



“The gas clothes dryer makes a big difference to my family that our laundry is always fresh and dry, no matter the weather.”

MAINLAND UTILITY
BUSINESSES

elevating standards.

The Group's mainland operations recorded double-digit growth in unit gas sales, heralding a new era in tackling air quality issues

Towngas China was honoured with the 2016 HKMA Quality Award Grand Award, which was given for the first time in respect of operations outside of Hong Kong

The mainland's first-ever residential gas clothes dryer launched, selling 10,000 units and each boosting household gas consumption by 30 per cent

Hua Yan Water established a state-of-the-art bio-waste treatment facility that extracts methane for integration into Towngas China's pipelines





MAINLAND UTILITY BUSINESSES

With the evolving socioeconomic landscape in mainland China, we are witnessing opportunities not only to expand our operations, but to establish environmentally sound directives in the industrial, commercial and residential sectors. Towngas will strive for continuous improvement in products and services, providing a quality living environment for our customers and the society.

A direct fired absorption chiller/heater and boiler powered by natural gas is installed in the Oceanic Museum in Weihai, Shandong province, to provide cooling and heating, as well as temperature modulated hot water.



Our City-gas Operations

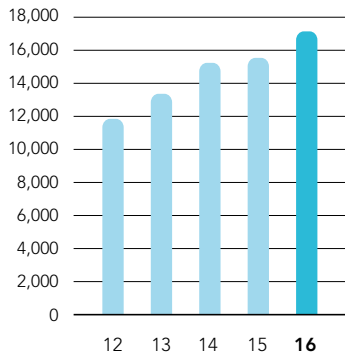
The year 2016 saw a substantial push to consolidate and strengthen the Group's 131 city-gas ventures across 23 provinces, autonomous regions and municipalities in mainland China, which together serve over 23 million residential, commercial and industrial customers. Challenges of a weak global economy notwithstanding, we recorded a 10.3 per cent volume growth in total gas sales, accounting for 8.3 per cent of the national city-gas market.

National demand for natural gas saw a mild recovery in 2016, though the consecutive decline of China's GDP growth over recent years and the weakening of its exports have affected our industrial gas sales. Low international oil prices depressed the cost of other petroleum fuels, leading some customers in the first half of the year to abandon piped city-gas in favour of cheaper alternatives. Fortunately, we were able to implement more competitive pricing in 2016 by virtue of a city-gate price reduction in non-residential

natural gas, which was introduced in a timely fashion by the National Development and Reform Commission at the end of 2015. With an extra boost from a significant marketing push, we succeeded in regaining customers lost earlier in the year.

Despite the challenges of a stagnant economy throughout the majority of the year, our long-term prospects paint a positive picture. In an effort to alleviate pollution and improve air quality, the mainland government's 13th Five Year Plan established carbon

China Joint Ventures Gas Sales (million m³)



intensity reduction targets of 40 to 45 per cent from 2005 levels by 2020, with a 60 per cent ceiling by 2030. With government policies stimulating the adoption of natural gas and giving structure to China's growing natural gas market, we anticipate a growth in gas sales in the coming years, particularly in the industrial sector. Severe pollution is also accelerating restrictions on coal and oil-fired burners, driving industrial operators to cleaner fuels like natural gas, which currently

comprises 6 per cent of the national energy mix. National adoption targets were set at 10 per cent by 2020 and 15 per cent by 2030, leaving a substantial gap to be filled. This will have a profound effect on our portfolio of businesses for the next five years.

To begin weaning from the reliance on coal-fired power, the mainland government is endorsing Distributed Energy Centres, which are gas-fired power generators coupled with cooling and heating systems that supply a localised district. The reduction of natural gas city-gate prices at the end of 2015 has made this a viable business, spurring the formation within the Group of two companies to grasp this potential market. Such projects offer several advantages; not only do they represent good long-term investments, they will boost city-gas sales significantly, promote sustainability via enhanced energy efficiency and offer the

potential for the business of thermal energy and electricity.

Already experiencing the benefits of China's expanding gas infrastructure, our commercial city-gas projects recorded a 12.1 per cent volume growth in 2016. With our piped-gas networks becoming more accessible to the market, restaurants and other commercial businesses are switching from bottled liquefied petroleum gas to piped gas as it is a safer and more convenient alternative.

The growth of the nation's middle class and the rise of urbanisation present much promise for our city-gas projects. Under the mainland government's 13th Five Year Plan, urbanisation is targeted to reach 60 per cent by 2020 and 70 per cent by 2030, giving rise to a more prosperous middle class. This will herald improved standards of living and increased gas consumption as public amenities proliferate, and household applications expand from cooking and water-heating to more modern applications like gas space heating and clothes drying, particularly in the regions along the Yangtze River.



A brewery in Jinan, Shandong province, utilises steam generated by natural gas boilers not only in the process of barley fermentation, but also to clean and sanitise beer bottles.

Our gas-fired home-based space heating boilers are a particularly effective driver of gas sales during winter, generating a tenfold increase in gas consumption over the year's average cooking and water heating usage.

Midstream Facilities

With operations stabilising over the year in spite of the sluggish economy, business proceeded smoothly for our midstream natural gas operations in 2016. We currently operate a total of eight midstream projects, including our Taigang Gas midstream long-haul pipeline project in Taian, Shandong province, the Xuancheng-Huangshan natural gas sub-stream and downstream city-gas projects in Anhui province, natural gas pipeline projects in Anhui and Hebei provinces, natural gas extension projects in Jilin and

Henan provinces, a Guangdong Liquefied Natural Gas Receiving Terminal as well as a natural gas storage project under construction in Jiangsu province, which together support the growing natural gas market in mainland China.

To meet a growing demand for natural gas in response to the mainland government's targeted green energy policies, we are now constructing a natural gas storage facility in underground salt caverns in Jintan, Jiangsu province, with a total storage capacity of 460 million standard cubic metres. Phase one of the project, capable of storing 150 million standard cubic metres, is expected to be completed in the second quarter of 2017. The facility will facilitate the more efficient management of our gas inventory and reduce supply bottlenecks during high-demand periods, such as the winter months.

China's gas consumption in 2016 reached 206 billion cubic metres, and is forecast to double by 2030. Considering the nation's robust foreign and indigenous natural gas supply, as well as growing demand from the shifting national energy mix, we foresee considerable opportunities to expand our midstream frameworks as China strives to meet its clean energy targets in the coming years.

Water Supply and Wastewater Operations

Spearheaded by Hong Kong & China Water Limited (Hua Yan Water), our burgeoning business encompasses six water projects, serving a total of 1.19 million customers across the two provinces of Jiangsu and Anhui. Buffered from the effects of a weak economic climate, our water projects enjoyed stable sales in 2016, recording a 3 per cent rise in revenue in 2016 with a sales volume of 455 million tonnes. Business expanded in 2016 to the maintenance of water supply systems within buildings, providing a further boost to the year's revenue.



Our underground natural gas storage facility in Jintan, Jiangsu province, will facilitate the management of our gas inventory in East China during high-demand periods.

To meet the substantial market demand for more sanitary and quicker means of drying clothes, Bauhinia launched the first-ever residential gas clothes dryer on the mainland.



Our modern treatment plants cover the production and distribution of drinking water as well as the treatment of wastewater. These include water supply joint venture projects located in Wujiang of Suzhou, and Wuhu; wholly-owned water supply projects in Zhengpugang Xin Qu, Maanshan and Jiangbei Xin Qu, Wuhu; and an integrated water supply and wastewater treatment joint venture project in Suzhou Industrial Park (the Park), together with an integrated wastewater treatment joint venture project, catering to an internationally-based company's TV screen production plant in the Park.

Essentially an environmental endeavour, these treatment facilities purify wastewater to required standards before discharging it back into the public sewage system, alleviating local pollution levels. Following the success of its integrated project at the Park, Hua Yan Water acquired a government-led project to establish a waste treatment plant, which will be capable of processing 500 tonnes of food waste, green waste and landfill leachate per day for conversion into natural gas, oil products, solid fuel and fertilizers. The project is expected to be commissioned in the third quarter of 2018.

The facility's advanced bio-waste treatment processes extract useful matter such as methane gas, which is fed to our neighbouring city-gas supply system, while wastewater is directed to our nearby treatment plant, establishing a crucial synergy between the Group's facilities within the Park. The bio-waste is in fact completely broken down into useful components that can be sold to nearby businesses for additional revenue, forming a new milestone in our journey of transforming waste into reusable matter. Considering the prolific demand for bio-waste treatment and the government's keenness to pursue this fledgling endeavour, such an arrangement forms a model blueprint that can be implemented in other cities across the mainland.

Extended Service Businesses

Supporting contemporary living for over 23 million customers, we offer innovative products and services that include home appliances, kitchen furnishings, household goods and our jointly offered gas insurance policies. Our success this year was bolstered by a conscious shift in our promotional strategy, putting greater focus on the merits of gas appliances for contemporary comfort and convenience.

Through our online services platform, customers in mainland China can access our premium services anywhere, at any time.



The featured product of 2016 was the mainland's first-ever residential gas clothes dryer, which debuted under the Bauhinia brand in selected cities. Having been available in Hong Kong for over 20 years, these energy-efficient appliances dry quicker, are gentler on fabric, are more economical to use than electric dryers and are more sanitary than outdoor clotheslines. Post-launch sales were at the 10,000-unit level, each boosting household gas usage by 30 per cent. The utilisation of gas for clothes drying will be extended to the commercial laundry sector, broadening our gas sales opportunities.

Bauhinia's home appliances, including cooking appliances and water heaters, continued to appeal to the mainland market, selling over 750,000 units in 2016 and accumulating sales of about 4.5 million units in total since the 2005 launch of the brand. Appreciated by customers for the high-quality construction and reliability of its products, the Bauhinia brand was the recipient of numerous awards in 2016, including Hong Kong Top Brand, Typical Outstanding

Enterprises of National Quality and Integrity and the Gold Tripod Award of the Chinese Top Chef Star Avenue Cup.

Another successful endeavour making its way from Hong Kong was our Total Kitchen Solution. Introduced in 13 mainland cities in 2016, it packages premium kitchen appliances together with our flagship Mia Cucina kitchen cabinetry and other household merchandise. These enjoyed a warm reception among project developers, with a total of 1,700 units sold post launch, and will be introduced gradually to other markets across the mainland in the years to come.

Channelling this momentum, we will be introducing our range of consumer appliances, including white goods under the Mia Cucina name in both Hong Kong and mainland China in early 2017, bringing our popular kitchen solutions under one unified brand.

In light of the progress made in 2016, we anticipate a positive response for the expanded Mia Cucina brand.

Partnering with Ping An Property and Casualty Insurance Company of China, Ltd, and Huatai Property Insurance Company Ltd, we began offering household gas insurance protection in 2015. Providing an accident cover for a low premium, these could be purchased online or through our customer centres. Our insurance plan gained favourable traction in 2016, achieving total sales of over RMB89 million across 43 of our city-gas projects. As part of our diversified business model, we are actively exploring other possible protection lines to offer in the coming years.

Serving Our Customers

To extend brand favourability and awareness in 2016, we sought to strengthen ties with our customer

base, continuing to forge a relationship of trust based on our established reliability, safety focus and customer-centric culture.

Our customer service network expanded to 244 customer centres across 82 mainland cities in 2016, offering customers a comprehensive destination addressing gas usage and household appliance needs.

Our rigorous service ethic extended to the digital sphere when we brought our business online in March 2016, prompted by the unrivalled opportunities of mainland China's Internet Plus movement. Our new online customer centre and the Towngas Lifestyle WeChat service account offer integrated lifestyle service platforms which enable customers to shop for our household goods and healthy food products online, in addition to settling gas bills and making installation or maintenance reservations and other service requests.

Our digital customer service channels will give customers access to different services anywhere, at any time. We will also be transitioning our platform to a membership model, making every customer a member of our club with exclusive privileges such as discounts on household goods, healthy food and medical consultations, as well as other third-party services.

Enhancing Safety

A key differentiator that sets us apart as one of the most trusted gas companies on the mainland is our attractive safety record. As a result of group-wide endeavours to weave a safety focus into our corporate DNA, major gas-related accidents and casualties have remained at a low level even as our customer numbers have gone up. Customers choose city-gas instead of other fuels mainly because they trust the safety of our gas networks, the reliability of the systems and equipment

we supply and the rigorous training undergone by our maintenance and regular inspection teams. During the year, we offered comprehensive safety training to employees across our mainland utility operations with a total of over 850,000 hours.

At the corporate level, we continued to promote Total Quality Management (TQM) as a means of holistic quality and risk management, rolling out initiatives that encompassed every organisational level. Taking a proactive approach to ensuring the continued integrity of our gas equipment and infrastructure, senior management maintained their ongoing safety visits to worksites and customer premises, and convened regularly for the evaluation of current safety issues and corporate risks. Reputational risks were also brought to the table in 2016 as part of our comprehensive risk management directive. Corporate safety manuals from February 2015 were also updated in December 2016 in light of a shift in local regulations and company requirements, placing greater emphasis on environmental standards.



Towngas China was honoured with the 2016 HKMA Quality Award Grand Award presented by The Hong Kong Management Association for its excellent standards of management.

2016 Utility Businesses in Mainland China

Towngas Piped City-Gas Projects

GUANGDONG PROVINCE

	Year of Establishment	Project Investment Rmb M	Registered Capital Rmb M	Equity Share %
Panyu	1994	260	105	80%
Zhongshan	1995	240	96	70%
Dongyong	1998	178	75	82.6%
Shenzhen	2004	–	2,212	26.5%
Chaoan	2007	185	99	90%
Chaozhou Raoping	2011	189	106	60%

CENTRAL CHINA

Wuhan	2003	1,000	420	49%
Xinmi	2009	205	85	100%

EASTERN CHINA

Yixing	2001	246	124	80%
Taizhou	2002	200	83	65%
Zhangjiagang	2003	200	100	50%
Wujiang	2003	150	60	80%
Xuzhou	2004	245	125	80%
Suining	2009	155	67	100%
Fengxian	2009	60	31	100%
Peixian	2015	300	100	100%
Danyang	2004	150	60	80%
Jintan	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%
Jiangxi	2009	52	26	56%
Zhangshu	2009	86	34	100%
Yonganzhou	2010	100	68	93.9%
Hangzhou	2013	2,988	1,195	24%

SHANDONG PROVINCE

Jinan East	2003	610	470	49%
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NORTHERN CHINA

Jilin	2005	247	100	63%
Beijing Economic-technological Development Area	2005	111	44	49%
Hebei Jingxian	2011	186	79	81%

NORTHWESTERN CHINA

Xi'an	2006	1,668	1,000	49%
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HAINAN PROVINCE

Qionghai	2008	110	50	49%
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Midstream Projects

	Year of Establishment	Project Investment Rmb M	Registered Capital Rmb M	Equity Share %
Guangdong LNG	2004	8,595	2,578	3%
Anhui NG	2005	–	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	217	37.6%
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Water/Waste Treatment 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%
Suzhou Industrial Park (food waste processing and utilisation)	2016	220	75	55%

Towngas China Piped City-Gas Projects

GUANGDONG PROVINCE	Tongxiang	Laiyang	Anshan	SOUTHWESTERN CHINA
Foshan	Huzhou	Zhaoyuan	Lvshun	Ziyang
Shaoguan	Yuhang	Pingyin	Kazuo	Weiyuan
Qingyuan	Songyang	Feicheng	Beipiao	Pengxi
Yangdong	Changjiu	Boxing Economic Development Zone	Wafangdian	Lezhi
Fengxi	Fuzhou	Yangxin	Xinqiu	Pingchang
EASTERN CHINA	Jiujiang	Wulian	Jianping	Dayi
Nanjing Gaochun	Wuning	HUNAN PROVINCE	Changchun	Yuechi
Dafeng	Xiushui	Miluo	Gongzhuling	Cangxi
Tongshan	Yifeng	NORTHEASTERN CHINA	Siping	Chengdu
Maanshan	Changting	Benxi	Qiqihar	Zhongjiang
Bowang	SHANDONG PROVINCE	Chaoyang	HEBEI PROVINCE	Jiayang
Zhengpugang Xin Qu Modern Industrial Zone	Jimo	Tieling	Qinhuangdao	Pengshan
Wuhu Fanchang	Laoshan	Fuxin	Yanshan	Mianyang
Bozhou-Wuhu Modern Industrial Zone	Zibo	Shenyang Coastal Economic Zone	Cangxian	Xinjin
Wuhu Jiangbei	Zibo Lubo	Yingkou	Mengcun	Xindu
Anqing	Longkou	Dalian Changxingdao	Shijiazhuang	Mianzhu
Chizhou	Jinan West	Dalian Economic and Technical Development Zone	Baoding	Jiajiang
Tunxi	Weifang	INNER MONGOLIA	INNER MONGOLIA	Qijiang
Huangshan	Weihai	Baotou	Baotou	Gulin
Huizhou	Taian			Zhongwei (Fusui)
	Chiping			Xingyi
	Linqu			Luliang

Midstream Projects

Xuancheng Huangshan
Taian Taigang

CNG Refilling Stations

Qiqihar (Lianfu)
Qiqihar (Xingqixiang)

Other Projects

Zhuojia Public Engineering
Sichuan Distributed Energy Systems
Towngas China Energy Investment