓
G4-PR4	C2.2	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	In 2014, there were no recorded incidents of non-compliance.	✓
G4-PR5		Results of surveys measuring customer satisfaction	Social Performance >> Customer Services>> Caring for Customers	✓
Marketing Communications				
G4-DMA			Social Performance >> Customer Services	✓
G4-PR6		Sale of banned or disputed products	We do not sell products that are banned in other markets or are subject of stakeholder questions or public debate.	✓
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 2014, there were no recorded incidents of non-compliance.	✓

GRI G4	HKEx ESG Reporting Guide General Disclosures	Description	Corresponding Chapters / Information	External Assurance
Customer Privacy				
G4-DMA	C2.3, C2.5		We respect the privacy of customers and conscientiously safeguard customers' data. We are committed to protecting all personal data we receive, and ensuring compliance with the Personal Data (Privacy) Ordinance.	✓
G4-PR8	C2.2, C2.5	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	In 2014 there were no recorded incidents of non-compliance.	✓
Compliance				
G4-DMA	C2		Safety Performance >> Customer Safety  We have established a quality control mechanism to inspect and test incoming appliances and conduct compliance checks on or on behalf of our suppliers and vendors.	✓
G4-PR9	C2.2	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	In 2014 there were no recorded incidents of non-compliance.	✓
Emergency Preparedness				
G4-DMA			Safety Performance >> Emergency Preparedness	✓
Asset Integrity and Process Safety				
G4-DMA			Safety Performance >> Gas Infrastructure Safety	✓
G4-OG13		Number of process safety events, by business activity	Key Statistics >> Safety Performance (Hong Kong)	✓
Fossil Fuel Substitutes				
G4-OG14		Volume of biofuels produced and purchased meeting sustainability criteria	Environmental Performance >> New energy development and unconventional energy	✓

# 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 2014 (the Report). This is the eleventh annual sustainability report of Towngas in which the progress and sustainability activities for the period from 1<sup>st</sup> January 2014 to 31<sup>st</sup> December 2014 are presented, also the vision, mission, values, management and corporate governance policies are stated.

The aim of this verification is to provide reasonable assurance of the information stated in the Report is accurate, reliable, material and objective where 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 (the ESG Guide) of the Hong Kong Stock Exchange.

## Methodology

The process used in this verification was based on current best practices. The Report was reviewed against the following criteria:

- International Standard on Assurance Engagement 3000 (ISAE 3000) - "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
- The 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.

## Conclusion

Based on the results of the verification process, it is confirmed 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 Key Performance Indicators of the ESG Guide.

Our opinion is that the information presented in the Report provides a structured, balanced and consistent representation of Towngas sustainability performance in the past year. The materiality assessment and stakeholder engagement process is systematic and comprehensive which forms the basis for disclosure. The Report clearly articulates the corresponding actions that Towngas orchestrated in response to the sustainability impacts from its Hong Kong and Mainland operations that having substantive influence on stakeholders. Besides, the Report also highlights the achievement in the past year and objectives for the future in each sustainability topics. It is a factual, accurate and reliable Report with inclusive, material and responsive representation.

**Signed on behalf of Hong Kong Quality Assurance Agency**

**Connie Sham**  
Head of Audit, June 2015