
T O W N G A S
C O R P O R A T E
I N F O R M A T I O N

2017

ENVIRONMENTAL
SAFETY & HEALTH
OPERATIONAL & FINANCIAL
INFORMATION



煤氣
Towngas

FOREWORD

The Hong Kong and China Gas Company Limited (Towngas), in its endeavour to enhance the transparency of its operations and services, publishes this Corporate Information Booklet 2017.

Supported by charts, the Booklet presents an update of the Company's accomplishments across a wide spectrum of activities which range from an annual business and operational review to its financial status.

Prominent in the Booklet is information on the Company's safety measures and practices. These include prompt response to emergency incidents as well as proactive efforts to maintain gas safety at customers' homes and enhance their knowledge of gas safety.

Towngas is also well aware that liaison with customers is a priority issue. Hence, complementary with the 24-hour Customer Service Hotline, the Customer Focus Team serves as an effective direct communication channel between the Company and its customers.

Furthermore, the Company has achieved high performance in its "green policy" to ensure an environmentally-friendly operation.

However, Towngas does not intend to be complacent. Instead it will continue to seek further improvement and provide the people of Hong Kong with even better and more value-for-money service.

For enquiries, please contact our Corporate Affairs Department at 2963 3483.

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OPERATIONAL INFORMATION

1. Annual Business Review

The global economy recovered steadily in 2017, and concurrently, the local economy grew well. Favourable employment conditions and growth in the number of inbound visitors helped stimulate local consumer spending. Benefiting from a rise in commercial and industrial gas sales, total volume of gas sales in Hong Kong for 2017 reached 29,049 million MJ, an increase of 0.8 per cent compared to 2016 whilst total number of appliances sold in 2017 was over 275,000 units, a similar level to 2016.

During the year under review, the Company invested HK\$1,259 million in production facilities, pipelines, plants and other fixed assets for the further development of its gas and gas related businesses in Hong Kong.

(a) Hong Kong Gas Business Profit

The volume of gas sales increased by 0.8 per cent in 2017, while our customer base further expanded to a total of 1,883,407 accounts, an increase of 23,993 over the previous year. In terms of total gas sales volume, residential customers accounted for 53 per cent while commercial and industrial customers accounted for 47 per cent. To meet increasing operation and manpower costs, we adjusted the standard gas tariff upward by HK1.1 cents per MJ which, including the standard tariff and fuel cost adjustment, amounted to an actual increase equivalent to 4.3 per cent. We also pledged to keep the basic tariff unchanged for the next two years. Net profit after tax from sales of town gas in Hong Kong for the year 2017 amounted to HK\$2,825.7 million.

(b) Sales and Marketing

The year 2017 saw a brighter economic picture in Hong Kong, with GDP growth reaching 3.8 per cent as compared with 2.0 per cent in 2016. The booming stock and property markets as well as an increase in inbound tourist numbers helped to stimulate local spending, which benefited our commercial clients and contributed to a positive growth in our sales of 2.6 per cent during the year.

Our commercial customers continued to look to us for cost effective, environmentally responsible energy solutions. Hong Kong's two theme parks are currently using town gas in a wide range of applications, such as gas absorption chillers and dehumidification units, in place of their previous electricity-powered systems. In addition, we will be supplying gas to Ocean Park's new Water World and hotel for use in water heating as well as climate control in the park's swimming pools and water carnival features.

Another major customer acquired during the year was Vogue Laundry, one of the leading commercial laundry companies in Hong Kong. When this customer moved to a new plant in Yuen Long, we provided the gas for its expanded production lines to power the four 12-tonne boilers that generate the high-pressure steam used in its washing machines, dryers and pressing machines. Also in Yuen Long, we helped a well-established soy sauce factory, Koon Chun, to convert its diesel steam boilers to town gas.

As part of the Total Kitchen Solution we offer to customers, we launched a line of kitchen cabinets under the Mia Cucina brand in 2013. Made of Italian and other premium European materials and accessories, these cabinets are highly competitive against comparable brands in the market and come with lifelong after-sales service, a competitive edge unique to Towngas. In 2017, we added kitchen white goods such as refrigerators and microwaves to the brand. These kitchen packages have been very well-received by both retail consumers and property developers, who ordered more than 5,300 units during the year. Today, roughly 30 per cent of new residential units in Hong Kong are installed with Mia Cucina kitchen cabinets, which are well-regarded for the quality and value they offer.

To add a new dimension in flame cooking, we collaborated with Sanrio to launch Hong Kong's first Hello Kitty kitchen appliance: the TGC X HELLO KITTY built-in hob. We also introduced a wide range of Hello Kitty-inspired kitchenware, such as a clay pot, tamagoyaki fry pan and wok, to bring consumers a complete and delightful cooking experience. The launch of this popular product range received widespread media attention, and sales results have been encouraging.

What's more, we introduced a mini stovetop oven designed especially for flame cooking. The stovetop oven combines grill-steam-bake functions in an all-in-one compact appliance that does not need extra counter space. Launched during Home Delights Expo, it won the Creativity Award 2017 of the Hong Kong Brand Corporate Association.

To provide customers with a better bathing experience in less space, we brought a new generation of small-sized temperature-modulated 11L gas water heaters to market under the SIMPA brand. We also developed our own superslim temperature-modulated gas water heater that can fit into almost any small-size flat in Hong Kong.

Since 1977, Towngas Cooking Centre has been a resource for people to learn about the advantages of flame cooking through content rich courses taught by expert chefs. In celebration of the 40th Anniversary of the Towngas Cooking Centre, in 2017 we staged a series of promotions that included a TV programme – The Ahistoric Grandpa Cooking Show – hosted by a popular Chinese cuisine master, Lee Ka Ding. Mr Lee was also invited to run cooking classes as the grand finale of the celebration activities. In addition, we enriched the Disciples Escoffier Professional Diploma with a pastry course, which is currently being held in our new and expanded Cooking Centre.

(c) Serving Our Customers

As a utility company offering services essential to daily life, we understand that meeting customer expectations is a key driver of our business. Throughout the year, we were honoured to receive nearly 6,000 written complimentary letters from customers as a testimony to our caring, high quality services and products.

One of the hallmarks of Towngas service is the high safety level we offer. In addition to on-call maintenance services, we conduct regular safety inspections every 18 months to ensure these gas systems and appliances are safe and defect-free for our customers.

During the year, we also revamped our corporate website and online service platform to provide greater convenience as well as mobility for customers. To promote our paperless online services, we rewarded newly-registered eBilling customers who successfully applied to pay their gas bills via bank autopay with a one-off HK\$50 gas charge rebate. We also offered monthly lucky draws for prizes of HK\$1,000 in gas charge rebates under this promotion.

In recognition of our commitment to service excellence, we received the Sing Tao Service Awards – After Sales Services for the ninth consecutive year, *East Week's* Hong Kong Service Awards – Public Utilities for the seventh consecutive year, and the Hong Kong Call Centre Association's Gold Award of Mystery Caller Assessment (Phone-in) for the third year running. This year, we obtained the Hong Kong Top Service Brand Award jointly organised by The Hong Kong Brand Development Council and The Chinese Manufacturers' Association of Hong Kong, which further reinforced our reputation for service excellence.

(d) The Gas Infrastructure

We are committed to long-term investment in the extension of our pipeline network in order to keep up with infrastructure development and meet Hong Kong's energy demands. These include the more than 15 km of pipeline planned for the third runway at Hong Kong International Airport, where more catering businesses are expected in the passenger terminal expansion.

Additionally, we will be significantly expanding our network coverage to reach the approximately 400,000 housing units in the New Territories that will be available for occupancy in phases throughout the next ten years. During the year under review, we continued to make progress on the network design for the residential developments in Fanling North, Kwu Tung North, Hung Shui Kiu and Tung Chung East.

To further enhance supply security, we made satisfactory progress linking up the supply network between Tuen Mun and Tsuen Wan and reinforcing the supply to major commercial and industrial customers in Tai Po and Yuen Long Industrial Estates, as well as the two theme parks in Hong Kong.

In November 2017, we brought the SENT Landfill Gas Utilisation Project in Tseung Kwan O on stream. It is currently the largest landfill gas treatment facility of its kind in Asia. The landfill gas we collect will be converted into synthetic natural gas at the facility, then transported to the offtake station in Tseng Lan Shue through a 12 km pipeline and integrated into the gas supply network.

Despite the low leakage rate of our gas pipeline network, we continued to seek ways to identify very minor cases of seepage, even those undetectable by sophisticated equipment. For example, we employ highly sensitive sniffer dogs to pinpoint leaks at busy traffic locations and other challenging environments. This enables us to locate leakage points quickly and accelerate the repair process, while reducing the extent of road digging and disturbances to the public.

(e) *Towards a Sustainable Future*

Towngas conducted a holistic Corporate Climate Change Risk Assessment to its operations in Hong Kong to avoid business interruptions arising from major climate change risks. Typhoons, heavy rainfall, flooding and storm surge were amongst the highest ranked climate change risks that Towngas faces. We implemented measures to prevent major relevant climate change impacts and ensure reliable gas supply, for example installing flood gates, auto-start submerged pumps and high level alarms in Tai Po Production Plant.

Our unwavering commitment to environmental protection is reflected in the way we conduct our businesses. As an energy supplier, we strive to minimise our carbon footprints while developing clean energy for homes, businesses and vehicles, with the ultimate goal of creating a more sustainable future.

One of the highlights in our quest to become a green industry leader was the introduction of our first 10-year Green Bond in November 2017 through a HK\$600 million and a JPY2 billion transaction. We are the first energy utility to issue green bonds in Hong Kong. Proceeds from the Towngas Green Bond will be used to finance waste-to-energy initiatives, such as our landfill gas project at the SENT landfill site and other eligible green investments.

In Hong Kong, we remained focused on developing renewable energy from waste. In November 2017, we made significant progress on our landfill gas initiative with the official commissioning of our third landfill gas utilisation project. Together with our landfill gas utilisation projects in Shuen Wan and the North East New Territories, the output of all three projects is expected to account for around 5 per cent of our total fuel mix. It is also projected to reduce carbon emissions by 87,600 tonnes annually, equivalent to the carbon absorption of 3.8 million planted trees per year.

The feedstock we use in Hong Kong, which includes a mix of natural gas, naphtha and landfill gas, is clean and has thus enabled us to reduce the carbon emissions per unit of town gas produced by over 20 per cent compared with 2005. In fact, in 2017 our greenhouse gas emissions were already below 1 per cent of all emissions in Hong Kong. Our plan is to further reduce our carbon footprint, with a 30 per cent target reduction in the carbon intensity of our Hong Kong gas production by the year 2020, as compared with 2005.

To improve the effectiveness of our environmental initiatives, public education is essential. In 2017, we have carried out a range of activities to share our environmental experience with stakeholders. These included promoting the concept of waste-to-energy through exhibition panels and a Virtual Reality game we designed for students, and introducing waste reduction and our utilisation of landfill gas at our renovated education centre at the SENT landfill site.

(f) *Empowering Our People*

We continued to build a competent talent pool that will enable us to keep pace with the growth of our businesses. During the year, we developed a set of career development schemes for providing staff with continuous professional learning as

well as opportunities for vertical promotion and horizontal job rotation. One of the new programmes launched in 2017 was the two-year Network Supervisor Trainee Programme which provided network technicians with technical and supervisory skills training as well as mentor guidance to prepare for future promotion.

In addition, we initiated the Young Towngas Leadership Competence Accelerated programme designed to develop young talent as the future leaders of the Group. Twenty-three intakes from different businesses across geographical locations will participate in the two-year programme, which includes courses in mentorship, management training by external institutes such as Tsing Hua University, and benchmarking visits to other companies.

Through the Towngas Engineering Academy, we have built up the technical competence and professionalism of Towngas employees throughout their careers with us. Towngas is the first and, until now, only gas company in mainland China to provide gas engineers with dedicated training schemes accredited by the Hong Kong Institution of Engineers (HKIE) and the UK based Institution of Gas Engineers and Managers (IGEM).

In Hong Kong, we worked with the Vocational Training Council (VTC) to launch the Diploma of Vocational Education in Gas Services Engineering – the first diploma programme in Hong Kong directly related to the gas industry – and the first batch of students graduated in 2017. We are now planning to roll out a Professional Diploma in Gas Engineering with VTC in 2018. This programme will pave the way for our employees and related trade practitioners to become professional engineers in the gas industry.

Graduates of our Gas Apprentice Training Schemes are the backbone of our technical and management workforce, ensuring gas safety, efficient operations and the successful growth of the business. The year 2017 marked the 50th anniversary of the launch of the first scheme, the Gas Craft Apprentice Training Scheme. Following its success, two more training schemes, the Gas Technician Apprentice Training Scheme and Gas Network Fitter Training Scheme, were established in 1977 and 1982 respectively. Over 1,200 technical professionals have graduated from these three schemes so far.

We recognise the importance of providing an environment for our staff that is conducive to productivity and enables them to lead fulfilling lives both at work and at home. We also regularly review and upgrade staff benefits to accommodate changes in social conditions and keep up with market trends. As an example of how we do this, at our headquarters building in Hong Kong we provide a library, fitness facilities and a clinic where staff can enjoy free medical services and medicines for the treatment of illness. We also have a Mother Care Room, which was doubled in size during the year, to give breastfeeding employees a clean and quiet space to prepare and store breast milk.

During the year, Towngas was named one of the HR Asia Best Companies to Work for in Asia 2017 by *HR Asia*, an authoritative HR publication in Asia. We also won the Friendly Employment Award under the Talent-Wise Employment Charter of the Labour and Welfare Bureau, recognising our commitment to employ people with disabilities.

2. Safety

(a) Customer Safety

Our concern for safety underpins everything we do. We understand the need to educate and inform the public on the safe and responsible use of gas products and services. In 2017, we held 12 safety exhibitions, maintaining our long-standing and well-proven methods of taking our safety message direct to consumers. As always, appliance safety was a high priority: We conducted more than 1,310,000 Regular Safety Inspections of gas facilities in customers' homes. This safety driven programme has proved extremely popular with our customers.

(b) Occupational Safety and Health

Safety and health is our priority. Total Safety Management System has been implemented to avoid accident and improve safety and health performance continuously. We endeavor to ensure the implementation of health and safety policy and promote safety culture through organising trainings, seminars, promotion activities and others. The industrial safety performance in 2017 was satisfactory, which is the best in the past 36 years. There were 6 industrial accidents with an Accident Frequency Rate of 0.12.

To encourage colleagues to pay attention to the health and safety condition of working environment, HSE Suggestion Scheme and Near Miss Reporting Scheme was in place for reporting submission. In 2017, we further developed an Instant Messaging HSE Reporting Channel for mobile devices, which colleagues can report both good practices and malpractices through mobile devices in a more convenient way to improve safety culture. To make this programme more interesting, seasonal reporting theme was set up.

Occupational Safety and Health promotion enhance safety culture of the company successfully. In 2017, various safety and health promotion programme were organised. Prevention of Musculoskeletal Disorder, Heat Stress Management Programme was organised, activities such as mini-games, seminars, trainings, OSH information leaflet were included. Besides, Health, Safety and Environment (HSE) Month, our annual promotion event, was organised in November which attracted more than 2,000 numbers of participation. During HSE Month, Fire and Ambulance Services Academy Visit, Environmental Visit, HSE Day and others were organised. These activities enhance company safety awareness and culture effectively.

Effective and efficient emergency preparedness facilitate the company to response emergencies in a timely and effective manner. In 2017, numbers of joint fire exercises with Fire Services Department were organised, allowing our emergency response team to work closely with Fire Services Personnel in the operations. Besides, Corporate Emergency Table-Top Exercise was conducted. During the exercise, scenarios about gas network and information technology incident were simulated, mock press-conference was organised afterwards to train the media handling skill of management.

Towngas focuses on improving health and safety through innovation. In 2017, we enhanced roadwork safety through innovation and modification, thus, the pneumatic soil remover, easy-controlled electric trolley, self-assembled mechanical arm and automatic LED warning system of vehicles were developed. These measures not only improved the health and safety standard, they also received the Safety Enhancement Programme Award – Gold Award at the 16th Hong Kong Occupational Safety and Health Award.

With the outstanding safety performance, Towngas also won “Safety Management System Award – Gold Award”, “OSH Annual Reporting Award – Silver Award” and “Safety Performance Award” in 16th Hong Kong Occupational Safety and Health Award organised by Occupational Safety and Health Council.

(c) Gas Production Plants Safety

We have strong confidence in the safety, reliability and management systems of our Tai Po and Ma Tau Kok gas production plants. Both plants were designed and built by reputable international project contractors, based on proven engineering and chemical processes. Manned by competent and experienced operation and maintenance crews, the two gas works did not have even one interruption to the gas supply since the first day they were commissioned. On this basis, our Company's supply reliability continues to be one of the best in the utilities and reached a level of 99.991% in 2017.

Our Company exerted great efforts in safeguarding the conditions and availability of the two gas plants. Ma Tau Kok gas production plant has over 40 years' safe and reliable production history, while Tai Po plant is equipped with modern computer control systems and sophisticated instruments, and the plant has been running stably for 31 years. Both sites implement strict work rules and procedures to control various high risk operations, with robust backup from automatic alarms and safety interlocks. A high degree of emergency response preparedness is achieved by a wide range of fire-fighting facilities, well trained response teams and frequent emergency drills. Our standards of safety control compare most favourably with other major utilities in Hong Kong and overseas.

Towngas abides by all legal requirements and cooperates fully with the various government departments responsible for enforcing stringent surveillance to the plants. The Accident Frequency Rate of gas production plants has always been maintained at a low level, with about 0.24 case per 100,000 man hours. Nonetheless, in pursuit of the target of zero accidents, the plant management proactively reviewed the root causes of each incident and implemented every practicable preventive measure. No major gas emergency has happened in the plants for many years.

As a long term strategy, Towngas will continue to develop various hazard controls and risk mitigation measures to maximise the safety of its employees, the plants' neighbourhood and the plants themselves, guaranteeing 100% reliability in the whole lifetime of the plants.

(d) Network Safety

Ensuring network safety, we continue to monitor and enhance our pipeline infrastructure with an active maintenance and rehabilitation programme. Rigorous trench inspections and leakage surveys continue and the introduction of better equipment and technology also provide invaluable support in the maintenance of safety standards.

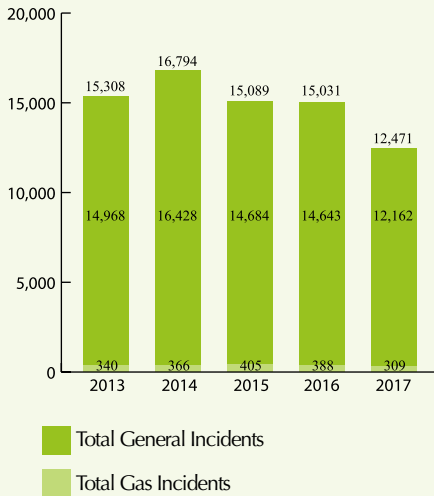
Emergency vehicles equipped with new tablets are now used in the handling of any gas emergency and the use of sensitive laser methane detectors for leakage surveys, as well as advanced technology which check the condition of the coating on steel pipes, were also introduced these years.

In addition, we continue to check our pipes rigorously by sophisticated leakage survey from anywhere between six times a year to once a year to ensure their integrity.

We also augmented the number of trench inspections of third party excavation sites to circumvent damage to nearby Towngas pipelines. In 2017, 152,241 trench inspections covering 10,897 active sites were made.

(e) Charts on Emergencies, Safety Inspections and Safety Promotion

(i) Number of Urgent Reports

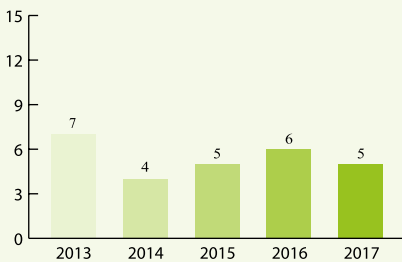


Urgent Reports refer to incidents which require Towngas personnel to attend immediately, whether the incident is gas-related or not.

Out of the 12,471 Urgent Reports received in 2017, only 309 were Gas Incidents. Gas Incidents are town gas-related and are classified according to any of the following situations:

- Reported by Police or Fire Services Communication Centre
- Uncontrolled gas escape (which cannot be ascertained that it can be stopped by turning off the meter control cock)
- Incidents involving injury to a person, whether fatal or non-fatal
- Incidents involving explosion or fire damage to property
- Supply defects

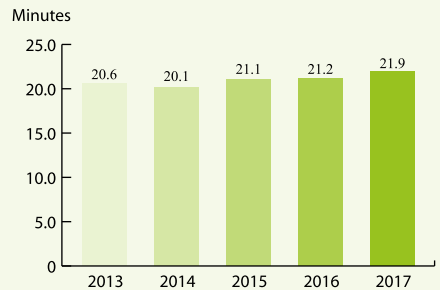
(ii) Number of Major Gas Emergencies



Out of the 309 Gas Incidents in 2017, 5 cases were Major Gas Emergencies.

* *Nature of "Major Gas Emergency" is defined in the Gas Safety Ordinance. Suicide cases are not included.*

(iii) Average Response Time for Gas Incidents



The promptness of Towngas' response to emergencies has achieved a world class standard and we will strive to continue improving the level of promptness in the coming year.

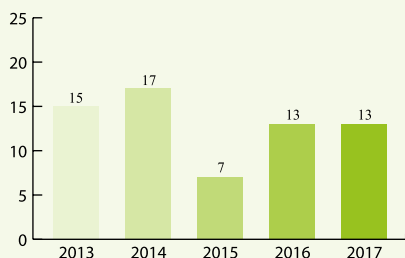
(iv) Number of Fatal Gas Accidents

Year	2013	2014	2015	2016	2017
No. of Fatal Gas Accidents	0	0	0	0	0

* Suicide cases are not included.

With Towngas' efforts to promote gas safety and respond promptly to emergencies, the number of fatal accidents from gas emergency incidents has remained at an exceptionally low level throughout the past five years.

(v) Number of Incidents Involving Third Party Damage



Towngas has been able to keep the third party damage in a relative low level. The number of third party damage was 13 in 2017.

(vi) Trench Inspection

Total number of active sites inspected in 2017

Island	Kowloon	New Territories	Total
3,612	3,743	3,542	10,897

To minimise third party damage to its network facilities, Towngas emphasises close coordination with concerned parties in any excavation work that may subject its pipelines to possible damage. Apart from provision of alignment drawings and safety advice for the third parties, the Company organises safety talks for the construction industry. In 2017, a total of 544 contractor personnel attended our safety talk sessions. Besides, the Company is possibly the only local utility to proactively send its technicians to work at sites to ascertain the alignment of its facilities for maximum safety.

(vii) Number of Leakage and Pipeline Surveys

Type of pipelines	Frequency of leakage surveys
Transmission pipelines: - All HP & IPB mains	At least once a year
Distribution pipelines: - PE or steel pipes over or enclosed within structures - Medium pressure ductile iron pipes or all galvanised iron pipes - Low pressure ductile iron pipes - Others	At least twice a year At least six times a year At least three times a year At least once a year

HP – High Pressure IPB – Intermediate Pressure B PE – Polyethylene

Under the Company’s rigorous leakage survey programme, our qualified technicians perform regular leakage detection on our different types of gas pipes with the help of advanced instruments – including Flame Ionisation Detectors (FID) and Combustible Gas Indicators (CGI). With these sensitive instruments, very low level traces of gas seepage can be detected and rectified before they develop into reported gas escapes. Considering these surveys as effective precautions against major gas escapes, we conduct more leakage and pipeline surveys than our foreign counterparts every year.

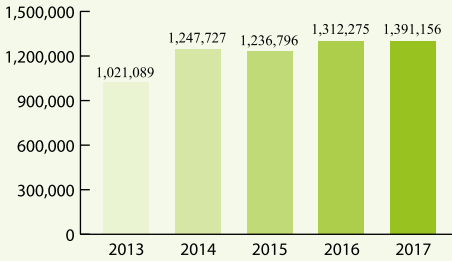
As a result of the stringent and proactive leakage survey and trench inspection programmes, the number of public reported gas escape incident in network was only 0.017 per km per year in 2017. Even if minor seepages located by the sensitive leakage survey were also included, the number was 0.081 per km per year only, much lower than the figures in many other similar metropolitan cities.

(viii) Major Emergency Drills with Government Authorities in 2017

Type of Drill	Joint Fire Exercise				Bomb Threat Drill		Emergency
Venue	Tai Po Plant	Ma Tau Kok Plant	Aberdeen Depot	Braemar Hill Tunnel	Tai Po Plant	Ma Tau Kok Plant	Tai Po Plant
No. of Exercises	2	2	1	1	1	1	1

(Government authorities include Fire Services Department, Electrical and Mechanical Services Department and Police Force)

(ix) Number of Regular Safety Inspections



Towngas has taken proactive measures to maintain gas safety at customers' homes by initiating on-site safety inspections of their gas installations and external service risers at regular intervals of 18 months.

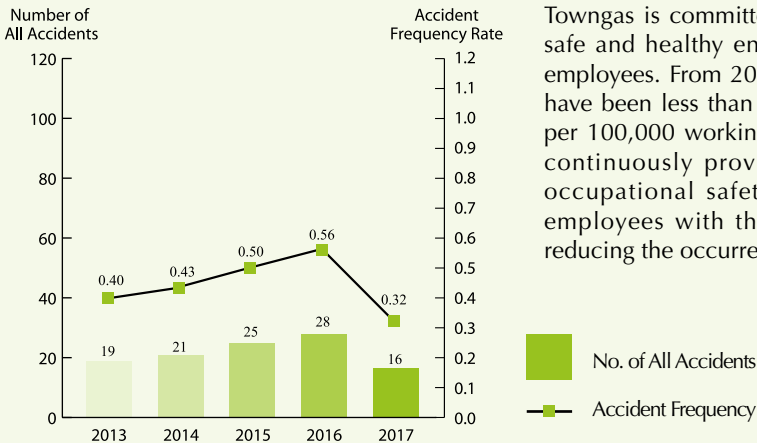
(x) Number of Sub-standard Appliances Upgraded

Towngas encourages customers to upgrade their sub-standard appliances through various educational and promotional programmes. In 1999, we introduced a discount scheme to encourage customers to upgrade their water heaters and cooking appliances. In 2017, 112 Flueless (Sink) and Open-flued water heaters, and 354 Non-FFD cooking appliances were removed or upgraded.

(xi) Number of Safety Exhibitions and Safety Talks

Towngas has been widely recognised for its continuing efforts in promoting home safety. Safety talks and safety exhibitions are major channels through which Towngas enhances the public's awareness and improves their knowledge of gas safety. In 2017, we organised 12 safety exhibitions and 7 safety talks in housing estates and elderly centres. Information panels were exhibited and information booklets on gas safety were delivered.

(xii) Industrial Safety Performance of Employees



Towngas is committed to providing a safe and healthy environment for its employees. From 2013 to 2017, there have been less than 1 injury accident per 100,000 working hours. Towngas continuously provides training on occupational safety and health to employees with the aim of further reducing the occurrence of accidents.

3. Service Pledge

Initiated in 1994, the Towngas Service Pledge has set high targets in major customer service areas: reliability of gas supply, safety, service attitude, the speed and convenience of service, appointments and complaint handling. Towngas has performed well in the past 23 years and pledges to continue improving its service and to set higher targets to ensure customers get the best possible levels of service.

(a) Results of 2017

	Results
Reliability	
• Uninterrupted gas supply (over 99.99%)	99.991%
• In case of supply interruption on account of maintenance or engineering work (3 days prior notification)	100%
• Restoration of gas supply within 12 hours	100%
Safety	
• Average arrival time (within 25 minutes)	average 22.57 minutes
Appointments	
• Availability of maintenance and installation services within 2 working days	Average 1.11 days
Speed and Convenience	
• Customer Service Hotline (calls answered within 4 rings)	94.98%
• Connect or disconnect gas supply within 1 working day (upon customer's request)	100%
• Deposit refunded at Customer Centres (2 hours after disconnection of gas supply) (upon customer's request)	100%
Service Quality	
• Efficiency *	8.91
• Courteous and friendly attitude *	8.87
Handling Suggestions	
• Reply within 3 working days	100%
• Resolution, or a statement of when the matter will be resolved, within 2 weeks	100%

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

(b) Service Pledge for 2018

Towngas pledges to continue improving our service and to set higher targets, aiming at providing our customers with best possible service. The new Pledge has become effective from January 2018, and the annual reporting on performance results will be announced in January 2019.

<u>Pledges</u>	<u>Target</u>
Reliability	
• Uninterrupted gas supply	- Over 99.99%
• In case of supply interruption (on account of maintenance or engineering work)	- 3 days prior notification
• Restoration of gas supply	- Within 12 hours
Safety	
• Emergency Teams	- Arrive on site within 25 minutes
Appointments	
• Availability of maintenance and installation services	- Within 2 working days
Speed and Convenience	
• Customer Service Hotline	- Calls answered within 4 rings
• Connect or disconnect gas supply	- Within 1 working day
• Deposit refunded at Customer Centres supply*	- 2 hours after disconnection of gas
Service Quality	
• Efficiency	- 8 or above out of a total score of 10
• Courteous and friendly attitude	- 8 or above out of a total score of 10
Handling Suggestions	
• Written comments or suggestions	- Reply within 3 working days
	- Resolution, or a statement of when the matter will be resolved, within 2 weeks

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

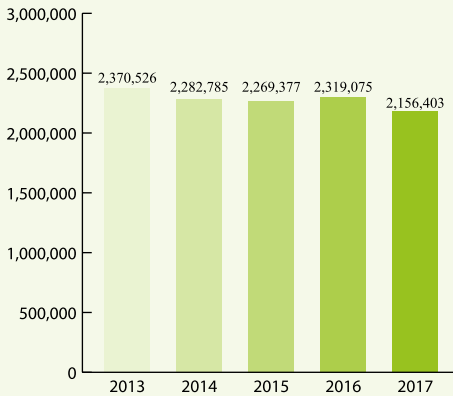
4. Customer Liaison

(a) Customer Focus Team

Since its inception in 1993, the Customer Focus Team has provided an effective communication channel between Towngas and its customers. It is a key factor in ensuring that our services meet customer expectations. The Team, comprising managers from customer related departments, visits two public or private housing estates every month. Issues related to Towngas service, gas safety, bill payment and gas appliances are discussed at the meetings. Comments from customers contribute greatly to the improvement of Towngas products and services. In 2017, the Customer Focus Team made 24 visits to its customers.

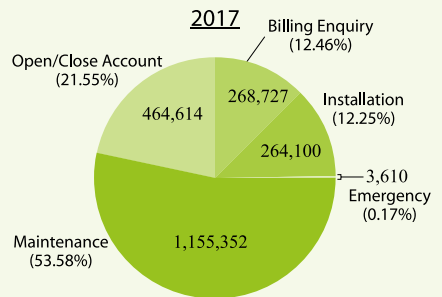
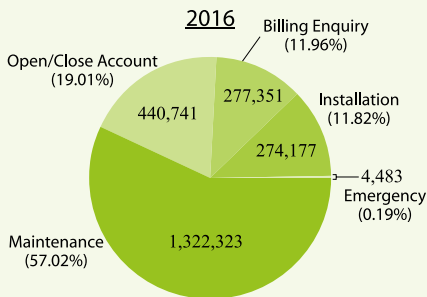
(b) Customer Service Hotline and Emergency Hotline

Number of Incoming Calls



The public can always keep in touch with Towngas through its Customer Service Hotline (CSH) and Emergency Hotline. The CSH – 2880 6988 – provides a convenient one-stop service for customers to enquire about and arrange the full range of Towngas services. The Emergency Hotline – 2880 6999 – operates around the clock, and responds to emergency calls immediately.

Number of Incoming Calls by Categories:



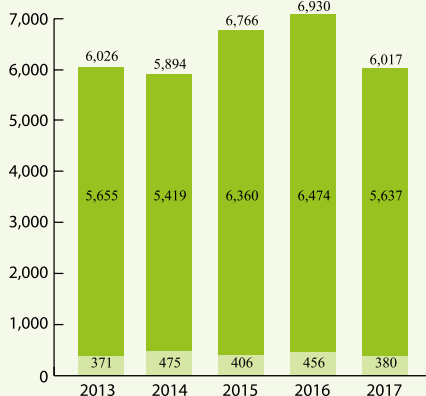
The largest category of incoming calls to the CSH and Emergency Hotlines is maintenance, representing 53.58% of total calls in 2017 while other categories include open/close account, billing enquiry, installation and emergency.

(c) Bill Inserts to Customers

A bill insert, which comes with the bi-monthly gas bill, is an effective means to keep our customers informed. In 2017, a total of 23 information leaflets on various topics were sent to customers. The topics of these leaflets were mostly related to Towngas services and products, including special offers on appliance, Towngas Avenue, Towngas Cooking Centre, Mia Cucina green and health products, etc as well as gas safety and energy saving tips. Also, we have sent 13 leaflets for NGOs without charges.

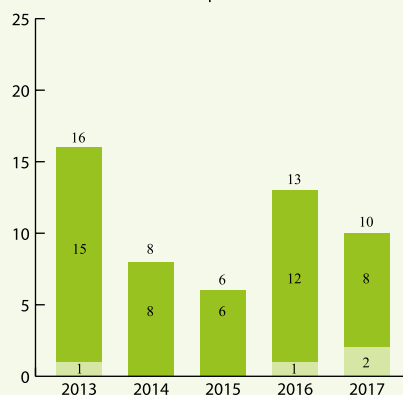
(d) Number of Customers' Compliments and Complaints

Number of Customers' Compliments



Written Compliments
Verbal Compliments

Number of Customers' Complaints



Written Complaints
Verbal Complaints

Delivering high quality customer service has always been a Towngas priority. We are more focused than ever on the continuous enhancement of customer satisfaction by providing superior quality service. As a result, there were a total of 6,017 compliments about Towngas' service in 2017, which included 5,637 written compliments and 380 verbal compliments.

Regarding the number of customer complaints, Towngas received a total of 10 complaints in 2017 (8 written complaints and 2 verbal complaints). With 1,883,407 customers as at 31 December 2017, the ratio is 1 complaint per 188,341 customers. Towngas is committed to taking proactive measures to improve product quality and the service attitude of its frontline staff.

5. Efficiency (Products and Productivity)



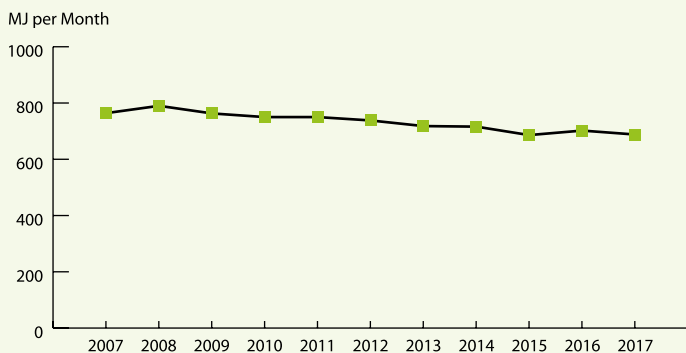
In 2017, Towngas continued to devise and implement measures to maintain high cost-efficiency without compromising the quality of our services to customers. In addition to bring down the costs of spare parts of gas appliances through vigorous research and development efforts, we have further promoted the use of information technology to attain a higher level of automation throughout our operations.

These measures, together with a range of other initiatives, resulted in a 0.1 per cent slightly increase in productivity in 2017, which is measured in terms of number of customers served by each employee. As at the end of 2017, the number of employees engaged in the town gas business in Hong Kong was 2,022. In 2017, each Towngas employee served 931 customers, and town gas sales averaged 14.4 TJ per employee. Towngas will continue to seek ways to ensure our customers receive the best and most cost-effective service.

To enhance chefs' productivity in preparing for a large quantity of tasteful soup in a very short time, a powerful Cool Kitchen Stockpot is developed to provide a high efficient, fast boiling, and low noise level solution to them. It becomes a favorable appliance in some chain shops. Besides, this stockpot may be equipped with an optional feature to recover flue heat to produce hot water for other applications in kitchen which further enhance energy use.

In addition, our pioneering activities in the use of landfill gas (LFG) have also been gaining momentum. First diversifying into this area at the Shuen Wan Landfill, the use of this renewable energy grew exponentially with the commissioning of our North Eastern New Territories LFG utilisation project in 2007. In 2017, accounting for about 2 per cent of our production fuel, our aim is to grow this resource to 5 per cent. Extending these activities to the South Eastern New Territories (SENT) landfill site, agreement was signed with landfill operator in December 2014. The SENT Landfill Gas Utilisation Project was commissioned in 2017. The facility is expected to be operational in the first quarter of 2018. The use of LFG not only cuts carbon emissions released into the atmosphere, our consumption of naphtha also fell by around 11,480 tonnes in 2016. These savings alone translate into the planting of some 1.5 million trees.

With the efficiency improvement of gas appliances, the average monthly household gas consumption was reduced over the years.



6. Charges

In addition to the gas charge, which is calculated based on customers' gas consumption, Towngas levies a fixed Monthly Maintenance Charge on residential customers which entitles them to reliable, efficient and comprehensive repair and maintenance services for all their gas appliances and installations. Towngas also adjusts the gas charge through a Fuel Cost Adjustment mechanism to reflect fluctuations in fuel prices.

(a) Monthly Maintenance Charge

The Monthly Maintenance Charge (MMC), which has been frozen at HK\$9.5 since 1998, covers the labour charges for appliance maintenance and repairs, on-demand appliance check-ups, regular safety inspection whereby customers' gas appliances, gas installation pipes and external service risers are inspected by our fully-qualified, registered gas technicians at regular intervals of 18 months, and the 24-hour Customer Service Hotline. Towngas conducted more than 550,000 on-demand maintenance works and more than 1,390,000 Regular Safety Inspections in customers' homes in 2017.

However, MMC does not include the costs of replacing spare parts, rubber hose, stainless-steel braided flexible hose or corrugated stainless steel tube for appliances, nor the costs of repair or replacement of gas installation pipes and external service risers, appliance disconnection and reconnection, or gas meter accuracy testing. To provide our customers with maximum protection, 24-hour emergency services are rendered free-of-charge.

(b) Fuel Cost Adjustment

The fuel cost adjustment calculation is based on gas consumption and each month's fuel costs. For every complete multiple of HK\$1 by which the effective feedstock cost* rises above (or falls below) the equivalent of HK\$1,420 per kilolitre of naphtha, the charge for gas will be increased (or reduced) at the rate of HK0.004 cents per MJ.

Customer saved a total of HK\$632 million fuel cost adjustment in 2017 with the using of natural gas in producing town gas.

* *Effective feedstock cost is the weighted average cost (based on energy content) of different feedstock used for production of town gas.*

7. Fuel Mix Percentage

In 2017, fuel mix in terms of percentage of naphtha, natural gas and landfill gas used for gas production is as follows:

Feedstock	Percentage
Naphtha	38%
Natural Gas	60%
Landfill Gas	2%

8. Towngas Concession Schemes

Seeking to make a difference for some of the disadvantaged groups in society, we have launched four concession schemes to provide these groups in Hong Kong with additional service benefits. Under the concession schemes, beneficiaries may enjoy a 50% discount off basic gas tariff on the first 500 MJ (around 10.4 units) of town gas consumed, waiver of monthly maintenance charge, initial charge and security deposit, as well as free appliance maintenance and spare parts.

Towngas Concession Schemes	Qualified Applicants *
Concession Scheme for the Elderly	Applicants should be aged over 60 years, living alone or with other qualified senior citizens and living in self-care quarters within public housing estates, or qualified for the Comprehensive Social Security Assistance Scheme (CSSA).
Concession Scheme for People with Disabilities	Applicants should be receiving, or living with a direct family member who is receiving CSSA, and is classified as "100% Disabled" or "Requiring Constant Attendance" under CSSA.
Concession Scheme for Single-parent Families	Applicants should be single-parent family households receiving CSSA under the single-parent category.
Concession Scheme for Low Income Families	Applicants or his/her family member has a regular job income which is taken into account in the assessment of CSSA entitlement. (The "Notification of Successful Application" or "Notification of Revision of Assistance" bears the item of "LESS NET EARNINGS" indicated in two consecutive months of the CSSA payment period.)

* All applicants should be registered Towngas account holders.

In 2017, the overall average amount of annual savings per beneficiary customer under the Towngas Concession Schemes was HK\$559.

ENVIRONMENTAL PROTECTION

Our “Sustainability Report” has already clearly elaborated our sustainability strategies and set out the targets and standards that we encourage all employees, contractors and suppliers to work towards. Being a responsible public utility, our responsibility is not limited to our own operation, we promote environmental awareness amongst our stakeholders for sustainable development.

1. Environmental Promotional Programmes

We continue to offer our supports to green groups and government-led environmental protection programmes such as Energy Saving Charter and 4Ts Charter Schemes. In 2017, we support and sponsored the Green Earth’s five-year Plantation Enrichment Project to build native tree woodland together, the Stop Using Tissue Paper Day by Junior Chamber International Lion Rock, as well as the No Straw Day organised by Ocean Park Conservation Foundation, Hong Kong. We also sponsored and participated in the annual Eco Rangers by the Conservancy Association, Mooncake Recycling Programme by Food Grace, Hong Kong Green Day by the Green Council, Green Power Hike by Green Power, the No Air-con Night by Green Sense, Lai See Recycling Programme by Greeners Action, Green Walk Campaign by World Green Organisation and Earth Hour and Walk for Nature by WWF.

2. Environmental Training and Education Programmes

In recent years, Towngas has provided a great variety of environmental trainings and educational activities to nurture a green culture among our employees and contractors. Programmes conducted in 2017 included the annual Outstanding Environmental Subcommittee Award, seminar on green building, tour to Tai Sang Wai Fish Pond and visit to the T-Park Environmental Education Centre, etc. Publication of four issues of the Health, Safety & Environment Bulletin were distributed to all employees and our contractors. A Green and Healthy Cooking Tips leaflet was published to promote low-carbon lifestyle to customers and the general public. Green promotional messages were conveyed to employees via email and intranet on regular basis.

3. Environmental Achievements

Towngas was conferred with the 2016 BOCHK Corporate Environmental Leadership Awards – Gold Award (Manufacturing section) for two consecutive years, as well as the Belt and Road Environmental Leadership Recognition Award 2016, presented by The Federation of Hong Kong Industries and the Bank of China (Hong Kong) Limited, and the 2016 Hong Kong Awards for Environmental Excellence (Public Services - Silver Award) by Environmental Campaign Committee. The Wastewi\$e Certificate at Excellence Level which the Environmental Campaign Committee conferred upon us for the 16 consecutive years was testimony to our strong commitment to waste reduction.

4. Environmental Performance

In 2017, Towngas’ 12 functional environmental sub-committees achieved around 40 environmental objectives, including the implementation of the regenerative electric energy module in gas appliance and collection of electronic waste for recycling. Over 36 jet-type hand dryers were installed in toilets at our Headquarters to reduce use of paper towels. The Used Gas Appliance Recycling Programme has been held over ten years which has enabled us to divert wastes from landfill sites. For more details about our environmental performance and targets, the public can access our website to view or download our “Sustainability Report”.

(a) *Environmental Performance Table*

(All legal requirements relating to environmental protection were fully complied with)

Ozone Layer Protection

- All of our vehicle air conditioning systems now operate with refrigerant R134A.
- All BCF portable fire extinguishers have been replaced by dry powder extinguishers.
- The central MVAC system in North Point building and Ma Tau Kok building operate with HCFC-free refrigerants.

Air Quality

- Total NO_x output was 4.0 kg/TJ of town gas (Annual total of 113,583 kg, equivalent to a daily average of 311 kg).
- Total SO_x output was 0.02 kg/TJ of town gas (Annual total of 700 kg, equivalent to a daily average of 1.92 kg).
- Total CO₂ output was 11.6 MT/TJ of town gas (Annual total of 333,888 MT, equivalent to a daily average of 915 MT).

Greenhouse Gas Emission

- Annual total greenhouse gas emissions of 358,417 MT in terms of CO₂ equivalent.

Volatile Organic Compounds (VOC)

- Estimated annual total VOC emissions was 5.7 kg/TJ of town gas (Annual total of 163,522 kg, equivalent to a daily average of 448 kg).

** Before introduction of natural gas feedstock, estimated annual total VOC emissions was 9.83 kg/TJ of town gas (Annual total of 268,242 kg, equivalent to a daily average of 735 kg).*

Water Quality

- Total waste water output was 4.1 m³/TJ of town gas (Equivalent to a daily average of 319 m³).

Chemical Waste

- Total chemical waste output was 2.5 kg/TJ of town gas (Equivalent to a daily average of 193 kg).

Noise

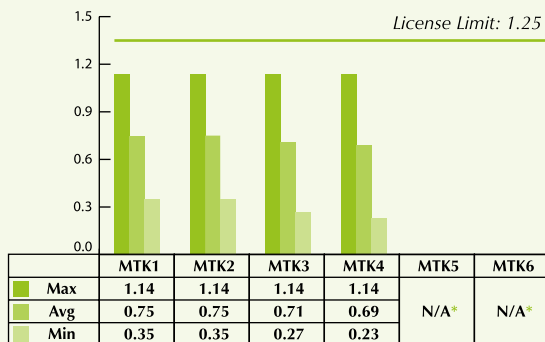
- All installations and operations complied with the statutory requirements. No noise abatement notice has ever been received.

(b) *Operation of Gas Production Plant for 2017*

Towngas is one of the energy suppliers in Hong Kong, we provide a safe and reliable gas supply to our customers every day. During the year, the availability of the two plants in Tai Po and Ma Tau Kok was 89.2%, and the installed capacity was a total of 12.596 million standard m³/day. The peak daily demand was about 6.191 million standard m³/day and the thermal efficiency reached 87.9%.

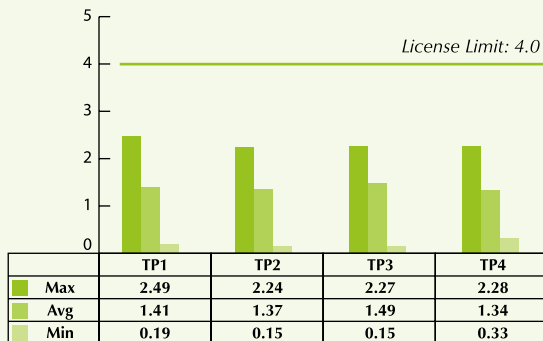
(c) Emission Level of Gas Production Plants for 2017

(i) NOx emission level of Ma Tau Kok (MTK) gas making units (Kg/hour)

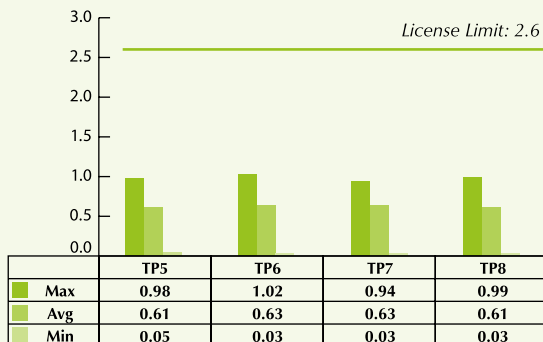


* MTK5 and MTK6 at cold standby in 2017

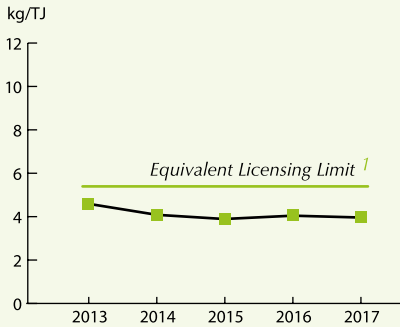
(ii) NOx emission level of Tai Po (TP) gas making units Phase 1 (Kg/hour)



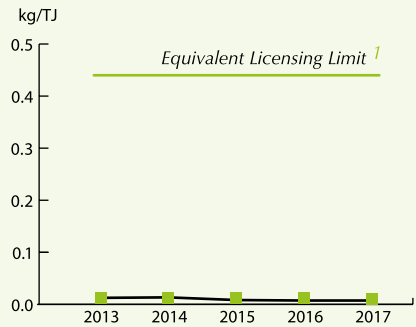
(iii) NOx emission level of Tai Po (TP) gas making units Phase 2 (Kg/hour)



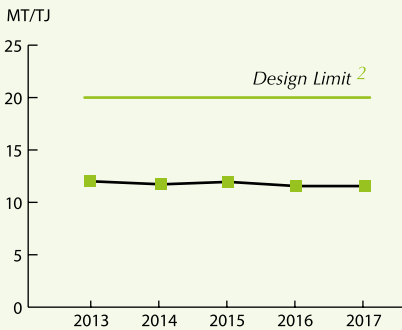
(iv) NOx emission level



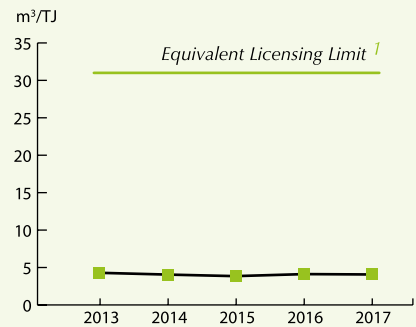
(v) SOx emission level



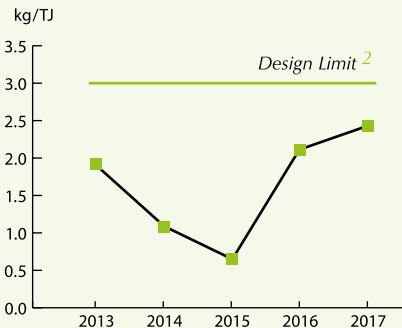
(vi) CO2 emission level



(vii) Waste water output



(viii) Chemical waste output



- 1 "Equivalent Licensing Limit" (kg/TJ OR m³/TJ) = "Weighted average of actual licensing limit" (kg/hr or m³/hr) ÷ production rate of the plants for the year 2017 (TJ/hr).
- 2 As there is no Licensing Limit for the discharge level, we apply the design limit of our production plants as a reference point for the emission level.

FINANCIAL INFORMATION

The figures and financial information as shown in this section do not constitute the statutory annual consolidated financial statements of The Hong Kong and China Gas Company Limited (the “Company”) for the year ended 31st December 2017, but are derived from those financial statements. Further information relating to these statutory financial statements required to be disclosed in accordance with section 436 of the Hong Kong Companies Ordinance (Cap. 622) (the “Companies Ordinance”) is as follows:

The Company will deliver the consolidated financial statements for the year ended 31st December 2017 in due course to the Registrar of Companies as required by section 662(3) of, and Part 3 of Schedules 6 to the Companies Ordinance.

The Company’s auditor has reported on these consolidated financial statements. The auditor’s report was unqualified; did not include a reference to any matters to which the auditor drew attention by way of emphasis without qualifying its reports; and did not contain a statement under sections 406(2), 407(2) or (3) of the Companies Ordinance.

1. Consolidated Income Statement

for the year ended 31st December 2017	2017 HK\$'M	2016 HK\$'M
Revenue	32,476.5	28,557.1
Total operating expenses	(24,845.2)	(21,387.2)
	7,631.3	7,169.9
Other gains/(losses), net	630.1	(29.5)
Interest expense	(1,256.9)	(1,207.4)
Share of results of associates	2,604.3	2,447.4
Share of results of joint ventures	1,487.9	1,465.3
Profit before taxation	11,096.7	9,845.7
Taxation	(1,749.8)	(1,575.9)
Profit for the year	9,346.9	8,269.8
Attributable to:		
Shareholders of the Company	8,225.3	7,340.7
Holders of perpetual capital securities	111.2	110.5
Non-controlling interests	1,010.4	818.6
	9,346.9	8,269.8
Earnings per share – basic and diluted, HK cents	58.8	52.5*

* Adjusted for the bonus share issue in 2017

2. Consolidated Statement of Financial Position

as at 31st December 2017

	2017 HK\$'M	2016 HK\$'M
Assets		
Non-current assets		
Property, plant and equipment	55,827.4	49,209.6
Investment property	764.0	729.0
Leasehold land	2,229.3	2,016.6
Intangible assets	5,883.6	5,572.4
Associates	23,393.4	20,485.0
Joint ventures	10,889.2	9,226.5
Available-for-sale financial assets	4,289.9	4,967.1
Derivative financial instruments	269.9	505.9
Retirement benefit assets	60.4	–
Other non-current assets	3,089.0	2,860.4
	<u>106,696.1</u>	<u>95,572.5</u>
Current assets		
Inventories	2,578.3	2,110.4
Trade and other receivables	7,512.0	6,329.6
Loan and other receivables from associates	241.4	153.4
Loan and other receivables from joint ventures	939.7	900.1
Loan and other receivables from non-controlling shareholders	103.1	65.4
Financial assets at fair value through profit or loss	42.1	67.3
Derivative financial instruments	119.6	87.5
Time deposits over three months	2,071.0	3,381.1
Time deposits up to three months, cash and bank balances	10,758.6	8,076.1
	<u>24,365.8</u>	<u>21,170.9</u>
Current liabilities		
Trade and other payables	(14,269.8)	(12,134.2)
Loan and other payables to joint ventures	(1,137.9)	(718.9)
Loan and other payables to non-controlling shareholders	(175.3)	(186.3)
Provision for taxation	(531.9)	(556.3)
Borrowings	(15,757.0)	(5,951.8)
Derivative financial instruments	(76.2)	–
	<u>(31,948.1)</u>	<u>(19,547.5)</u>
Total assets less current liabilities	<u>99,113.8</u>	<u>97,195.9</u>

2. Consolidated Statement of Financial Position (Continued)

as at 31st December 2017

	2017 HK\$'M	2016 HK\$'M
Non-current liabilities		
Customers' deposits	(1,331.6)	(1,302.8)
Deferred taxation	(5,723.1)	(5,067.3)
Borrowings	(21,161.8)	(27,296.1)
Asset retirement obligations	(46.9)	(39.4)
Derivative financial instruments	(604.5)	(542.2)
Retirement benefit liabilities	–	(50.1)
	<u>(28,867.9)</u>	<u>(34,297.9)</u>
Net assets	<u>70,245.9</u>	<u>62,898.0</u>
Capital and reserves		
Share capital	5,474.7	5,474.7
Reserves	<u>54,964.1</u>	<u>48,457.5</u>
Shareholders' funds	60,438.8	53,932.2
Perpetual capital securities	2,354.1	2,353.8
Non-controlling interests	<u>7,453.0</u>	<u>6,612.0</u>
Total equity	<u>70,245.9</u>	<u>62,898.0</u>

3. Directors' Emoluments

The aggregate amounts of emoluments payable to directors of the Company for their service on the Board of the Company and its subsidiaries undertaking for the year ended 31st December 2017 are as follows:

	HK\$'M
Fees	4.3
Salaries, allowances and benefits in kind	10.8
Performance bonus	34.1
Contributions to retirement scheme	8.1
	<hr/> <hr/> 57.3

Number of directors whose emoluments fell within:

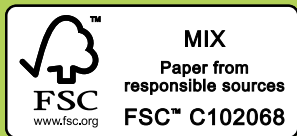
<i>Emoluments band (HK\$'M)</i>	
0.0 - 1.0	7
15.5 - 16.0	1
37.5 - 38.0	1

The above remuneration paid to directors of the Company also represents the amount of short-term employee benefits of HK\$49.2 million and post-employment benefits of HK\$8.1 million paid to the Group's senior management during the year ended 31st December 2017. There were no other long-term benefits, termination benefits and share-based payment paid to the Group's senior management during the year.

4. Analysis of Residential Maintenance

Net loss on residential maintenance of the Company under the Fixed Monthly Maintenance Charge for the year ended 31st December 2017 is as follows:

	HK\$'M
Residential maintenance revenue	206.6
Less expenses:	
Manpower costs	(147.3)
Other operating and administrative expenses	(117.0)
Net loss	<hr/> <hr/> (57.7)



香港中華煤氣有限公司
The Hong Kong and China Gas Company Limited
June 2018 www.towngas.com