



# MAINLAND UTILITY BUSINESSES———

Since the establishment of our first joint venture in
Guangdong province in 1994, Towngas has experienced
great success on the mainland across the scope and breadth
of our activities. In line with the mainland government's
clean energy policies, the consumption of natural gas is
expected to continue on a significant upward trajectory in
the coming years, opening up valuable opportunities for

growth across the various markets in which we operate.

#### **City-gas Operations**

Our portfolio of city-gas ventures continued to thrive in 2015. Adding 4 new city-gas projects, the Group operated 131 city-gas projects across mainland China, covering 23 provinces, autonomous regions and municipalities and serving around 20.9 million residential and business accounts. Despite a slow economy and a difficult environment for the manufacturing industry, we recorded a 2 per cent growth in total gas sales volume to 15.5 billion cubic metres for the year, which accounts for 10 per cent of the national city-gas market.

A sluggish economy in 2015 affected business performance worldwide. China's GDP growth continued its downward trend, dropping down to 6.9 per cent in a 25-year record low, and low international oil prices made piped natural gas less competitive.



A combined cooling, heat and power system fuelled by natural gas is installed at a data centre in Nanjing, Jiangsu province to enhance energy efficiency.

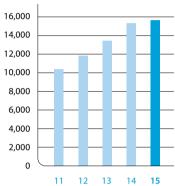
Retail consumption weakened while industrial activity and exports came down, impacting our city-gas business in the industrial sector.

In spite of these formidable challenges, we succeeded in boosting residential and commercial gas sales in 2015.

Our strategic marketing initiatives,

total-solution services and environmentally-friendly applications facilitated the expansion of our catering business market, particularly our drive to promote natural gas as a replacement for liquefied petroleum gas among small restaurants. Overall gas sales in the catering sector rose





by 12 per cent, while the quantity of new installations increased by 33 per cent.

During the year, our efforts to promote distributed energy systems yielded encouraging results, particularly among data centres and commercial complexes. These gas-fuelled cooling, heating and power generating systems not only reduce greenhouse gas emissions, but also generate waste heat that can be used for a wide variety of applications, making natural gas an environmentally-friendly and economical solution.

Echoing national air quality policies targeted at curbing the prevalence of coal-fired steam or hot water boilers, we devoted significant effort to promoting high-efficiency natural gas boilers, recording a 40 per cent increment in new installations.

On a national level, natural gas consumption has been forecasted to rise significantly in the coming years. At the 2015 United Nations Climate Change Conference in Paris, China pledged that by 2030, it will reduce carbon emission intensity by

60 to 65 per cent compared to levels in 2005 while capping further emissions. As such, the nation's city-gas demand is expected to undergo significant growth in the coming years, with the mainland government driving a shift towards cleaner fuels like natural gas, which produces lower carbon emissions than other fossil fuels like coal and petroleum.

Great reform marked the natural gas pricing mechanism in 2015. The Shanghai Petroleum and Natural Gas Exchange, of which we are a shareholder and co-founder, launched a pilot operation on 1st July. Promoting market-oriented pricing, this trading platform is conducive to the healthy development of a wholesale mechanism for natural gas, paving the way for the further broadening of the upstream market. In November, the National Development and



Stenter machines heated up by natural gas are used at a textile mill in Suzhou, Jiangsu province.



Reform Commission announced a RMB0.7 drop in non-residential natural gas city-gate prices, representing a substantial step towards restoring the economic competitiveness of natural gas. As favourable gas utilisation policies and pricing reforms continue to take root, along with a more abundant upstream supply even in winter - making gas space heating possible - we expect to see significant growth in natural gas demand in the coming years. This will provide us with immense opportunities to capture the clean energy market and continue contributing to a safer and more reliable gas supply and services on the mainland.

#### **Midstream Facilities**

Generating promising returns, our midstream natural gas businesses operated smoothly in 2015. During the year, Towngas China acquired two midstream natural gas projects – the Xuancheng-Huangshan natural gas sub-stream and downstream city-gas project in Anhui province, and the Taigang Gas midstream long-haul pipeline project in Taian, Shandong province.

The construction of a natural gas storage facility in underground salt caverns in Jintan, Jiangsu province showed satisfactory progress. Phase one of the facility accommodates a storage capacity of 130 million cubic metres, and is expected to be completed in the third quarter of 2016. By reducing supply bottlenecks during peak seasons, we will be able to manage our gas inventory more effectively and to further develop the winter load markets.

Taking into consideration our natural gas pipeline projects in Anhui and Hebei provinces, our natural gas extension projects in Jilin and Henan provinces, our Guangdong LNG Receiving Terminal project, as well as the natural gas storage project in Jintan, Jiangsu province, our midstream projects totalled 8, underpinning the development of our downstream city-gas markets.

## Water Supply and Wastewater Operations

Gas, water supply and wastewater operations are closely related. They serve the same customers and utilise similar technology and management patterns. This makes the Group ideally placed to leverage our existing customer base, know-how and social capital to capture the many opportunities opening up in this area of business.

Through Hong Kong & China Water Limited (Hua Yan Water), the Group currently operates six water projects in mainland China, which serve more than 1.1 million customers in the residential, industrial and commercial sectors. Despite industrial consumption being slightly down, overall water



Customers can enjoy high-quality Aquajoy purified water produced with ultra-filtration processes. business sales are on the rise at a steady pace of 2.3 per cent for the year, for a total of 433 million tonnes during the year.

Our projects include water supply projects in Suzhou, Jiangsu province and in Wuhu and Maanshan, Anhui province; and an integrated water supply and wastewater treatment joint venture project together with an integrated wastewater treatment joint venture project for a special industry, both in Suzhou Industrial Park, Jiangsu province.

China is becoming the world's largest consumer of bottled water. Capitalising on this market trend, Hua Yan Water introduced the Aguajoy brand in September 2015, employing state-of-the-art ultrafiltration processes to offer 18.9 litre bottles of drinking water to schools, hospitals, offices and residential markets. Located in Wujiang, Suzhou, the first production line has a capacity of 3 million bottles per year. This is expected to be a promising line of business, and plans are in place to increase production in the years to come.

## Extended Service Businesses

Further capitalising on the wellestablished Towngas brand name, we began to unveil a number of flagship offerings for our mainland customers. These innovative new products and services aim to promote a modern lifestyle for the



We launched our high-end kitchen solutions brand, Mia Cucina, to cater to a growing market in mainland China.

20.9 million customers that use our city-gas services on a daily basis, while creating greater customer value and generating additional business for our utility companies. We are also seeking to advance to a digital platform for gas bill and internet purchase settlements in order to seize the unrivalled opportunities presented by the Internet Plus movement in mainland China.

In 2015, riding on the success of the Total Kitchen Solution service in Hong Kong, we began offering premium kitchenware, appliances as well as other household goods. The market response among property developers in Eastern China has been promising. The expansion of further market locations will begin in 2016. Mia Cucina, our popular range of premium kitchen cabinets, was introduced to the mainland market for the first time in 2015. Combining superb workmanship with innovative design, followed by unfailing after-sales service, these Europeanstyle cabinets are not only aesthetically pleasing, but have also proven to address the practical needs of Chinese household kitchens well. Incorporating high-quality materials and rigorous construction,





The Bauhinia National Cooking Competition for Secondary and Primary Students was organised in mainland China to promote the culture of cooking for love.

they offer a high load capacity and excellent durability, while special ergonomic features and automatic functions enhance user experience.

Also launched in 2015 was our household gas insurance policy programme. In partnership with Ping An Property and Casualty Insurance Company of China, Ltd and Huatai Property Insurance Company Ltd, we offer the market's most competitive insurance products for gas incident induced losses and damages. As at the end of the year, we have achieved total sales of RMB30 million through a pilot run across 16 of our city-gas projects.

Bauhinia, our flagship brand of safe and high-quality integrated gas appliances, celebrated its 10th anniversary in 2015. Aided by the appeal of our creative marketing strategies, the brand has gained high customer satisfaction on the mainland, selling around 760,000 units during the year and accumulating sales of 3.68 million units since its launch. Each of these quality appliances sold results in the safer daily use of gas among household customers.

The reliability and high quality of Bauhinia appliances have been recognised through numerous awards both on the mainland and in Hong Kong. These include Annual China Outstanding Marketing Award 2014-15, Top Ten Unit in the National After-sales Service Industry, and Certificate of National Outstanding Enterprise with Excellent Quality, Service and Integrity.

Leveraging the success of gas clothes dryers in Hong Kong, we are seeing high potential for the household product in parts of the mainland, and are planning to introduce these
Japan-made appliances in the market
under the Bauhinia brand in 2016.

#### **Serving Our Customers**

"Customer focus" is our guiding principle, the basis of our success and the driving force behind our ongoing efforts to enhance customer value and service delivery. To this end, we expanded our network of customer centres, bringing the total to 231 outlets across 79 mainland cities, each offering customers a one-stop experience that complements our overall dedication to service excellence. During the year, we introduced eService platforms that support online payment, service appointments, gas usage readings and more in order to provide our customers with valueadded convenience.

Innovation and technology are major drivers of our customer service delivery. Our advanced customer information system, a unified and standardised data platform for our mainland ventures, enables us to better manage customer data and billing across a cloud computing platform.

Ensuring the safety of our customers is a paramount directive throughout the Group's businesses. We take a proactive stance, conducting regular safety inspections to ensure that pipes and appliances remain in good working order. Our inspection personnel also take the opportunity to educate customers on gas safety. A number of other initiatives also educate customers and raise general awareness, including radio and television ads, flyers, community exhibits, student visits, safety talks and other special events.

#### **Enhancing Safety**

For Towngas, safety and risk management are group-wide concerns. Even as our customer base has increased substantially over the past five years, serious gas-related accidents leading to injuries and fatalities have dropped by more than half. As one of the mainland's most trusted gas companies, we work proactively to maintain this

downward trajectory, treating the safety of our customers, our colleagues and the general public with the utmost diligence.

Beginning in 2008, we rolled out safety inspections conducted by corporate senior management across our city-gas businesses on the mainland. Together with a series of safety enhancement measures in practice, we have succeeded in implementing more rigorous safety and quality standards, stepping up inspections and maintenance, enhancing the reliability of the gas infrastructure, educating our stakeholders as well as nurturing a corporate culture of responsibility.

Regular safety and risk audits are conducted to cover our mainland city-gas and water businesses. A new round of audits for the 2015/16 period is progressing well, with 52 companies having undergone inspections so far.

In 2015, we expanded the scope of our safety directive from Safety Solutions to Total Quality Management. This takes a more holistic approach to managing risk, quality and reliability at the corporate level, addressing organisational values and emphasising customer experience. Efforts to promote these standards will continue in 2016.



Continuing to enhance service quality amongst our staff, we organised the Service with a Smile Ambassadors campaign.



#### **Utility Businesses in Mainland China in 2015**

	Year of Establishment	Project Investment Rmb M	Registered Capital Rmb M	Equity Share %
TOWNGAS PIPED				
CITY-GAS PROJECTS				
Guangdong Province	1			
Panyu 	1994	260	105	80%
Zhongshan -	1995	240	96	70%
Dongyong	1998	178	75	82.6%
Shenzhen	2004	_	2,178	26.9%
Chaoan	2007	185	99	60%
Chaozhou Raoping	2011	189	106	60%
Central China				
Wuhan	2003	1,200	420	49%
Kinmi	2009	205	85	100%
Factory China				
Eastern China			40.5	0.53
Yixing	2001	246	124	80%
Taizhou 	2002	200	83	65%
Zhangjiagang	2003	200	100	50%
Wujiang	2003	150	60	80%
Kuzhou	2004	245	125	80%
Suining	2009	85	34	100%
Fengxian	2009	60	31	100%
Peixian -	2015	300	100	100%
Danyang	2004	150	60	80%
lintan 	2006	150	60	60%
Tongling	2006	240	100	70%
Suzhou Industrial Park	2001	600	200	55%
Changzhou	2003	248	166	50%
Nanjing	2003	1,200	700	49%
Fengcheng	2007	206	88	55%
Pingxiang	2009	297	105	100%
liangxi	2009	52	26	56%
Zhangshu	2009	86	34	100%
onganzhou	2010	100	68	93.9%
Hangzhou	2013	2,988	1,195	24%
Shandong Province				
linan East	2003	610	470	49%
Northern China	222=	• -=		
lilin	2005	247	100	63%
Beijing Economic-technological Development Area	2005	111	44	50%
Hebei Jingxian	2011	186	79	81%
Northwestern China				
Xi'an	2006	1,668	1,000	49%
Hainan Province				
	2000	110	50	400/
Qionghai	2008	110	50	49%

	Year of Establishment	Project Investment Rmb M	Registered Capital Rmb M	Equity Share %
MIDSTREAM PROJECTS				
Guangdong LNG	2004	8,595	2,578	3%
Anhui NG	2005	750	252	27.5%
Hebei NG	2005	2,760	920	43%
Jilin NG	2007	360	220	49%
Henan NG	2012	125	50	49%
Jintan NG	2013	180	100	64%
LNG REFILLING STATION				
Nanjing (Marine)	2014	600	204	39.9%
WATER PROJECTS				
Wujiang	2005	2,450	860	80%
Suzhou Industrial Park	2005	4,705	1,597	50%
Wuhu	2005	1,000	400	75%
Suzhou Industrial Park (Industrial Wastewater Treatment)	2011	550	185	49%
Maanshan	2013	157	63	100%
Jiangbei	2013	1,049	374	100%

#### **TOWNGAS CHINA PIPED CITY-GAS PROJECTS**

<b>Guangdong Province</b>	Huzhou	Zhaoyuan	Anshan	Southwestern
Foshan	Yuhang	Pingyin	Lvshun	China
Shaoguan	Songyang	Feicheng	Kazuo	Ziyang
Qingyuan	Changjiu	Boxing Economic	Beipiao	Weiyuan
Yangdong	Fuzhou	Development Zone	Wafangdian	Pengxi
Fengxi	Jiujiang	Yangxin	Xinqiu	Lezhi
	Wuning	Wulian	Jianping	Pingchang
Eastern China	Xiushui		Changchun	Dayi
Nanjing Gaochun	Yifeng	Hunan Province	Gongzhuling	Yuechi
Dafeng	Changting	Miluo	Siping	Cangxi
Tongshan			Qiqihar	Chengdu
Maanshan	Shandong	Northeastern		Zhongjiang
Bowang	Province	China	Hebei	Jianyang
Zhengpugang Xin Qu	Jimo	Benxi	Province	Pengshan
Modern Industrial Zone	Laoshan	Chaoyang	Qinhuangdao	Mianyang
Wuhu Fanchang	Zibo	Tieling	Yanshan	Xinjin
Bozhou-Wuhu Modern	Zibo Lubo	Fuxin	Cangxian	Xindu
Industrial Zone	Longkou	Shenyang Coastal	Mengcun	Mianzhu
Wuhu Jiangbei	Jinan West	Economic Zone	Shijiazhuang	Jiajiang
Anqing	Weifang	Yingkou	Baoding	Qijiang
Chizhou	Weihai	Dalian Changxingdao		Guilin
Tunxi	Taian	Dalian Economic and	Inner	Zhongwei (Fusui)
Huangshan	Chiping	Technical	Mongolia	Xingyi
Huizhou	Linqu	Development Zone	Baotou	Luliang
Tongxiang	Laiyang			-

#### **MIDSTREAM PROJECTS**

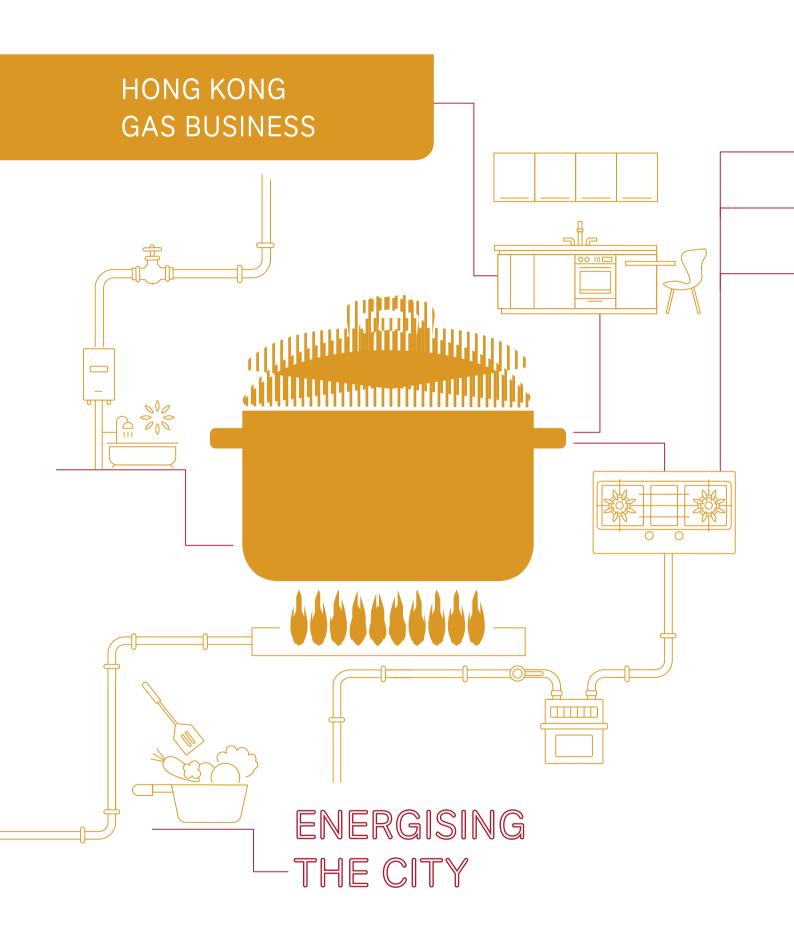
Xuancheng Huangshan Taian Taigang

#### **CNG REFILLING STATIONS**

Qiqihar (Lianfu) Qiqihar (Xingqixiang)

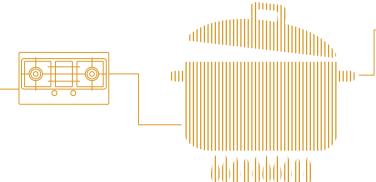
#### **OTHER PROJECT**

Zhuojia Public Engineering





## HONG KONG GAS BUSINESS



As Hong Kong's first utility company, we remain foremost in the industry by continually re-evaluating our thinking.

Our focus has been on growth, which we have achieved by crossing innovative thinking with prudent implementation. Even so, our foremost concern remains unchanged: providing safe and reliable gas supply as well as high quality products and services to our customers, year after year.

## Residential and Commercial Activities

Affected by a decrease in the number of inbound tourists as well as an unseasonably warm year in Hong Kong, total volume of gas sales for the year was 28,404 million MJ, a decrease of 1.5 per cent. As at the end of 2015, our customer base further expanded to a total of 1,839,261 accounts, an increase of 19,326 over the previous year.

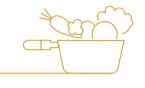
To help offset increasing manpower and operating costs, we raised the gas tariff by 3.5 per cent in August 2015. With 470,000 new residential units due to come into the market in the next 10 years, we foresee sales picking up significantly in the coming years.



Despite the dip in inbound tourism in 2015, our commercial business performed well through our efforts to cultivate new gas applications. Hong Kong's two theme parks are diversifying their energy sources,

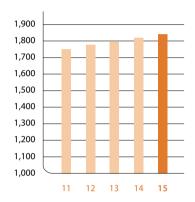


Ocean Park's Adventures in Australia utilises gas-powered Direct Fired Absorption Chiller/Heater in its central air conditioning system to maintain constant indoor temperature.



#### Number of Customers

Company (Thousand)



using gas to power air conditioning, dehumidifying and other applications as a more economical, environmentally-friendly and reliable alternative. Considered together with on-site catering services, we saw a strong increase of 36 per cent in gas sales within the parks.

Our business in the restaurant trade enjoyed stable growth with the introduction of tailor-made highefficiency products. Our innovative range of automated cooking appliances has been well received in the commercial catering industry. Featuring waste-heat recovery functions together with automatic wok-tossing, smart flame timers and programmable jet oven features, these gas-powered appliances not only save energy and lower operating costs, they also allow for

a more consistent standard in cooking quality and help lower the risk of repetitive stress injury for employees.

During the year, we secured two new conversion-to-gas projects for the benefit of the environment – a laundry factory in Tuen Mun and a hospital in Wanchai operated by the Hospital Authority. It is expected that the switch of their diesel equipment to dual-fuel, allowing for the use of town gas, will be completed in 2016.

We will also be supplying landfill gas to generate electricity, which presents the added benefit of reducing carbon emissions and transforming waste into useful energy. Once construction is complete, a new generator located in the North East New Territories will annually supply 20 million MJ of electricity to the

Alice Ho Miu Ling Nethersole Hospital. As a combined heat and power system, the generator produces thermal by-products that will also be harnessed to produce steam and hot water for use in the hospital. The new system is due to come into operation in mid-2016.

We always strive to promote home cooking and family dining as a way to foster synergy amongst our residential projects and to transform our image beyond that of a traditional utility company. In 2015, our marketing campaigns – Cook For Love and Total Kitchen Solution, aiming at fostering family closeness through home cooking and a modern lifestyle respectively – were ranked among the top 10 in the HKMA/TVB Awards for Marketing Excellence



The Mia Cucina Curva series embraces the curved lines of its cabinets to create a stylish kitchen.





Disciples Escoffier Diploma in Culinary Arts, a culinary course co-organised with Disciples Escoffier, received enthusiastic response.

In 2015, a total of 255,730 sets of appliances were sold with an increase of sales revenue by 6.4 per cent, compared to 2014. Through Total Kitchen Solution, we expanded our B2B business in the high-end retail and property development markets. Packaging our Mia Cucina kitchen cabinets with our TGC and Scholtès gas appliances, we offered a one-stop kitchen package to both the retail consumer and commercial developer markets. Fulfilling emerging needs for premium designs in compact kitchens, these packaged solutions are high in demand among Hong Kong's top developers. More than 4,000 kitchen solution installations were sold in 2015 alone. Our new Inner Pantry cabinets were also introduced this year, specially catering to the latest designs for studio flats. We are confident that they will quickly gain

popularity among Hong Kong's new generation of homeowners.

2015 marked the 20th anniversary since the debut of our popular gas clothes dryers in Hong Kong. To celebrate the success of this gas application, we launched an array of promotions to highlight the advantages of indoor gas clothes drying.

#### A Commitment to Customer Service

We are committed not only to high standards of quality in our products and services, but also to the safety and convenience of our customers. As evidenced by the 6,766 compliment letters that we received in 2015, our efforts are well appreciated by our customers.

For the past 20 years, we have carried out regular gas safety inspections every 18 months, keeping our incident rates at record lows. Inspections are also good chances for our frontline staff to engage with customers, impart gas safety tips and address concerns directly.

Our customer engagement endeavours reaped tremendous rewards in 2015. We received the Sing Tao Service Awards – After Sales Service for the seventh consecutive year, East Week's Hong Kong Service Awards – Public Utilities for the fifth year running, and Ming Pao Weekly's Ming Pao Elite Awards – Public Utilities for the first time.

Our customer service hotline, powered by a state-of-the-art call management system, has enabled us to embrace an array of innovative service enhancements. These earned us the Mystery Caller Assessment (Phone-in) Gold Award, the Inbound Contact Centre Team Leader of the Year Gold Award, and the Inbound

#### **RESULTS OF**

#### **TOWNGAS SERVICE PLEDGE 2015**

#### **RELIABILITY**

Uninterrupted gas supply (over 99.99%)

99.992%

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

100%

Restoration of gas supply within 12 hours

100%

#### SAFETY

Emergency Team average arrival time (within 25 minutes)

Average 20.96 minutes



SERVICE QUALITY

Efficiency\*

8.85

Courteous and friendly attitude\*

8.86

#### **APPOINTMENTS**

Availability of maintenance and installation services within 2 working days

Average 1.12 days

#### HANDLING SUGGESTIONS

Reply within 3 working days

100%

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

100%

## SPEED AND CONVENIENCE

Customer Service Hotline (calls answered within 4 rings)

93.21%

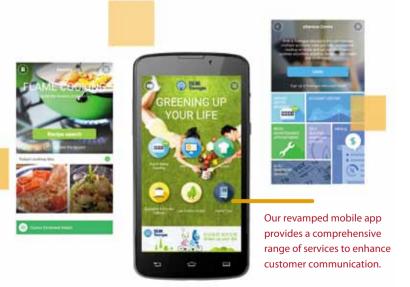
Connect or disconnect gas supply within one working day

**100%** upon customer's request

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

100% upon customer's request

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



Contact Centre of the Year (over 50 seats) Bronze Award, organised by the Hong Kong Call Centre Association.

During the year, we revamped our mobile application for access to a wider range of online services, cooking recipes and green tips. Payments may now be settled at convenience stores anytime, simply by providing the in-app QR code.





A commemorative pattern created by over 1,000 Towngas employees and contractors during an event celebrating the 20th anniversary of the Regular Safety Inspection programme.

#### **Gas Infrastructure**

The year 2015 saw a continuation of our efforts to expand and upgrade our piped-gas network and infrastructure in Hong Kong, serving our customers and enhancing supply reliability.

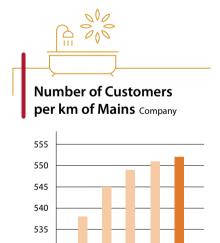
Modifications to our Ma Tau Kok plant have been completed, allowing for natural gas to completely replace naphtha as the feedstock for the production of town gas. Not only will this further reduce NO<sub>x</sub> emissions in the process, it will bring numerous economic benefits as well. As part of our ongoing efforts to enhance gas safety, we strengthened our trench inspection measures, engaged in more rigorous leakage surveys and conducted regular upgrades to aging pipes. These efforts have paid off, enabling us to realise the lowest numbers of both third-party damage incidents and network leakages. Moreover, our ongoing replacement

of medium pressure ductile iron pipes in our gas network is now approaching its final stages.

To enhance supply security for the residential sector in the North West New Territories, we are laying a looped pipeline 9 km in length along Castle Peak Road from the Tai Lam Station to the Tuen Mun North Station, and modifying these gas stations to support the added capacity. Pipelaying work is expected to be completed in 2017.

Another way to enhance supply security is developing new technology to improve our inspection and maintenance procedures. We use wireless quadcopters to conduct our riser inspections and detect gas leaks, greatly enhancing operation efficiency. Similarly, our Laparobot, a small robot designed to move within our network of pipes to detect and rectify abnormalities,

eliminates the need to dig up the pavement. Another invention is our Aquashield, which automatically seals off pipes compromised by water ingress in order to protect our underground networks from becoming inundated by water mains burst in the close vicinity.



530

525

520

11 12 13 14

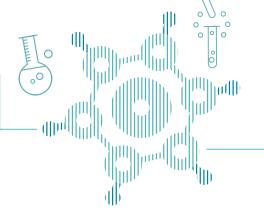
### **Towngas Network in Hong Kong** Guangdong LNG Terminal SHENZHEN Fanling **NEW TERRITORIES** TAI PO PLANT Tuen Mun Chuen Lung Tai Lam Kok Sha Tin Tsuen Wan Tsing Y Ta Pang Po Chek Lap Kok KOWLOON Hong Kong International Theme Park Tai Ho Tung Chung HONG KONG ISLAND Wong Nai Chung Chai Wan LANTAU ISLAND

Existing areas Planned new Planned high pressure High pressure or Completed Completed intermediate Completed submarine pipeline from Guangdong LNG of supply areas of supply or intermediate intermediate pressure high pressure pressure pipelines pressure pipelines pipelines under pipelines Terminal to Tai Po plant construction





# NEW ENERGY AND DIVERSIFIED BUSINESSES



Falling crude oil and natural gas prices present an unprecedented challenge to our new energy projects that output substitute fuels for crude. Yet our research and development initiatives in technologies that transform industrial and agricultural waste into cleaner fuels and valuable chemicals and materials are bound to bring the Group to another stage of business development. Moreover, the advent of the Big Data Era is setting the scene for the rapid expansion of our telecommunications business, positioning us to flourish in a changing economic and technological landscape.

#### **New ECO Energy**

ECO Environmental Investments Limited (ECO) is the Group's new energy platform and a world-class pioneer in alternative energy. With a strong focus on innovation, ECO has been successful in introducing clean and renewable fuels and their application through a number of projects in mainland China and overseas, bringing the Group closer to its new energy vision and commitment to environmental protection.

In 2015, the mainland government continued to progress towards energy diversification and the reduction of carbon emissions. As such, we expect to see a growing demand for clean automobile and marine vessel fuels, and a strong

potential for recycling industrial and agricultural waste. As a leader in clean energy, we have strategically invested in exploring commercially viable ways to turn low value feedstock into high value energy, allowing us to address environmental concerns as well as to meet the energy needs of the country.

To secure our supply of liquefied natural gas (LNG), we are building a diverse energy portfolio using different types of feedstock. One of these is coalbed methane, which we have been converting to LNG at our coalbed methane liquefaction facility in Jincheng, Shanxi province. Commissioned in late 2008, the facility has a production capacity exceeding 250 million cubic metres per annum.



Our coke oven gas plant in Xuzhou, Jiangsu province is expected to undergo operational trials in mid-2016, with an annual output capacity of 110 million cubic metres of LNG.

Another resource for the production of LNG is coke oven gas, which is a by-product of the coke-making process. We are currently constructing a plant in Xuzhou, Jiangsu province to convert coke oven gas into methane, then LNG. Trial operation is expected to commence in the second quarter of 2016, further enhancing ECO's LNG production capability.

ECO has also placed significant effort in converting biomass into clean energy and chemical products. A plant to upgrade low-quality inedible bio-oil is now under construction in Zhangjiagang, Jiangsu province. Upon completion, the facility will process approximately 220,000 tonnes of palm acid oil per year for conversion into high-quality chemical products and low-sulphur fuels. The construction work is expected to complete in early 2017 for trial production.

Agricultural waste, which is abundantly available on the mainland, also provides raw material for biomass conversion – an area showing high potential for development. Agricultural waste was traditionally burned on-site to make way for the next crop, forming a major cause of the severe smog pollution during harvest seasons. Through our research and development efforts, we have succeeded in developing new technology to convert agricultural and forestry waste into natural gas



ECO has developed innovative technologies to convert agricultural waste into multipurpose energy.

through thermal gasification and methanation, and to produce levulinic acid through hydrolysis, which can be used as a raw material for producing clean fuel additives. We are planning to commence a pilot project in Hebei province, which is expected to generate natural gas output by early 2017. This project will be the first large-scale operation of its kind and will have important implications for the future development of renewable energy.

Our coal-based methanol plant in Inner Mongolia employs clean coal technology to generate syngas, which is then synthesised into methanol. In mid-2015, we completed the construction work to enhance its daily production capacity to over 1,100 tonnes. The yield for the whole year rose to over 300,000 tonnes, representing an increase of 26 per cent compared to 2014. Moreover, we have developed technology to upgrade methanol into natural gasoline, a gasoline substitute chemical product. The upgraded facility is now at the pilot production stage.

On the demand side of our LNG value chain, our network of refilling stations on the mainland is growing apace with this prospering market. As part of its green policies, the mainland government is promoting more stringent emissions standards and providing incentives for natural gas vehicles. Moreover, natural gas prices have dropped at the wholesale level, making it a competitive fuel alternative, even at a time of low oil prices.

With the aim of displacing the heavy reliance on diesel in the commercial and logistics market, we located our compressed natural gas (CNG) and LNG refilling stations along major transportation routes and ports, where they supply clean fuel to heavy commercial trucks as well as marine vessels. We currently possess 60 refilling stations that are in operation, under construction or at the planning stage, covering Shaanxi, Shandong, Shanxi, Henan and Liaoning provinces, among others. Moreover, over 100 new sites have been earmarked for development in the coming years, ensuring that we



do not lose momentum on this important endeavour. By expanding our network of refilling stations, we hope to help drive the uptake of clean fleets across the mainland.

In Hong Kong, ECO continued to perform well in 2015. ECO Aviation Fuel Facility supplies safe and reliable fuel to the Hong Kong International Airport and continues to contribute steadily growing returns on investment. During the year, the total turnover was 6.07 million tonnes.

Our liquefied petroleum gas (LPG) refilling station business, a fixture in Hong Kong since 2000, experienced a growth in sales volume by 3 per cent in 2015. It provides 65,000 tonnes of LPG per annum, accounting for approximately 30 per cent of Hong Kong's auto LPG market.

Despite the impact of falling international crude prices on our upstream oil business, we hit several high-yield wells in 2015 in our onshore oilfield in Thailand, bringing annual production up to 1.86 million barrels, which represents a remarkable 36 per cent increase in yield. This achievement accentuated the value of this asset as well as our ability to deliver on this new frontier through our extensive engineering capabilities, even under harsh market conditions.

#### **Telecommunications**

Currently running two data centres in Hong Kong and three on the mainland with another under construction, having a total capacity of 15,000 server racks, Towngas Telecommunications



Equipped with TIA-942 Tier 3+ facilities, the TGT Tseung Kwan O Data Centre 2 is fully operational, providing world-class professional services to clients.

Company Limited (TGT) demonstrated sustained business growth, with an impressive 39 per cent increase of revenue in 2015. The business provides data transmission and cloud computing services to clients ranging from large corporations to SMEs, as well as telecommunications carriers and international network service providers in the region.

At the 10th China Internet Data Centre Conference held in Beijing, TGT was honoured with the 2015 China IDC Industry – Excellent Carrier-Neutral Data Centre Award, which represents the highest accolade in the IDC industry on the mainland, underscoring TGT's position as a trusted data centre services partner.

With a growing presence in the telecommunications market, TGT is well positioned to capitalise on the coming Big Data Era. Massive transmissions of data are expected to

mark the coming years, to be used to unlock new value.

It is a market that is expected to grow rapidly in the coming years as China shifts focus from heavy industry to the service sector. With ready access to the Group's resources, TGT is ideally placed to fill this emerging need.

#### **Information Technology**

S-Tech Technology Holding Limited (S-Tech) is a wholly-owned subsidiary of Towngas, responsible for product development, solution implementation and system integration. Since its inception, S-Tech has successfully launched a series of products that have enhanced service quality and efficiency for the Group. We developed three internal mobile applications to facilitate regular safety inspections, meter reading and maintenance appointments for customers on the mainland. We also introduced an advanced customer

service system, enabling our businesses in mainland China to better manage customer data and billing across a cloud computing platform. In addition, S-Tech provides consulting services and other cloud computing applications as well as IT products to companies both inside and outside of the Group.

## **Civil and Building Services Engineering**

U-Tech Engineering Company Limited (U-Tech) is our wholly-owned subsidiary that provides consultancy and engineering contractor services in Hong Kong and Macau. It specialises in utilities installation, infrastructure construction, and civil and building services engineering for public and private projects.

U-Tech enjoyed an excellent year in 2015 through the acquisition of various new contracts encompassing electrical and air conditioning installation, underground sewer inspection, and the installation of underground water mains and chilled water pipelines. U-Tech is also seeking opportunities in projects such as the construction and installation of a pedestrian lift next to a light rail station.

In recognition of its high standards of quality and safety, U-Tech was awarded the Safety Performance Award – Construction from the Occupational Safety and Health Council, the Outstanding Contractor Award – Electrical Installation from Henderson Land Development Company Limited, as well as the Safety Merit Award from the Hong Kong Construction Association.

#### **Manufacturing Businesses**

To ensure the highest standards of quality across the supply chain, we manufacture critical materials and devices such as polyethylene (PE) piping and jointing parts systems, as well as gas meters. With the steadfast shift to natural gas in mainland China, abundant opportunities are opening up for Towngas to contribute to a safer and more reliable gas infrastructure on the mainland.

G-Tech Piping System (Zhongshan) Company Limited (G-Tech), the Group's wholly-owned subsidiary, is a supplier of high-quality PE pipes, supported by GH-Fusion Corporation Limited, our joint venture with the United Kingdom-based Fusion Group, which specialises in PE fittings.

Reinforced by steadily increasing export opportunities despite the relatively weak export climate prevailing in mainland China, the PE piping business expanded rapidly in 2015, supplying about one quarter of the Group's mainland markets. To capture these opportunities, G-Tech commissioned its fourth PE pipe production line in Zhongshan in early 2015 and GH-Fusion also developed a number of new PE fittings to address the needs of the market. A second G-Tech PE pipe factory will come into operation in Maanshan, Anhui province in mid-2016, doubling its total production capacity and enabling its businesses to further broaden its market reach on the mainland.

M-Tech Metering Solutions
Company Limited (M-Tech) develops
and markets proprietary smart gas
meter solutions. Incorporating
Micro-Electro-Mechanical Systems
technology, the accuracy of these
new generations of gas meters



The construction of an underground seawater cooling system and associated works in the Kai Tak Development Area by U-Tech is progressing well.





G-Tech supplies high-quality
PE pipes to piped-gas operators.

is not affected by the temperature or pressure of the gas they measure, providing a more accurate measure of gas consumption. We are planning to supply these solutions to all of our city-gas businesses, as well as others in mainland China and overseas.

To meet the requirement for tier tariffs on the mainland, in 2015 M-Tech developed a new generation of Near Field Communication (NFC) residential gas meters, which allow for tariff payment, monthly tier tariff settings and gas consumption records to avoid conflict during tariff adjustment. These meters also contain several gas safety features such as regular safety inspection alerts, excess flow cut-off as well as external interference alarms.

#### **New Energy and Other Projects in 2015**

NEW ENERGY PROJECTS	Year of Establishment	Project Investment Rmb M	Registered Capital Rmb M	Equity Share %
Coal Mining Jiangxi Fengcheng Inner Mongolia Erdos Kejian	2008   2011	1,100 450	236 150	25%   100%
Coal-based Chemical Jiangxi Fengcheng Inner Mongolia Erdos	2009 2009	1,250 1,170	350 400	40% 100%
CNG/LNG Refilling Stations Shaanxi Xianyang Shaanxi Huitai Shaanxi Lueyang Shaanxi Fengxiang Shaanxi Shenmu Shaanxi Shenmu Shaanxi Yuanping Shanxi Yuanping Shanxi Pinglu Shandong Chiping Shandong Jining Shandong Dongping Shandong Dongping Shandong Weishan Shandong Shanxian Shandong Linqing Shandong Heze Hebei Shijiazhuang	2008 2010 2014 2014 2015 2015 2008 2013 2014 2010 2010 2010 2010 2012 2014 2014 2014 2014 2015 2015	12 54 21 30 26 28 40 25 27 30 11 43 50 58 28 22 23 65	12 27 13 15 22 14 20 20 14 15 8 26 28 29 14 13 13	100% 100% 100% 100% 90% 100% 42% 75% 100% 100% 100% 91% 70% 100% 100% 100%

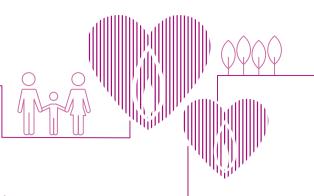
NEW ENERGY PROJECTS	Year of Establishment	Project Investment Rmb M	Registered Capital Rmb M	Equity Share %
NEW ENERGY PROJECTS				
CNG/LNG Refilling Stations Xingtai Ningjin Henan Xinmi Henan Anyang Henan Kaifeng Henan Linzhou Henan Nanyang Inner Mongolia Huhhot Inner Mongolia Wulatezhong Qi Inner Mongolia Xiwuzhumuqin Qi Inner Mongolia Chifeng Inner Mongolia Chaha'eryouyiqian Qi	2014 2010 2012 2013 2013 2015 2014 2015 2015 2015 2015	20 29 29 29 30 14 28 11 30 30	17 15 14 15 20 10 14 8 15 15	80% 100% 100% 100% 100% 100% 90% 100% 100
Ningxia Guangwuxian Ningxia Qingtongxia Ningxia Jinyintan Jiangxu Xuzhou Anhui Maanshan Jiangxi Pengze Guangdong Guangzhou	2015 2015 2015 2015 2006 2015 2013	15 21 28 40 15 45 26	11 13 14 20 11 30 13	100% 100% 100% 80% 30% 70% 100%
Upstream Projects Shanxi LCBM Jilin Tianyuan Xuzhou COG Heze COG Jiexiu COG	2006 2007 2014 2014 2014	600 140 453 450 480	200 5 151 150 250	70% 50% 80% 90% 60%
Coal Logistic Project Shandong Jining Jiaxianggang Logistic Port	2011	540	180	55%
Oilfield Project Phetchabun Province in Thailand	2012	USD 181M	USD 12,000	100%
TELECOMMUNICATION PROJECTS				
Shandong Jinan Shandong Jinan (Chibo) Shandong Laiyang Suzhou Fengxian Suzhou Peixian Liaoning Dalian (DETA) Liaoning Dalian (Yida) Heilongjiang Harbin Beijing (Zhongjing) Beijing (Chibo) Guangdong Dongguan Guangdong Shenzhen (Qianhai) Guangdong Shenzhen	2008 2009 2011 2011 2012 2010 2011 2013 2014 2014 2013 2014 2015	80 170 14 11 13 14 190 158 14 14 240 59	40 68 10 8 9 10 76 63 10 10 80 29.5 40	90.1% 65.5% 90% 100% 100% 49% 90% 80% 49% 97% 60% 100% 30%
OTHER PROJECTS				
Shenyang Sanquan Construction Supervisory ECO Engineering Management (Xi'an) Suzhou Industrial Park Broad Energy Services GH Yixing Ecology Zhangjiagang (Chemical) Dalian (New Energy Technology) M-Tech GH-Fusion G-Tech Towngas Technology S-Tech (Zhuhai) ECO Engineering Management (Shenzhen) Towngas Payment Technology (Shenzhen)	2011 2014 2012 2013 2014 2015 2011 2001 2012 2011 2014 2014 2015 2015	4 13 170 184 610 USD 4.75M 30 87 77.5 30 7 30 7	3 9 71 184 205 USD 4.75M 30 43 31 21 5 15 5 28	60% 100% 25% 100% 100% 100% 100% 100% 100% 100% 10

# CORPORATE SOCIAL RESPONSIBILITY





## CORPORATE SOCIAL RESPONSIBILITY



We recognise the importance of environmental stewardship and aim to incorporate sustainability into every facet of our business. While seeking green solutions to the energy challenges of the future, we also partner with employees, customers, associates and the public in philanthropic initiatives in order to build a better environment for the next generation.

#### Caring for the Environment

Knowing our legacy as Hong Kong's first utility company is rooted in the communities we serve, we brought fulfilment and convenience to customers, while building our identity as a socially responsible company. We pledge to make every effort to protect the environment and ensure sustainable development. This green policy guides our operations at all levels.

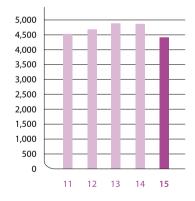
Throughout 2015, we achieved numerous milestones and participated in many events and programmes centred on our role as an environmental leader and advocator.

In mainland China, we sought to drive a shift from the use of

traditional coal, heavy fuels and liquefied petroleum gas to natural gas as it is a safer and cleaner alternative. To this end, we engaged a number of partners to help us develop technology to enhance the efficiency of natural gas as an energy source. One of our initiatives involved the conversion of supply systems from coal gas to natural gas among our city-gas projects, which was completed in October 2015, marking the end of the coal gas era and embracing the sole supply of natural gas for our residential markets across the Group.

In Hong Kong, construction on the South East New Territories (SENT) Landfill Gas Utilisation project showed satisfactory progress. The new facility will utilise advanced







We joined hands with Greeners Action to launch the Zero Food Waste@Campus campaign and over 10,000 students participated to collect 2,360 kg of food waste for recycling into fertilisers.

technology to convert landfill gas into synthetic natural gas, which will be transported through a 12-km-long pipeline to Tseng Lan Shue and integrated into the gas supply network there. The project is expected to reduce carbon emissions by around 56,000 tonnes per year.

Through energy-saving initiatives designed to reduce electricity consumption, our headquarter building in North Point, Hong Kong attained the Final Platinum rating under the BEAM Plus Existing Buildings V1.2 in 2015. Initiatives included the installation of an oil-free variable speed water-cooled chiller in our air conditioning system that reduces energy consumption while eliminating thermal waste and oil contamination. In addition, we signed the Energy Saving Charter, through which we committed to a room

temperature of 24°C to 26°C from June to September. We also pursue a paperless approach to business with the use of tablets and mobile devices. Handling such matters digitally saves time and natural resources while improving customer service and relations.

Public education is another significant component of our environmental initiatives. We promoted different ways to live green to our employees, contractors and suppliers as well as the general public, focusing on impactful changes to daily life.

We supported environmental programmes calling attention to Hong Kong's struggle with food waste, which adds over 3,000 tonnes of refuse to landfills every day.

In 2015, we worked with Friends of

the Earth (HK) through the Cherish Food Reward Scheme, providing discounts and vouchers to patrons at over 130 restaurants in exchange for ordering less rice and leaving no food behind. We also sponsored Greeners Action's Leftover Cooking Contest to encourage the public to cherish food by using leftovers as ingredients for cooking.

During the year, we also actively participated in environmental campaigns organised by green groups in Hong Kong. Under the Lai See Recycling Programme by Greeners Action, for instance, over 120 kg of red envelopes were collected in our offices, encouraging an eco-friendly Chinese New Year. In March, we took part in WWF's Earth Hour by turning off lights at our facilities in Hong Kong and mainland China for an evening to raise public awareness of climate change. Moreover, we supported the Clean Air Network's Airmazing Race 2015, joining the fight against air pollution.

Working with the Conservancy
Association, we held the fifth annual
Green Leaders Bloc programme,
which nurtures students to
become future environmental
leaders through a series of training
programmes. Participants also
planned campaigns for promoting
green living whilst raising awareness
of carbon emissions. Over 100 young
people have taken part since the
first intake in 2011.



Towngas employees combined exercise with charity, raising money and awareness of pressing environmental issues. Employees and their families joined the Green Power Hike and the Green Sense Charity Hike, raising funds for good causes while learning about Hong Kong's environment.

On the mainland, we organised an annual carbon reduction competition that has seen the creation of 167 projects since 2010. Through this programme, carbon emissions were reduced by about 94,000 tonnes per year.

This year also saw the launch of an environmental protection project, Green Towngas China. Together with customers, volunteers and local media, we planted over 7,400 trees, creating a green area of nearly 20,000 square metres.

Our green performance earned us the Best Enterprise for Corporate

Social Responsibility Award 2015 organised by China Environment News, the Ministry of Environmental Protection, China.

## Supporting Our Communities

We maintain a tradition of reaching out to local communities, making a difference in the lives of children, senior citizens and other people in need. Various initiatives saw the Company supporting non-profit organisations, education and social welfare while our employees generously volunteered their time to contribute to a warmer society.

In Hong Kong, we took a multifaceted approach to improving the lives of senior citizens, providing them with helpful services and social engagement. During festivals, which can be a particularly lonely time for the elderly, we provided them with festive food in celebration. In 2015, we distributed over 330,000 rice

dumplings and 100,000 mooncakes to needy families and elderly people, with an accumulated total of 2,415,000 rice dumplings and 1,720,930 mooncakes donated since the programmes were first rolled out.

Additionally, we continued installing toilet washlets in elderly care centres. Bringing the current total to over 180 units, this programme not only improves the lives of the elderly, but also offers help to their caretakers.

We carried on with the Warmth and Care Fresh Food Aid programme in 2015 to provide single-parent and low-income families with fresh and healthy food. A total of 46,800 food packs have been delivered, benefiting 450 families since 2013.

Established in 2000, our District Council Focus Teams have been developing strong bonds with local communities. By working directly with District Council members, we gain a better understanding of



Partnering with local district councillors, we launched the Gas Appliances for the Community programme. social needs and expectations while improving our ability to participate in the community. In celebration of the 15th anniversary of the District Council Focus Teams, we launched the Gas Appliances for the Community programme in 2015. Partnering with local district councillors, we set out to distribute 10,000 gas appliances to elderly people, as well as families in need, improving the convenience of their daily lives.

In parallel with our businesses expansion on the mainland, we share our community values and caring ambitions. Under the Gentle Breeze Movement, we help needy communities and schools via various programmes, including direct aid for those affected by poverty. Since 2013, this initiative has donated over RMB2.4 million to education projects. A total of 29 schools in the provinces of Jiangxi, Anhui, Jiangsu, Shandong, Guizhou and Shaanxi renovated their premises and introduced new learning tools such as computer labs, teaching aids and sports equipment, enhancing the quality of education for students.

Our mainland volunteers also supported the Guangcai Loving Home – Home of Happiness and Peace, a public welfare project launched by the China Guangcai Programme Foundation and Beijing Global Village. During this six-month programme, volunteers travelled to mountain areas of Chongqing to take care of children whose parents



Towngas China's Gentle Breeze Movement was rolled out to provide students with a better learning environment.

work far from home, helping them with schoolwork while organising additional extracurricular activities.

This year also saw us continuing our support towards the Shanghai Soong Ching Ling Foundation – BEA Charity Fund to set up a Firefly Centre in Yantai, Shandong province. Computers, projectors, furniture, books and other stationery, valued at more than HK\$200,000 were donated to over 600 students.

Echoing the annual Towngas
Rice Dumplings for the Community
campaign in Hong Kong, over
1,000 dedicated volunteers on
the mainland donated 4,200 hours
to distribute over 35,000 rice
dumplings and festive gifts valued
at RMB183,000 to around 12,000
needy people. Their generosity
made a lasting impression on local
mainland communities.

## Caring for the Well-being of Our Employees

We treasure employees as our valued resource. Together, at all levels, they make Towngas a leader in energy by bringing about new innovations, serving customers, running plants and doing everything required to continue our success. When called upon to aid their communities, they respond with passion and dedication, serving as an example for all to follow. To improve our employees' work satisfaction and well-being, we consistently organise different kinds of activities to enhance their physical and mental health.

As a socially responsible company seeking to offer opportunities to individuals with disabilities, we improved facilities for those working at our hotline centre.

Workstations have been redesigned



ergonomically, the main entrance has been refitted with an automatic door, and barrier-free facilities have been installed in the washroom.

In 2015, we continued with the Fun Living Series programme as the theme of our wellness programme in Hong Kong. Seminars focused on parenting, marital harmony and elderly care improved the personal lives of employees through education.

Through the Employee Caring programme, our mainland employees learned to balance work and life with activities focused on four topics: Living with Positive Energy, My Healthy Life, My Low Carbon Life and My Happiness. These courses can help encourage our staff to bring the positivity of a healthy and happy home life to the workplace for stronger performance.

Our contractors constantly exhibit active engagement and we value them with the same commitment as

Town Gas Sales per Employee Company (million MJ)

15
12
9
6
3
0
11 12 13 14 15

Towngas employees. In Hong Kong, we offer our contractors competitive compensation packages, including life protection plan, placing us among the first few utility companies to provide such scheme to contract staff. We not only organise a wide range of activities for our contractors, such as workshops, visits, tours, etc. but also set up incentive schemes and awards and invite them to participate in our major activities.

#### **Developing Our People**

Investing in employees is on the top of the priority list at Towngas. Throughout 2015, we focused our development programmes on leadership, management and technical training, allowing colleagues to enhance their skills and abilities.

We offered opportunities for career enhancement and progression.
Towngas Engineering Academy (TEA) organises a wide variety of technical training programmes for our employees so that they can acquire the academic and professional qualifications for advancement. Launched in July, our new e-Learning platform was designed to provide employees with the opportunity to learn at their own pace, as well as to refresh their knowledge on the go.

TEA is also committed to raising the professional standards of service for



We implemented the Total Quality Management programme to uplift our product quality and service standards in mainland China.

engineering personnel in mainland China, with the aim of building a stronger professional team. In 2013 and 2014, the Group became the first and only gas company in mainland China accredited by the Hong Kong Institute of Engineers and the Institution of Gas Engineers and Managers to organise dedicated training programmes for gas engineers on the mainland. Upon completing the programmes and accumulating sufficient working experience, trainees will gain a fast track to register as chartered engineers. The first cohort of trainees completed the programme in 2015.

Over the course of the year, a total of 200,011 training hours were offered through TEA in Hong Kong and mainland China.

We set up the Towngas Hall of Innovation exhibition at our Hong Kong headquarters to showcase innovations that have led to significant improvements in workflow, safety and productivity. These exhibits provide inspiration while recognising the talent and efforts of their inventors. We also issued a periodical, "Innovation Headlines",

featuring creative ideas and practices to encourage employees to approach their work with an open mind and to think outside the box.

Emphasising innovation and implementation as well as the "Three Courtesies", the Total Quality Management programme was introduced in mainland China to motivate employees in their pursuit of quality, excellence and comprehensive care as they work together to create value and foster growth for the Group.

Comprehensive training programmes and courses enabled colleagues to enhance their abilities in various fields. In 2015, over 640 mainland employees joined exchange learning trips to Hong Kong, including 220 from our mainland utilities businesses who attended specific training programmes provided at our headquarters. Topics included customer service, purchasing procedures and warehouse management, empowering participants to acquire an understanding of good practices in Hong Kong for implementation at their home companies.

# ENVIRONMENTAL PERFORMANCE TABLE 2015 (HONG KONG)



## 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.



#### AIR QUALITY

Total NOx output was 3.84 kg/TJ of town gas.

Total SOx output was 0.02 kg/TJ of town gas.

Total CO<sub>2</sub> output was 11.8 metric tonnes/TJ of town gas.





## GREENHOUSE GAS EMISSION

Greenhouse gas emissions from major gas production equipment was 357,845 metric tonnes in terms of CO2 equivalent.

#### WATER QUALITY

Total waste water output was 3.77 m<sup>3</sup>/TJ of town gas.

## CHEMICAL WASTE



Total chemical waste output was 0.64 kg/TJ of town gas.

#### **†‡†** NOISE

All installations and operations complied with the statutory requirements.

No noise abatement notice has ever been received.



We continued to implement internship programmes, graduate and management training, and career development schemes. For instance, 24 colleagues from Hong Kong participated in short-term mobility assignments in mainland China over the year, immersing themselves in the local working culture. These programmes build our talent pool and increase employee competencies, ensuring smooth operations as the Group magnifies its expansion.

#### **Supplier Relationship**

Towngas is committed to reliable long-term business relationships with business partners through fair and ethical purchasing practices. As such, we have established careful policies and procedures to select and assess our suppliers. Responsible operating

practices are emphasised in regards to supplier identification, management, communications and engagement.

Through robust supply chain management, essential to operational efficiency, we work closely with suppliers and contractors to meet customer needs in an effective and efficient manner. In addition to the Environmental Purchasing Policy, we launched the CSR Code of Practice for Suppliers concerning business ethics, workplace operations and environmental undertakings and carried out regular audits on their compliance with the code and quality requirements.

Meetings and conferences were also organised to encourage participation and communication about their materials and service performance.

In addition to offering them incentive programmes, we invited our business partners to join our company events, including our Health, Safety and Environment (HSE) day, Quality Day and annual dinner.

#### **Putting Safety First**

In everything we do, safety comes first. Teaming with employees and seeking new ways to improve workplace and personal safety is integral to how Towngas conducts business. Furthermore, we aim to make sure safety is always in the minds of our colleagues and their families.

The Occupational Health Campaign 2015 educated employees about healthy work practices through workshops and seminars on what constitutes a proper diet, musculoskeletal disorders and more. Exhibition boards and mini-games regarding occupational health provided new and helpful information at a glance.

With the support of our employees, HSE performance remained at high levels. During the 2015 HSE Day, employees, contractors and their families visited information booths,



On 2015 HSE Day, Wong Kam Sing, Secretary for the Environment (left) and Alfred Chan, Managing Director, rode the bicycle-powered mixers to make healthy fruit juices. engaged in educational games, participated in competitions, and attended an awards ceremony promoting workplace safety.

Feedback from the HSE Climate Index Survey also helped us devise innovative practices and solutions, including the creation of HSE programmes, workshops and emergency plans. The efforts of our colleagues and contractors led to Towngas receiving multiple honours, including the Safety Management System (Other Industries) Gold Award and Safety Performance Award at the 14th Hong Kong Occupational Safety & Health Award.

## Driving Growth and Building Long-Term Value

Guided by sound business ethics principles, we implement good

corporate governance and business practices to achieve sustainable growth. During the year, we complied with laws and regulations with significant impact on the Company.

As we look towards the future, we reflect upon the way we are seen by our customers and colleagues – as a compassionate, skilled and efficient company upholding the highest standards. Our brand is associated with peerless customer service, safety and reliability even in times of difficulty, as well as care for our communities. We strive to realise our mission to protect the environment whilst enjoying the respect of those with whom we work, whether in our offices or the world at large.

With our hope for the future embodied by the management theme "Expanding New Horizons", we are moving in new and exciting directions on all fronts. Encouraging innovation and bringing pioneering ideas to fruition through shrewd execution is vital to sustainability. During the year, we advocated a formula – "Growth = Innovation x Implementation" – within the Group, and implemented the Total Quality Management programme in mainland China to bolster our corporate values of quality and innovation.

We continued to be inspired by new technology and green innovations, incorporating them into our business to accomplish goals both financial and personal. By investing in new projects and business opportunities over the coming years, we aim to reaffirm our reputation as a caring leader in utilities and energy while offering the best to customers and our corporate family.

#### BUSINESS DRIVERS

# GROWTH VALUE IMPROVED SHAREHOLDER RETURN INNOVATION SAFETY AND RELIABILITY PRODUCTS AND SERVICES OPERATIONAL EXCELLENCE CORPORATE CITIZENSHIP

## ORGANISATION VALUES

