A child's nursery with a white shelf holding colorful toys. A pink speech bubble is overlaid on the top left. The toys include large letters 'N', 'O', and '1', a yellow rubber duck, and a pink stuffed animal.

The **number one**  
city-gas group on  
the mainland

## POWERING FORWARD

**84** city-gas projects in 16 provinces and municipalities...  
**6.8 billion** cubic metres... **390,000** Bauhinia appliances  
offering one-stop services...



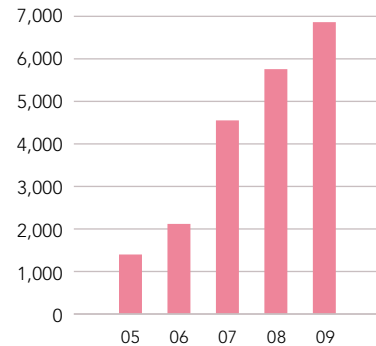
More than **10 million** customers... Gas sales reach  
sold since launch... Network of **115** customer centres

# THE MAINLAND CHINA GAS BUSINESS



left  
The commissioning ceremony on the acquisition of the Xinmi project, our first city-gas project in Henan province.

## China Joint Ventures Gas Sales (million m<sup>3</sup>)



With the global financial crisis leaving mainland China virtually unscathed, our activities on the mainland continued their strong growth, rising to 103 projects in 19 provinces, municipalities and autonomous regions at the end of 2009. Total turnover for these activities, which include our city-gas businesses, natural gas upstream and midstream operations, our new energy initiatives as well as our water businesses, rose to HK\$25.6 billion, an increase of 18.5 per cent over the previous year.

### City-gas Businesses

With 84 city-gas projects in 16 provinces and municipalities serving some 30 million people in over 10 million homes, we continue to consolidate our role as the number one city-gas group and the largest supplier of city-gas in the country. During the year, we saw an increase of almost 600,000 domestic customers, contributing to a strong rise in sales volumes of 19 per cent to 6,870 million cubic metres over 2008, whilst turnover grew 15.5 per cent to HK\$22.4 billion.

The extreme winter conditions experienced at the end of 2009 led to bottlenecks and shortages in gas supply throughout most parts of the country. However many of our projects benefited from the supply of liquefied coalbed methane from our plant in Shanxi, which began the

distribution of supplies by road tankers in December 2008. Capable of supplying up to 250,000 cubic metres a day, these supplies greatly helped to alleviate the tight supply situation. Looking forward, the scope of mainland China's gas supplies is expected to grow exponentially as large-scale gas infrastructure pipelines, transporting natural gas from the surrounding regions, are completed.

Due for completion in 2012, the West-to-East phase-two natural gas pipeline alone, stretching from Turkmenistan to Kazakhstan, through Xinjiang to Shanghai and ultimately Guangdong, will grow supplies by a further 40 billion cubic metres a year. Additional gas supply infrastructure projects such as the Sichuan to East and Myanmar to China natural gas pipelines are expected to grow





A paper manufacturer in Suzhou, one of our major gas users.

supplies by a further 27 billion cubic metres annually. As many of our projects are sited along these pipelines, we will benefit from this substantial increase in gas sources. Together with these supply enhancements, our growth strategy is to continue establishing new projects, gaining new city-gas concessions as they become available.

In line with this strategy, together with Towngas China, our Group portfolio grew from 71 projects in 2008 to 84 in 2009, with new ventures in Anhui, Guangdong, Henan, Jiangsu, Jiangxi, Shandong and Sichuan provinces. The largest of these new ventures is a project in Changjiu, Jiangxi province. Established to serve the industrial zone in the area, sales for this venture alone are expected to reach well over 400 million cubic metres annually in the long term.

### Upstream and Midstream projects

Our activities in the exploration, production and supply of gas have seen significant growth as we move increasingly into upstream and midstream projects in the natural gas and clean energy industries. In view of our pioneering role in the supply of these new environmentally-friendly energies, we have emerged both as a major player in the industry as well as the foremost supplier of clean energy in the country.

In addition to a natural gas exploration facility in Jilin, the first step in this direction was taken with the opening of our liquefaction plant in Shanxi, which turns coalbed methane into its liquefied form. The first large-scale plant of its kind in mainland

China, the facility has a daily production capacity of 250,000 cubic metres. These upstream activities will be boosted even further, as phase two of this facility comes on stream and as other ongoing initiatives are completed. These include the liquefaction of coal-mine methane, a mixture of mainly methane and air from mining ventilation, as well as a coal chemical project that will produce 200,000 tonnes of methanol annually. A mining operation facility in a coal-mine venture currently under construction, with an annual production capacity of 1.2 million tonnes of thermal coal in Erdos, Inner Mongolia is due to commence operations by end 2010.

A number of midstream projects also play a key role in feeding gas supplies to our city-gas ventures. These include four high pressure gas pipeline networks in Anhui, Hebei, Zhejiang and Jilin provinces as well as a liquefied natural gas receiving terminal in Guangdong.

### Serving Our Customers

Building on our award-winning customer-service model in Hong Kong, we have been able to establish a strong service base in mainland China with an outstanding reputation for quality and reliability.

## THE MAINLAND CHINA GAS BUSINESS



Many of our newly refurbished customer centres include a kitchen corner for cookery workshops.

The first link in this service chain begins with our customer centres which offer a convenient, one-stop-shop service to our customers. Growing by a further 20 centres during the year, we now have 115 of these outlets throughout the country. We are also expanding the sales channels of our Bauhinia brand gas appliances to provide greater convenience for customers. In 2009, with Shenzhen acting as the starting point, we added a further 33 outlets to our marketing network.

These centres broke new ground in mainland China, as we were the only gas service provider to not only supply gas appliances and equipment, but also to do so under our own Bauhinia brand. The supply of these appliances creates a “win-win” situation all

round – customers not only benefit from convenient one-stop services, they are also assured of high safety and quality appliances as well as excellent after-sales services. At the same time, we capitalise on a ready market of gas users. Just as importantly, we are able to build on the synergies of our gas appliance business in Hong Kong to offer a diverse range of modern and well-designed, efficient and value-for-money products.

These strengths have been recognised in the market. Sales grew 80 per cent in 2009 to 180,000 units, bringing our total sales, since Bauhinia’s launch in late 2005, to 390,000 units. We expect this number to grow yet again as customers become more familiar with our product benefits. All our appliances now comply

with standards stipulated by the Chinese Government.

Benchmarking our services against the highest world standards, this country-wide customer service network is supported by up-to-the-minute management systems and processes. Our Towngas Customer Information System (TCIS), for instance, streamlines and standardises procedures across our numerous city-gas companies to ensure consistent standards and services throughout our operations. Attesting to the value of this system, TCIS won the “Hong Kong Information and Communications Technology 2009: Best Collaboration Award (Greater China Market) – Gold Award” during the year.



Ensuring public safety, regular safety checks on gas infrastructure are conducted across our projects in mainland China.

### Enhancing Gas Safety

As a gas supplier, we make every commitment to ensure the safety of our customers, staff and the public in general, tolerating no compromises or short cuts whatsoever in our activities.

Taking this safety commitment into the homes of our customers, we carry out regular safety inspections, checking not only on the condition of gas pipes and installations but also the gas appliances used. As potential risks are immediately addressed, we have been able to significantly reduce the number of gas incidents.

In view of the success of our General Manager Monthly Safety and Risk Management Inspection Programme, which ensures the direct commitment of the most senior members of management,

we continue this initiative. The highlight of this programme took place when our Managing Director himself, walking the talk, carried out safety inspections in various project locations.

Our sophisticated network monitoring Supervisory Control and Data Acquisition System, implemented in more than 30 JVs, continues to improve network safety. The effectiveness of this system is such that it is increasingly being adopted by other gas companies in mainland China.

We also implemented a number of Key Management Focus projects addressing safety and risk to further improve our safety performance while our safety audit scoring system received a boost with the implementation of our Five Star+ Safety and Risk Management Audit Programme.

Regional Joint Venture General Manager Safety Conferences were held in Changchun and Chongqing and our water projects also held a technical workshop on its safety and risk management audit along with table top exercises which helped to enhance emergency handling procedures.

A highlight in 2009 was the establishment of G5+ Polyethylene (PE) piping standards, with four other major gas companies in Beijing, Chengdu, Guangzhou and Shenzhen, to enhance the quality and integrity of PE piping in mainland China. Though PE pipes are extensively used in the gas business, the technology is relatively new on the mainland. Being one of the first to introduce PE technology into the country, we have taken a major lead in the mainland's gas industry.

Over the years, this safety commitment has reaped significant results. We have won a number of public accolades for our safety practices. In 2009 for instance, we won a Merit Award in the 2009 National Occupational Safety and Health Quiz, and we also managed to achieve our "One-million Working Hours Accident Free" goal in our coal-based chemical plant project under construction in Inner Mongolia.

# THE MAINLAND CHINA GAS BUSINESS

## Towngas' Businesses in Mainland China in 2009



- Towngas piped city-gas projects
- Towngas China piped city-gas projects
- Towngas piped city-gas and water projects
- Water projects
- Liquefied natural gas (LNG) receiving station
- Provincial natural gas (NG) pipeline network
- ▲ City high pressure pipeline network
- Upstream projects
- ◆ Compressed natural gas (CNG) filling station
- Coal mining and coal-based chemical processing
- Telecommunication

	Year of Establishment	Project Investment Rmb M	Registered Capital Rmb M	Equity Share %	
<b>TOWNGAS PIPED CITY-GAS PROJECTS</b>					
<b>Guangdong Province</b>					
1	Panyu	1994	260	105	80%
2	Zhongshan	1995	240	96	70%
3	Dongyong	1998	132	53	80%
4	Jianke	2002	45	23	100%
5	Shunde	2004	200	100	60%
6	Shenzhen	2004	2,316	1,230	26.8%
7	Chaoan	2007	185	99	60%
<b>Central China</b>					
8	Wuhan	2003	1,200	420	50%
9	Xinmi	2009	205	85	100%
<b>Eastern China</b>					
10	Tongxiang	2003	83	58	76%
11	Huzhou	2004	200	87	98.85%
12	Yixing	2001	246	124	80%
13	Taizhou	2002	200	83	65%
14	Zhangjiagang	2003	150	60	51%
15	Wujiang	2003	150	60	80%
16	Xuzhou	2004	245	125	80%
17	Suining	2009	85	34	100%
18	Fengxian	2009	60	31	100%
19	Danyang	2004	150	60	80%
20	Jintan	2006	150	60	60%
21	Tongling	2006	240	100	70%
22	Yuhang	2006	240	160	50%
23	Suzhou Industrial Park	2001	245	100	55%
24	Changzhou	2003	248	166	50%
25	Nanjing	2003	1,200	600	50%
26	Fengcheng	2007	206	88	55%
27	Pingxiang	2009	87	35	100%
28	Jiangxi	2009	52	26	56%
29	Zhangshu	2009	86	34	100%
<b>Shandong Province</b>					
30	Jinan East	2003	610	470	50%
<b>Northern China</b>					
31	Jilin	2005	247	100	63%
32	Yingkou	2006	80	69	100%
33	Dalian	2008	171	96	100%
34	Dalian Economic and Technical Development Zone	2008	329	137	40%
35	Beijing Economic-technological Development Area	2005	111	44	50%
<b>Northwestern China</b>					
36	Xi'an	2006	1,668	1,000	49%
<b>Hainan Province</b>					
37	Qionghai	2008	110	50	49%
<b>MIDSTREAM PROJECTS</b>					
38	Guangdong LNG	2004	7,628	2,289	3%
39	Hangzhou NG	2005	760	304	10%
40	Anhui NG	2005	245	200	25%
41	Suzhou NG	2009	60	40	29%
42	Hebei NG	2005	660	220	45%
43	Jilin NG	2007	360	220	49%
44	Shanxi Yuanping CNG Filling Station	2008	34	20	42%

	Year of Establishment	Project Investment Rmb M	Registered Capital Rmb M	Equity Share %	
<b>UPSTREAM PROJECTS</b>					
45	Shanxi Coalbed Methane	2006	600	200	70%
46	Jilin NG	2007	140	5	50%
<b>WATER PROJECTS</b>					
15	Wujiang	2005	1,550	560	80%
23	Suzhou Industrial Park	2005	3,685	2,197	50%
47	Wuhu	2005	700	300	75%
<b>OTHER PROJECTS</b>					
48	Xianyang CNG Filling Station	2007	4	4	60%
49	Inner Mongolia Erdos Coal Mining	2009	447	120	70.1%
50	Inner Mongolia Erdos Coal-based Chemical Processing	2009	1,170	400	70.1%
51	Jiangxi Fenglong Coal Mining	2008	1,100	236	25%
52	Fengcheng Xingao Coal-based Chemical Processing	2009	1,250	350	30%
53	Jinan Telecommunication	2008	80	40	90.1%
54	Jinan Chibo Telecommunication	2009	170	68	58.82%

## TOWNGAS CHINA PIPED CITY-GAS PROJECTS

### Guangdong Province

55	Foshan
56	Shaoguan
57	Qingyuan
58	Yangdong

### Eastern China

59	Nanjing Gaochun
60	Maanshan
61	Anqing
62	Chizhou
63	Tunxi
64	Huangshan
65	Huizhou
66	Changjiu

### Shandong Province

67	Jimo
68	Laoshan
69	Zibo
70	Zibo Lubo
71	Longkou
72	Jinan West
73	Jinan Changqing
74	Weifang
75	Weihai
76	Taian
77	Chiping

### Northeastern China

78	Benxi
79	Chaoyang
80	Tieling
81	Fuxin
82	Shenyang Jinhai Economic Zone
83	Changchun
84	Gongzhuling
85	Qiqihar

### Southwestern China

86	Ziyang
87	Weiyuan
88	Pengxi
89	Lezhi
90	Pingchang
91	Dayi
92	Yuechi
93	Cangxi
94	Chengdu
95	Zhongjiang
96	Jiayang
97	Pengshan
98	Mianyang
99	Xinjin
100	Xindu
101	Qijiang



## ENSURING SERVICE EXCELLENCE

Signed **30-year** Ocean Park supply agreement...  
Customer Service Grand Award" ... Received **5,127**  
of natural gas now at **60 per cent** of town gas





Winner of "2009 Hong Kong Awards for Industries: complimentary letters from customers... Use production...

Over **1,680,000**  
customers in Hong Kong

# THE HONG KONG GAS BUSINESS



left  
Our customer centres offer a wide range of gas appliances as well as a choice of lifestyle products.

right  
A new booklet, named "My Low-carbon Flame Cooking Tips", illustrated by well-known local cartoonist Maggie (Ma Chai), promotes flame cooking.



Three "locomotives" – our operations on the mainland, in Hong Kong and our new eco-businesses, drive our growth. With almost 150 years of service in the territory, the town gas business in Hong Kong forms the first of these locomotives.

Our customer base stood at 1,698,723 customers at the end of December 2009, an increase of 26,639 over the previous year. While our customer base and the sale of our popular energy efficient appliances continued to grow during the year, owing to the stagnant economy in the first half of the year and the warm climate – 2009 was among the 10 hottest years on record in Hong Kong, gas sales slowed down in comparative terms, resulting in a slight decline in overall sales of 1.1 per cent.

## Our Residential Market

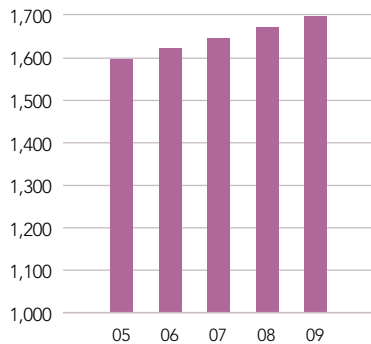
Confronting this challenging environment, rather than focusing on our role as a supplier of gas used solely for cooking and heating water, we see ourselves as an alternative supplier of energy, offering our customers a quality lifestyle with clean and green energy choices.

The availability and sale of well-designed and sophisticated gas appliances is fundamental to quality living. We therefore offer a full range of attractive, energy efficient and user-friendly gas appliances that promote the modern Towngas lifestyle. We were highly encouraged to see a growth of 6.1 per cent in appliance sales during the year, despite the slower economic conditions in the early part of 2009.



## Number of Customers

Company (Thousand)



right  
Towngas and  
Ocean Park signed  
an agreement for a  
30-year collaboration  
to build the gas  
supply infrastructure  
in the theme park.



During the year, sales of Elemento, our premium built-in hob series, reached 2,000 units. This award winning series combines different cooking modules and burners, based on individual preferences, to create the perfect cooking companion.

Energy labelling for a full range of domestic water heaters commenced during the year. As all our water heaters meet established energy performance standards, this differentiates our water heaters from the competitors in the market even further. Riding on our outstanding expertise in product development, we were able to maximise business opportunities and expand our market share with the introduction of a clothes dryer and a super-slim water heater for the

liquefied petroleum gas market. In addition, our new MEO product brand, providing a wider spectrum of products and serving a different target market, was successfully launched, through specialty stores, discount warehouses and direct sales outlets.

We also offer a wide range of “non-gas” lifestyle products in our customer stores and service centres. This move has been motivated by our efforts to provide “total solutions” and to promote a low carbon lifestyle to our customers, while at the same time supporting different social enterprises and fair trade products.

### Our Commercial and Industrial Activities

Despite the difficult commercial environment, we were able to

counter the slowdown in sales with our committed sales efforts which resulted in growth both in the hospital and food and beverage sectors. At the same time, promoting town gas as an economic as well as a green fuel, we were able to convert a number of non-town gas users into customers.

A major accomplishment during the year was the 30-year gas supply agreement made with Ocean Park. In addition to providing green energy for all the catering and water heating facilities in the Park’s HK\$5.5 billion refurbishment and expansion exercise, gas burners will also provide the special fire display effects at the Park’s soon to be unveiled Aqua City-Lagoon exhibit.

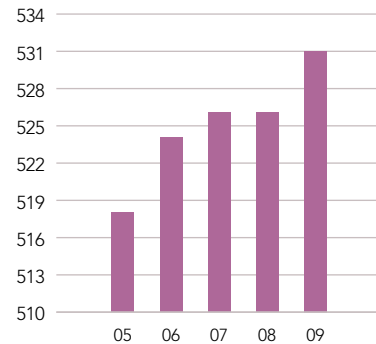


## THE HONG KONG GAS BUSINESS



left  
Our range of high efficiency gas appliances not only provides greater performance in the commercial kitchen, they also help save energy costs.

Number of Customers per km of Mains Company



Our high-efficiency commercial kitchen appliances, such as gas steamers also continue to offer efficient and cost-effective solutions to our customers. Designed and developed in-house, they not only significantly reduce the flue-gas temperature, helping to keep kitchen environments cooler, users can also reduce energy consumption by up to 30 per cent. Confirming these savings, we are delighted to report that a typical Chinese restaurant, after upgrading its steamers, has achieved an overall 20 per cent saving in its gas bill.

### Living the Towngas Way

As part of the Towngas experience, we put our customers

first in everything that we do. We took a significant step forward during the year, upgrading and relaunching our eService Centre to offer greater online convenience. Customers registering for eBilling services, can now review their gas accounts, settle payments, track their gas consumption history, report meter readings, book maintenance appointments and even keep up with our latest news and special offers. In addition to these online benefits, eBilling makes a significant contribution to the environment. Every eBilling customer, using the service for a year, reduces carbon emissions by 316 grams annually in terms of the paper and energy saved. Contributing to these savings,

Towngas is also donating HK\$6 towards Friends of the Earth (HK)'s tree-planting programme – to plant 10,000 trees in the next three years, for every customer who signs up for this service.

Our "From Good to Great" campaign fosters a service culture based on the five senses – see, hear, smell, touch and feel, to improve services and customer benefits. The relocation and refurbishment of our new shops and service centres provide a prime example of this concept at work. Firstly, all our outlets are centrally located making them easy to locate and access. Secondly, several of our more newly refurbished locations

## Results of Towngas Service Pledge 2009

		Results
<b>Reliability</b>	Uninterrupted gas supply (over 99.99%)	<b>99.992%</b>
	In case of supply interruption on account of maintenance or engineering work (three days prior notification)	<b>100%</b>
	Restoration of gas supply within 12 hours	<b>100%</b>
<b>Safety</b>	Emergency Team arrived on site within 30 minutes (at 90% of the times) <sup>1</sup>	<b>93.91%</b>
<b>Appointments</b>	Availability of maintenance and installation services within two working days	<b>Average 1.04 day</b>
<b>Speed and Convenience</b>	Customer Service Hotline (calls answered within four rings)	<b>96.96%</b>
	Connect or disconnect gas supply within one working day	<b>100% (upon customer's request)</b>
	Deposit refunded at Customer Centres (two hours after disconnection of gas supply)	<b>100% (upon customer's request)</b>
<b>Service Quality</b>	Efficiency <sup>2</sup>	<b>8.67</b>
	Courteous and friendly attitude <sup>2</sup>	<b>8.67</b>
<b>Handling Suggestions</b>	Reply within three working days	<b>100%</b>
	Resolution, or a statement of when the matter will be resolved, within two weeks	<b>100%</b>

1. Average 20.49 minutes.

2. The result was based on monthly surveys conducted from January to December 2009 by an independent research company. Our target is to exceed a score of eight out of ten.

provide kitchen and bathroom settings with our appliances on display to represent real-life situations. Customers can thus not only "see, hear, smell, touch and feel" what we have to offer, in many instances they are also able to try the equipment out for themselves.

Towngas Avenue takes this "service trial" one step further. Visitors to the Avenue can take the opportunity to enjoy some flame cooking. Using our state-of-the-art and user-friendly appliances, they cook their own meal under the guidance of our master chefs.

This "lifestyle" initiative serves a dual purpose, promoting both the quality and user-friendliness of our appliances as well as the benefits of flame cooking.

On the safety front, we maintain our regular 18-month customer safety inspection cycle, checking both pipes and equipment. During the year, we proactively visited customer premises where we have not been able to gain access for some time. In addition to boosting home safety, these visits provide direct contact with our customers, which helps promote our new services and products.

In 2009, we received 5,127 letters complimenting us on our services. Not only does this figure represent an increase of more than 38 per cent over 2008, it also translates into 14 letters or so for every day of the year. Additionally, on-demand maintenance orders fell 5 per cent during the year, reflecting better levels of service integrity. Regular customer surveys bring in constant ratings of high customer satisfaction and crowning these achievements, we continue to win a number of community and service awards. The jewel in this crown was our receipt of the "2009 Hong Kong

## THE HONG KONG GAS BUSINESS

Managing Director Alfred Chan (left) receiving the "2009 Hong Kong Awards for Industries: Customer Service Grand Award" from the Chief Executive of the HKSAR Donald Tsang.



Awards for Industries: Customer Service Grand Award" which recognises and encourages service excellence.

### The Gas Infrastructure

Excellent services require a complementing quality infrastructure. Consisting of two production plants in Tai Po and Ma Tau Kok as well as over 3,400 km of pipelines, our gas infrastructure has been honed through the years with a supply continuity rate of 99.99 per cent.

Making sure that we maintain this leadership role, we make ongoing improvements to enhance our network and systems. A primary focus is not only on green production techniques but also on the production of clean energy. With natural gas, a much

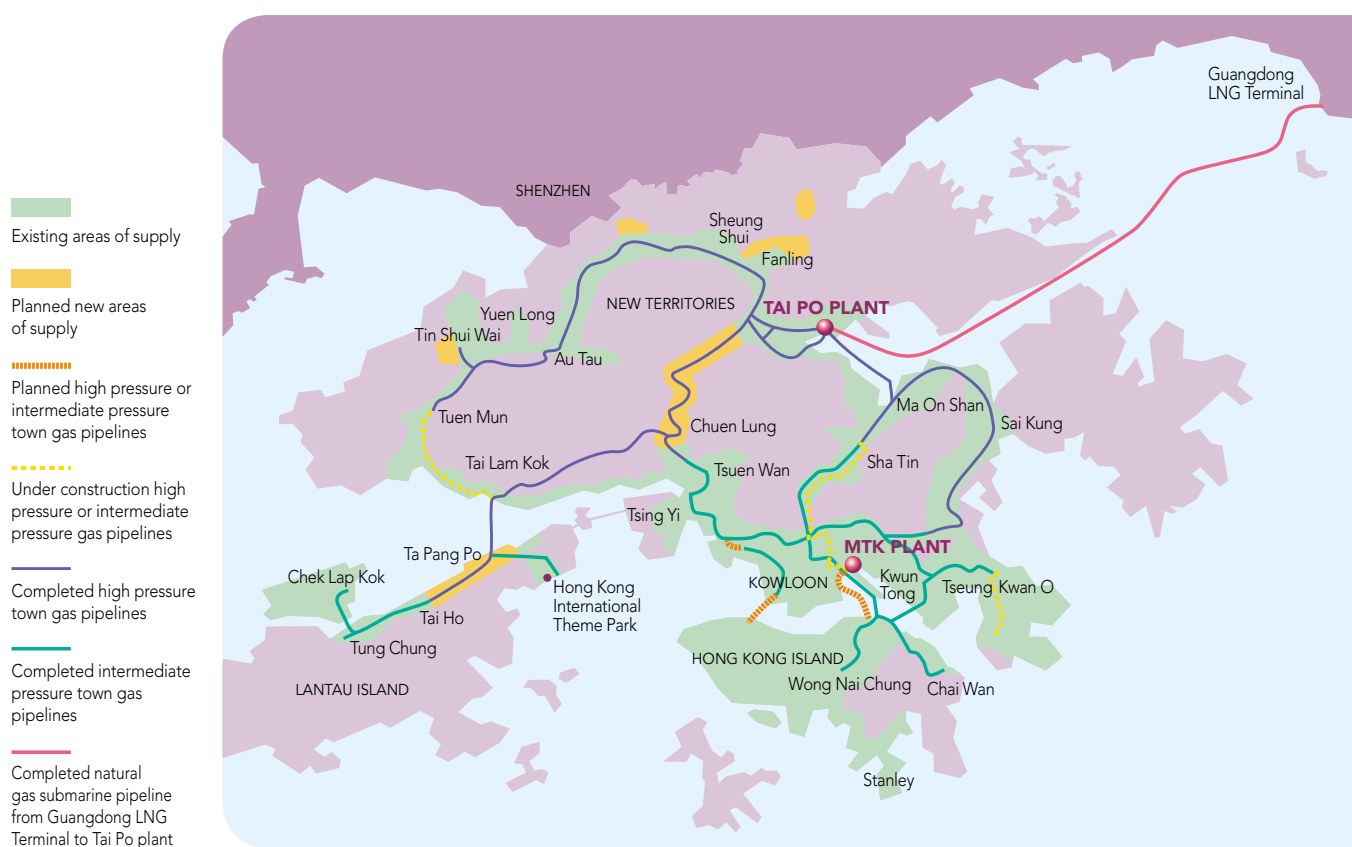
cleaner source of energy, accounting for 50 per cent of our feedstock, we made efforts to increase this figure to nearly 60 per cent in 2009. Additionally, the construction of a 15 km pipeline bringing natural gas to our Ma Tau Kok plant is currently under way, together with the conversion of the plant to natural gas feedstock.

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. Currently accounting for about 3 per cent of our gas production fuel, our aim is to grow this resource to 15 per cent. Extending

these activities to the South Eastern New Territories landfill site, the planning and design of a connection pipeline is currently under review. The use of LFG not only cuts carbon emissions released into the atmosphere, our consumption of naphtha also fell by around 11,200 tonnes in 2009. These savings alone translate into the planting of some 1.5 million trees.

Our gas distribution network consists of over 3,400 km of pipeline, stretching throughout the territory. A nine km ring-feed pipeline, under construction in Tuen Mun, will improve gas security and delivery in the western New Territories, while the commissioning of our 24 km Eastern Transmission Pipeline Project in 2008 has greatly

## Towngas Network in Hong Kong



enhanced service capacities and supply in the eastern New Territories. Looking forward, we are planning a new three km submarine pipeline in Victoria Harbour, to replace the existing system, which needs to be relocated to facilitate the building of the Cruise Terminal and the strategic link for the Central Kowloon Route. In the meantime, network extension projects are underway to serve the South East Kowloon Redevelopment encompassing the Cruise Terminal Areas.

Safety plays as an important role in our infrastructure as it does in our customer services. Rigorous

trench inspections and leakage surveys coupled with the introduction of the most up-to-date technologies, to trace the presence of problems in our pipelines, have helped to enhance the integrity of our gas transmission and distribution system and reduce the incidence of gas leakages, leading to a record low leakage rate.

An Emergency Logging System has greatly improved emergency communications with the intelligent tracking of emergency reports and follow up action; a new Riser Inspection Robotic System, with its gas leak detector and video camera, checks

service pipes and risers on external building walls; and the implementation of a second generation Geographic Information System, means that with more detailed mapping information, network safety and operational efficiencies are greatly enhanced. Driving this culture of safety among our contractors, we are in the process of launching an incentive scheme to enhance safety, quality and environmental protection performance in our new pipelaying contracts.

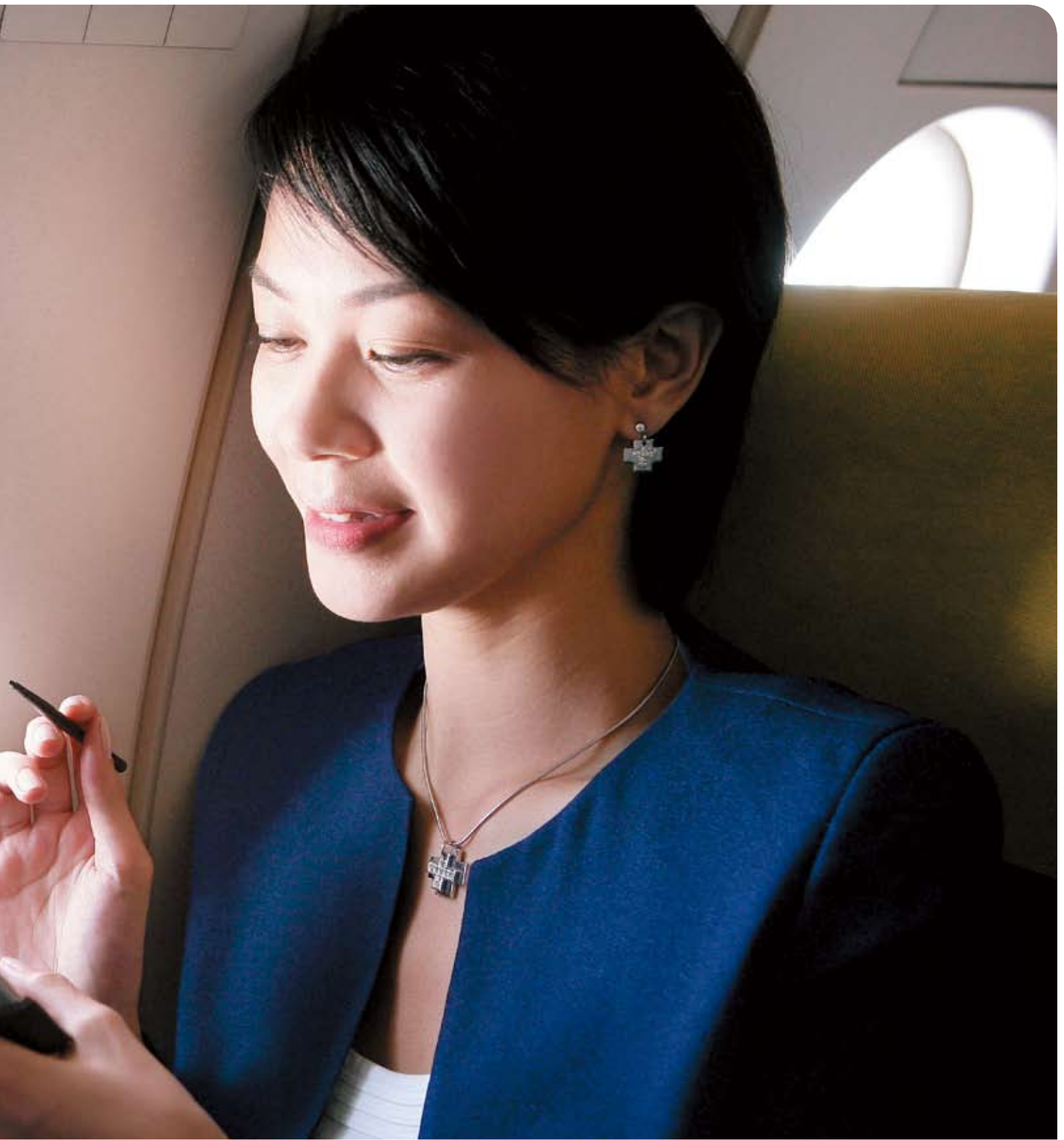


New aviation fuel facility –  
storage capacity of  
**264,000** cubic metres



### CREATING NEW FRONTIERS

One of the **largest** aviation fuel storage and logistic methane liquefaction and utilisation project on mine gas utilisation project...



facilities in the world... The **first** large-scale coalbed  
the mainland... The **world's first** large-scale coal-

# OUR DIVERSIFIED, ECO-FRIENDLY AND NEW ENERGY BUSINESSES



left  
Zhang Guobao (middle), Vice Director of the National Development and Reform Commission and Director of the National Energy Administration, toured ECO's coalbed methane liquefaction plant in Jincheng, Shanxi province after officiating at the plant's commissioning ceremony.

▶ right  
Upon its commissioning, the Aviation Fuel Facility in Tuen Mun will be the major logistics base for the supply of aviation fuel in Hong Kong.

The tremendous development boom in Hong Kong has fuelled our own rapid growth in the territory. With just 50,000 customers in the mid-70s, this figure has soared to 1.69 million customers today. Aware that as this market matures, we will need to look further afield for our ongoing development, we moved into the gas business in mainland China in the 1990s. This geographical expansion of the business, which we are familiar with, represents only one side of the coin. The formation of ECO Environmental Investments Limited (ECO), to drive the active diversification of our business, represents the other.

## New Eco-energy

Set up in the 90s to explore alternative sources of energy with an environmentally-friendly focus, ECO is known for its innovative, clean energy projects based on a number of industry firsts.

### Our Diversification in Hong Kong

In 2000, ECO won the bid from the Hong Kong Government to build and operate five dedicated liquefied petroleum gas (LPG) filling stations under its initiative to improve air quality in the territory. Hong Kong's 18,000 taxis and 2,300 public light buses currently run on this environmentally-friendly fuel. Our annual sales account for around 30 per cent of this vehicular LPG market in Hong Kong.

Another major milestone was the commissioning of the North Eastern New Territories landfill gas

(LFG) project in 2007. One of the largest projects of its kind in the world, it currently contributes about 3 per cent of our total fuel in gas production. The use of LFG is significant as it makes a dual contribution to the environment – it not only reduces carbon emissions released into the atmosphere as the gas is no longer flared off on site, it also conserves resources as it reduces our use of naphtha. Plans are also progressing to harness the LFG at the South Eastern New Territories landfill site.

In 2002, ECO won a 40-year franchise to build and operate the Hong Kong International Airport's key aviation fuel storage facility located in Tuen Mun. As a land-based aviation storage tank farm directly linked to the existing storage depot at the Airport, the facility consists of eight tanks capable of storing 264,000 cubic





metres of fuel together with the necessary support infrastructure such as jetties, transportation facilities, submarine pipelines, etc. Our design and construction fully comply with Hong Kong and international standards while the fire protection and fighting system is exemplary in Hong Kong. The first phase construction of the project is basically complete, and due for commissioning in the first quarter of 2010. The next phase is expected to come on stream at the end of 2010.

### Moving onto the Mainland

In 2008, ECO shifted its business focus onto the mainland and into the development of new and unconventional forms of energy. In the same year, ECO's first two projects came into operation. The first was the opening of a compressed natural gas (CNG) filling station. Providing both a more economical and cleaner

alternative to traditional diesel fuel, ECO's strategy is to serve the niche coal-trucking market in the Shaanxi region. With a daily distribution capacity of 50,000 cubic metres, the station provides enough clean energy for 250 heavy duty trucks. Building on this approach, a network of stations is being mapped out and plans are advanced for a similar service model in other provinces where there is high traffic in heavy duty trucks.

The second project, again the first of its kind in mainland China and, very likely, the world, commenced in December 2008 with the opening of our coalbed methane (CBM) liquefaction plant in Shanxi province. CBM, predominantly composed of methane, is an unconventional energy which is present in coal seams. Extracted in the coal mining process, the gas is usually wasted. With CBM

resources in mainland China being even more abundant than natural gas, this plant provides a significant number of benefits. Firstly, the extraction of CBM ensures safer mining practices as there is less flammable gas released during the mining process. Secondly, if unused the extracted CBM would be flared off. Our liquefaction operations therefore mean that less greenhouse gases are emitted into the atmosphere and the resulting gas utilisation also means that the use of traditional fossil fuels is greatly reduced.

Transported by road to where it is needed, the liquefied coalbed methane (LCBM) is able to help alleviate any shortages in piped gas supply. Phase two of this liquefaction plant is scheduled to come on stream in the fourth quarter of 2010, in time to meet demand for the coming winter. When fully operational, it will triple existing capacity to an impressive 300 million cubic metres a year. Attesting to the innovation and importance of this project, the plant has been cited in 2009 as one of the 50 Clean Energy Projects with the Highest Investment Value by the Financial Times and the China Chamber of International Commerce.

### New Projects and Developments

ECO's third pioneering project consists of our coal-based chemical plant in Erdos, Inner Mongolia.



## OUR DIVERSIFIED, ECO-FRIENDLY AND NEW ENERGY BUSINESSES



left  
ECO's coal-based  
chemical plant in Erdos,  
Inner Mongolia.

▶ right  
The signing ceremony  
for the agreement of a  
coal-mine methane project  
in Chongqing, which uses  
breakthrough technology to  
trap and purify the methane.

The plant employs clean coal gasification techniques to make syngas (synthesis gas) which in turn is transformed into methanol which can be used as a clean fuel to replace gasoline or as a chemical feedstock for chemical processing. The plant, with an annual production capacity of 200,000 tonnes, is progressing well and is due for commissioning at the end of 2010. A nearby large coal mining project of ECO will provide the coal required for this initiative.

A further development in December 2009 was the signing of an agreement for a coal-mine methane (CMM) project in Chongqing, due for completion in 2011. Using breakthrough technology developed in conjunction with a mainland research institute to remove the oxygen present in CMM through a catalytic process, and adopting cryogenic technology similar to that

used in the Shanxi LCBM project, this Chongqing project will produce 90 million cubic metres of liquefied coal-mine methane (LCMM) annually in its first phase of operation. In conjunction with our LCBM project in Jincheng, Shanxi, ECO will enjoy a total production of 390 million cubic metres of natural gas equivalent in liquefied form.

CMM is similar to CBM – the former is simply extracted during the mining process, hence it contains air, the latter before mining commences. As in the case of CBM, the extraction of CMM creates safer mining conditions while at the same time transforming a waste material into a useful energy resource. It lowers carbon emissions caused by the need to flare off the methane, and reduces potent greenhouse gases being vented into the atmosphere –

when released, this methane is estimated to be 21 times more potent than carbon dioxide as a greenhouse gas. Yet again, this project is the first of its kind in mainland China and, we believe, the first of its type in the world.

Looking forward, we will be pushing these frontiers. We will continue to explore and develop new energy alternatives using the latest and most innovative technologies. In addition to our industry-leading activities in the liquefaction of CBM and CMM as well as the gasification of coal, other unconventional forms of energy are currently being studied.

### Telecommunications

Our telecommunications arm, Towngas Telecommunications Company Limited (TTC) uses our gas network as a springboard to offer economical and cost



effective telecommunications solutions to telecom carriers, service providers and major corporations. The company's high-end telecommunication infrastructure services and quality network solutions are provided via optical fibres installed along our gas networks, using either glass-in-gas (GIG) or glass-along-gas (GAG) techniques. The synergies gained are significant as the costs of laying these networks are substantially less than building a new network from scratch.

In 2007, TTC moved into mainland China to capitalise on these synergies and gain a foothold in the country's burgeoning telecommunications industry. In 2009, the company took a further step forward, establishing a JV in Shandong, to enter the mainland's fast-growing data business with the building and operation of a world class data centre in conjunction with

several well-known names in the industry. Located in Jinan with an area of 16,000 square metres, the data centre not only meets various international telecommunications standards such as ISO 27001, FISC, TIA-942, it also establishes a new model in the region, offering the highest levels of service excellence. The company has also been invited by the Ministry of Commerce from the Chinese Government to participate in the "Thousand-Hundred-Ten" project and signed a Memorandum of Understanding, signifying our support for the development of the IT outsourcing service industry in mainland China.

### Water Supply and Wastewater Operations

The three water projects, managed by Hong Kong & China Water Limited (Hua Yan), continue to grow and prosper. Profits rose 35.8 per cent over the previous year while the further completion of new infrastructure developments has led to a 20.4 per cent increase in the total number of customers.

In May 2009, phase one of Hua Yan's second wastewater treatment plant in the Suzhou Industrial Park came into operation. Initially processing some 150,000 cubic metres of sewage a day, capacity is expected to double to 300,000 cubic metres a day when the plant is fully operational. Wuhu Hong Kong & China Water Company Limited also commissioned its

large-scale fresh water project in August 2009. Consisting of 38 km of pipeline and three pumping stations, the project brings fresh water from the Yangtze River to Nanling in Anhui province.

### Building Services Engineering

U-Tech Engineering Company Limited (U-Tech) has widespread experience in the building of underground networks using the more environmentally-friendly "trenchless" technologies. With a number of professional and consultancy projects under its belt, including several major projects for Hong Kong's Water Supplies Department (WSD), the company has established a leading position at the forefront of the industry.

One of 2009's most notable projects was the completion of a 76 m duct across Castle Peak Road. Within this "common" duct, two 800 mm diameter steel water pipes, a 600 mm diameter steel gas pipe and a 200 mm diameter PE pipe have been placed, providing services both for WSD and ourselves. The project was successfully completed despite the tight time frame without any disturbance to the public.

In August 2009, U-Tech was awarded a "Group C" WSD licence. This new licence will mean a whole new era for U-Tech, as it is now qualified to undertake the most complex, mega-scale water projects in Hong Kong.



## CARING FOR OUR FUTURE

Greater use of landfill gas, avoiding **34,600** tonnes  
Team celebrated its **10<sup>th</sup>** Anniversary... **930,000** rice  
of soup distributed in the past **10** years...





“Low Carbon Action!”  
call to reduce **one million**  
tonnes of carbon emissions

of carbon emissions... Towngas Volunteer Service  
dumplings, **570,000** mooncakes and **150,000** servings



# CORPORATE SOCIAL RESPONSIBILITY



left

At the “Low Carbon Action!”’s Green Christmas Exhibition, a specially designed low carbon Christmas lighting unit went on display, enabling the public to power the lights by riding a bicycle.

right

At the unveiling of our “Low Carbon Action!” initiative, Secretary for the Environment Edward Yau, Towngas Managing Director Alfred Chan and representatives from Hong Kong’s green groups, gathered together to mark this milestone.

This commitment to excellence only accounts for half the picture. It is also essential that we maintain a socially responsible attitude towards the world we live in and the people we serve – our community, our customers, our people, our shareholders and suppliers, as well as our environment. Only with the completion of this picture will we be able to ensure our sustainability and ongoing growth into the future.

The first step in this commitment to social responsibility and ongoing sustainability is the need to deal honestly, equitably and ethically with our various stakeholders – our regulators, our community and the public at large. Our corporate governance activities are therefore embedded into the very foundations of our Corporate Social Responsibility programme – good corporate governance highlights our accountability and increases our transparency. This in turn enables our stakeholders to trust us and to believe that we will not only take care of their needs but that we will do so with their best interests at heart.

## Protecting Our Environment

As a responsible supplier of energy, and in line with our vision to be a leading supplier of clean energy in the region, caring for our environment is a natural extension of our activities.

We continue the greening of our operations in Hong Kong with the increasing use of natural gas and landfill gas (LFG), as they account for a growing percentage, currently running at about 60 per cent, of our town gas production fuel. In mainland China, the majority of our city-gas ventures are based on natural gas, one of the cleanest fossil fuels available. Together with our role as a supplier of natural gas, we are helping to convert the country from a coal-based to a gas-powered economy. Coupled with ECO’s range of new energy

## Environmental Performance Table (Hong Kong)

<b>Ozone Layer Protection</b>	All of our vehicle air conditioning systems now operate with refrigerant R134A All BCF portable fire extinguishers have been replaced by dry powder extinguishers
<b>Air Quality</b>	Total NO <sub>x</sub> output was 4.39 kg/TJ of town gas Total SO <sub>x</sub> output was 0.03 kg/TJ of town gas Total CO <sub>2</sub> output was 12.13 metric tonnes/TJ of town gas
<b>Greenhouse Gas Emission</b>	Greenhouse gas emissions from major gas production equipment was 357,043 metric tonnes in terms of CO <sub>2</sub> equivalent
<b>Water Quality</b>	Total waste water output was 5.47 m <sup>3</sup> /TJ of town gas
<b>Chemical Waste</b>	Total chemical waste output was 0.87 kg/TJ of town gas
<b>Noise</b>	All installations and operations complied with the statutory requirements No noise abatement notice has ever been received

All legal requirements relating to environmental protection were fully complied with.

projects in LFG, liquefied petroleum gas, liquefied coalbed methane, compressed natural gas, liquefied coal-mine methane and methanol among others, we are not only in the forefront of the clean energy industry, it is this commitment to clean energy which will define our future business and determine our future direction.

### In Hong Kong

A major milestone was the completion of our first carbon audit in Hong Kong, which was verified under ISO 14064-1 specifications. Under this programme, a carbon inventory accounting exercise will be carried out every year. Building on this initiative, we also launched our "Low Carbon Action!" Campaign. With the slogan call to cut carbon emissions by an impressive one

million tonnes, the campaign aims to generate public awareness of environmental protection and promote low carbon living.

This large-scale promotional campaign makes use of diverse channels ranging from mass media publicity to online innovations such as social media, forums and websites. Our new websites provide information on how we can all reduce our carbon output and lead greener lives. Depicting these savings as trees, the website is cultivating a virtual Towngas Forest online. The message also received prominent coverage at our Green Christmas Exhibition, which attracted over 56,000 visitors. The exhibition featured an outdoor billboard powered by solar energy and "human" energy, generated by pedaling the bicycles at the venue. We also

sponsored the School Carbon Off Action contest organised by Green Power, and the Tree for Life environmental education programme organised by The Conservancy Association, to support this action.

Within the community we joined hands with leading green groups to sponsor a number of community awareness activities. These included WWF – Hong Kong's Earth Hour, when lights were switched off for an hour throughout Hong Kong to call for action on climate change; as well as Friends of the Earth(HK)'s Dim it – 6.21 action to reduce energy waste and generate awareness of light pollution. In addition to turning off our lights during the period, we also launched low carbon menus at Towngas Avenue, promoting the benefits of a low carbon diet.

## CORPORATE SOCIAL RESPONSIBILITY



left  
Our mainland employees actively participate in tree planting activities, helping to alleviate global warming.

right  
Towngas was the major sponsor of the Joint Coalition Against Financial Tsunami's industry-wide restaurant promotion campaign.

These activities, together with our staff programmes, ongoing energy savings and waste management initiatives, earned us the "Class of Excellence" Wastewi\$e Label for the eighth year running. We also won various green awards presented by magazines including Prime Magazine, Three Weekly and Lisa Family Magazine for the commitment demonstrated towards environmental management.

### On the Mainland

We continue to introduce our environmental management system and standards to our project companies on the mainland, and in line with the completion of our carbon audit in Hong Kong, we are extending this practice into the country.

With a focus on creating "low emission" businesses, we are conducting a number of environmental campaigns. A number of JVs, in Shandong and Shaanxi for instance, have also started tree planting and other environmentally-friendly programmes.

Sharing our expertise in the management of a comprehensive and effective environment programme, we also participated in a number of summits and forums, often speaking from our own experience and activities. A major highlight during the year was the Global Green Business Summit which took place in Tianjin. Endorsed by the Tianjin Government, we made a presentation together with leading figures from major organisations,

such as the United Nation Intergovernmental Panel on Climate Change, as well as the Chinese government's National Development and Reform Commission, National Energy Administration and Ministry of Environmental Protection.

Recognising our outstanding performance and positive influence on the environment and the industry in mainland China, we won the "2009 National Enterprise Environmental Excellence Award", presented by China Environment News.

### Caring for Our Community

In promoting our Towngas lifestyle, we also seek to improve life for the less fortunate in our

The Towngas Volunteer Service Team celebrated its 10th anniversary during the year. The team has contributed over 200,000 voluntary hours of service since 1999.



community. We therefore do what we can to lend a helping hand where it is needed and where we feel we can make a difference.

In Hong Kong, countering the effects of the financial crisis, the Joint Coalition Against Financial Tsunami spearheaded an industry-wide fast food and restaurant campaign. Over 180 companies signed the Charter, offering discounts and special promotions to help sustain the retail and restaurant business. We actively sponsored this event, doing our best to support our customers during these difficult times.

Our Towngas Volunteer Service Team also celebrated its 10th anniversary during the year. Currently standing at about

900 members, the Team was established in 1999 to further our commitment and care for the community. Since then the Team has contributed more than 200,000 voluntary hours of service, not only winning Champion for the Social Welfare Department's "Highest Service Hour Award (Private Organisations – Best Customer Participation)" once again, but also gaining the Hong Kong Council of Social Services' "Caring Company Award" for the seventh year running.

Aiming to provide greater care for senior citizens during this 10-year period, over 930,000 rice dumplings and 570,000 mooncakes have been made and distributed. At the same time, more than 150,000 servings of

hot soup have also been cooked, distributed and served to the elderly in the community. A hair cutting team was also set up in 2006 and the establishment of our Customer Volunteer Service Team in 2005 has taken the overall number of our volunteers to well over the 1,000 mark.

On the mainland, further to our efforts in the aftermath of the earthquake in Sichuan, we operated a Book Donation with Love and Care programme in the area. Under this initiative, over 30,000 donated books were collected for distribution to schools in the general vicinity. During school visits, our volunteers also built bookshelves and book corners for the students.



## CORPORATE SOCIAL RESPONSIBILITY



After the Sichuan earthquake, Towngas carried out a Book Donation with Love and Care programme, under which over 30,000 books were collected and donated to students.

In November 2009, the Shanghai Soong Ching Ling Foundation – Bank of East Asia Charity Fund was launched. Our donations to this project will help fund the purchase of equipment for village schools and of books and stationery for students. These initiatives together with our ongoing community activities have won us the “2009 China ‘Harmony • Responsibility’ – A Brand with Love Award” presented by News Magazine. We also won the “China Best Corporate Citizenship” award at the Fifth China Committee Corporate Citizenship commendation conference held in Shanghai.

### Developing Talent, Driving Excellence

The pursuit of excellence is only possible with committed and talented people, who share not

only our goals but also our passion for perfection. In building this quality workforce, learning and development play a core role. Not only will a thorough understanding of the job and its technical requirements ensure the highest levels of professionalism, staff development maximises potential and helps us build resourceful leaders hand-in-hand with a pool of talented people.

#### Staff Development

TLC+, our first talent acceleration programme, was launched in 2008 to build a leadership pipeline to meet our business needs. The programme identified suitable talent, fast-tracked their careers and exposed them to different situations and opportunities, over a structured and rigorous 18-month programme, which included finance management, political acumen, and positive

influencing skills. Together with group projects and on-the-job exposure, 25 participants in Hong Kong have strengthened their leadership competencies. At the conclusion of the programme in October 2009, 60 per cent of participants had enlarged their role. The TLC+ concept is currently being extended to the mainland, where our focus is to build a talent pool to meet our ever expanding business, while also providing a promising career path for those with the required capabilities.

Set up to oversee gas engineering training and professional development within the Group, our Towngas Engineering Academy (TEA) was established in March 2009. Bringing our Technical Training, Professional Qualification and Superior Quality





Driving a pleasant working environment, a "Smiley Towngas China" photo-taking competition was organised across our project companies in mainland China.



Service functions under one roof, its engineering, professional qualifications, corporate and people development training enhance gas safety, technical competence as well as the organisation development for Hong Kong and mainland projects. At the same time, ensuring sufficient and competent manpower within the gas industry, we continue to run our Gas Fitter Apprentice Training and Trainee Network Fitter Training Schemes in conjunction with Registered Gas Installer Training for contractors. Over 98,000 training man-hours were delivered to ensure the competence of our workforce.

Our Continuing Professional Development exercise equips, upgrades and refreshes the gas engineering knowledge and skills of our practicing engineers,

through information sharing, technical visits and seminars. In 2009, TEA invited distinguished engineers, technical specialists and well-known academics to speak at these seminars. Through this initiative, we accumulated more than 1,300 training man-hours and promoted a lifelong learning culture within the Group.

Our Graduate Trainee Scheme, first introduced in 1982, received encouraging recognition during the year, with two of our trainees taking both the first and second prizes in the "Hong Kong Institution of Engineers' Trainee of the Year Award 2009". Providing momentum to our training activities, one of our graduate apprentices also won the "Sir Edward Youde Memorial Fund Outstanding Apprentice Award", the first time we won this award.

Within the community, we actively participated in a number of training incentives organised by the Labour Department (LD) and institutions. Under the Graduate Assistance Programme, Youth Work Experience and Training Scheme and Co-operative Education Scheme, a number of trainees spent time with us in various internship and mentoring programmes.

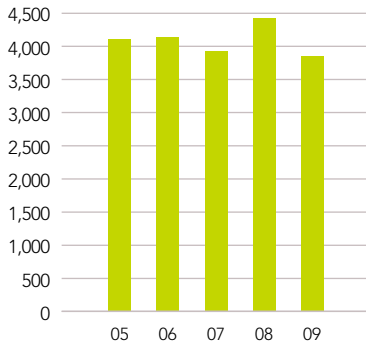
### Employee Welfare

We continue to improve staff welfare, seeking to create a better work-life balance for our people together with a safe, healthy and pleasant working environment. Therefore, we have earned the "preferred employer" status both in Hong Kong and mainland China.

# CORPORATE SOCIAL RESPONSIBILITY

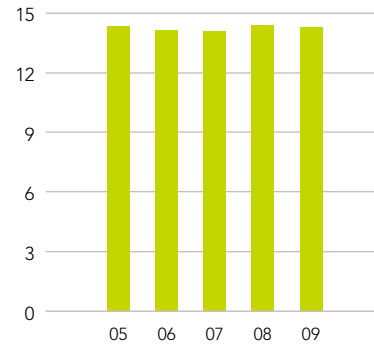
## Revenue per Employee

Company (HK\$ thousand)



## Town Gas Sales per Employee

Company (million MJ)



A number of new “family-friendly” initiatives were rolled out to improve staff well-being. In 2009, phase two of five-day working week programme came into operation to include more employees in our customer service areas. As a result, around 61 per cent of our Hong Kong employees now enjoy this benefit. From 2009 onwards, male employees became entitled to three days’ paternity leave on the birth of their children while from July 2009, all employees also benefit from three days of marriage leave.

Furthermore, around 9 per cent of employees have now joined our company-subsidised individual medical insurance scheme, which, in addition to our group medical scheme, provides enhanced health care for our employees.

## Occupational Health and Safety in Hong Kong

Maintaining the highest standards of health and safety, we attained the second best record in our industrial safety performance over the past 28 years. During the year, there were 12 industrial accidents, resulting in an Accident Frequency Rate of 0.29.

Driving a culture of safety and improving emergency procedures internally, we held a number of joint fire exercises with the Fire Services Department (FSD). These exercises helped ensure that our emergency response team would work smoothly with Fire Services personnel.

Taking this message to our suppliers, contractors and the local community, we organised the Joint Utilities Safety & Occupational Health Policy Group Safety Forum 2009, where over 300 participants from various organisations in Hong Kong shared their experiences on crisis management. Two Occupational Safety & Health (OSH) seminars were also held for contractors with speakers from the FSD, LD and Construction Industry Council Training Academy. A Health, Safety and Environmental (HSE) Photo Competition and HSE Quiz for contractors not only brought in highly positive responses, they also raised greater awareness of OSH.

Helping our people to deal with the swine flu (H1N1) epidemic that swept around the world in 2009, we were quick to set up an emergency plan. We also issued a special edition of our newsletter to keep our staff informed of the best ways to prepare for and manage the epidemic. An HSE Resource Centre, which opened during the year, also provides employees and contractors with updated information on HSE and personal protective equipment.