



# 港华燃气 Towngas

港华燃气  
BAUHINIA



# Scaling New Peaks... Doubling our Business

The integration of upstream supply, midstream delivery and downstream customer activities, together with the acquisition of Panva Gas and the rapid growth of our piped gas business, resulted in the doubling of our activities on the mainland.



# MAINLAND CHINA GAS BUSINESS

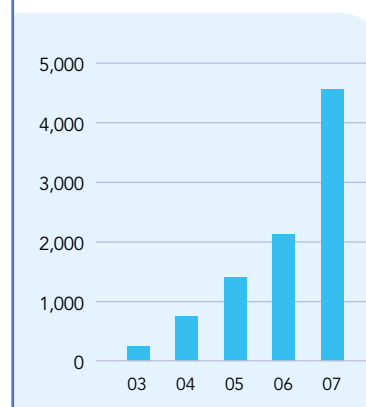
Our businesses on the mainland scaled new peaks in 2007. From just two small joint ventures (JVs) in Guangdong province that commenced operations in 1994, our Towngas brand is rapidly gaining momentum and we are now the leading piped city-gas operator in the country. At the end of 2007, total turnover on a combined basis for our mainland business increased 119 per cent to HK\$15.2 billion.

A major highlight was the greater integration of upstream supply, midstream delivery and downstream customer activities into our supply chain. With the establishment of a number of projects in the exploration, production and delivery of natural gas; the acquisition of Panva Gas Holdings Limited (Panva Gas) and the rapid growth of our piped gas business; hand-in-hand with our focus on services improvement and safety in the cities where we operate, we took a major step forward in 2007 towards the realisation of our aspirations to become the leading supplier of clean energy in the region.

## Towngas China Company Limited

The large increase in value during the year is due primarily to our strategic partnership with Panva Gas which became an associate company of the Group in March 2007. On 1st March 2007, we acquired an approximate 43.9 per cent interest of the enlarged share base of Panva Gas, a Hong Kong listed company. Building on our Towngas brand, Panva Gas changed its name to Towngas China Company Limited (Towngas China) on 23rd May. This acquisition has brought a further 25 piped gas ventures into the Group, extending our geographical reach on the mainland.

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





Towngas in Ziyang. Previously a Panva Gas company, this JV is now part of Towngas China's portfolio in Sichuan province.

Reflecting the widespread experience and expertise of our management in the industry as well as our considerable financial resources and technical skills, a number of improvements have been made and synergies generated in the Company. The capital structure for example has improved and there is better financial management; corporate governance and engineering standards have been raised; our businesses benefit from joint purchasing programmes and both Towngas China's and Hong Kong and China Gas Investment Limited's (HCIL) headquarters were consolidated under one roof.

During the year, Towngas China's net debt to equity ratio improved from 94 per cent at the close of 2006 to 17 per cent at the end of 2007. The credit rating also went up in August 2007 to Investment Grade Level, which defines Towngas China as a medium sized operation that is performing satisfactorily in the market.

Looking forward, our aim is to grow the Towngas brand into a leading household name providing safe, value for money, reliable and dependable services to residential, commercial and industrial users throughout mainland China. We therefore continue to seek new challenges and explore opportunities that will enhance our business. During the year, three piped city-gas projects and one liquefied petroleum gas (LPG) project were added to Towngas China's portfolio.

### Piped City-Gas Business

Our piped city-gas business continues to form the main thrust of our activities on the mainland. With no more than 5,000 household customers when we first began operations in 1994, our 65 projects in 12

provinces and two municipalities now serve over eight million commercial, industrial and residential customers. Supported by our commitment to provide safe, reliable and one-stop gas supplies to our customers, hand-in-hand with growing trust in our services, the business achieved solid performances during the year with sales volumes reaching 4.6 billion cubic metres, an increase of 2.5 billion cubic metres over 2006, whilst combined turnover rose 99 per cent to HK\$11.9 billion. This positive picture is expected to intensify into the future.

## MAINLAND CHINA GAS BUSINESS

Natural gas usage is currently estimated at 3 per cent of the national total fuel consumption while the use of coal represents a hefty 70 per cent. By 2015, the use of natural gas is expected to climb to 10-15 per cent overall, providing strong potential for growth. Poised to capture these new opportunities, we are growing and diversifying our various activities in anticipation of market needs.

In 2007, in addition to Towngas China's new JVs in Mianyang, Sichuan province, Gongzhuling, Jilin province, and Qijiang in Chongqing, we added three further JVs to HCIL's portfolio. The first commenced operations in Chaoan, Guangdong province, providing gas supplies to industrial users, particularly in the ceramics and other china production factories in the area.

This was followed by a piped gas project in Fengcheng, Jiangxi province as well as a midstream project in Jilin province. The latter builds on our management experience in other midstream projects in Anhui, Hebei and Zhejiang. These midstream projects, apart from supporting our downstream operations, also strengthen our market interests by vertically extending our gas business supply chain.

Demand for this clean energy is growing such that bottlenecks in supply and temporary shortages due to peak load capacity limitations are being experienced. Capitalising on this situation, we expanded our activities from a piped city-gas company to a dynamic energy concern by embarking into new energy businesses.

We have been looking upstream to the exploration, production and supply of environmentally friendly natural gas supplies. This interest crystallised in early 2007 when we established our first JV in the exploration and sale of crude oil and natural gas in Jilin province. These activities, though not large in scale, will not only complement our piped

Our stylish customer centres in mainland China not only offer one-stop services, they also showcase a wide range of appliances, including our Bauhinia brand.



gas activities by providing additional sources of supply, the knowledge and experience gained will enable our further expansion into similar projects in the future.


### Other Gas-related Businesses

In line with our one-stop service strategy and capitalising on the fact that we are the first point of contact for customers requiring gas services in mainland China, we also provide quality gas

appliances to customers under our own Bauhinia brand. At the end of 2007, a total of 96 customer centres were in operation offering value-added gas services to customers in addition to providing a showcase for our products. Looking to improve and integrate services even further, in 2007, HCIL entered a co-operation with our JV in Wuhan to develop a new customer information system that will serve all our JVs in mainland China.

During the year, we celebrated a major highlight – the sale of our 100,000th Bauhinia unit. Since the brand was launched just two years ago in September 2005, this has been a remarkable achievement. We believe this success is due to a number of reasons. First and foremost, not only can our customers now enjoy one-stop shopping convenience, our service is unique in that we are the only gas supplier to provide our own brand of appliances in the country. We also work closely with manufacturers, building on our experience in Hong Kong, to design and produce innovative and effective products that will meet the needs of our customers with built-in safety features.

Last but not least, our customers benefit from our established safety measures. Under our regular safety inspection programme, Towngas technicians initiate checks on piping, gas meters as well as relevant appliances in customer premises at least once every 12 months. Ensuring a regular and systematic service approach to gas safety, this move has helped to significantly reduce gas incidents in our areas of operation.



Manufacturing vehicle wheels in Shandong. This client is a major gas user with large consumption needs.

# MAINLAND CHINA GAS BUSINESS

## Towngas' Businesses in Mainland China



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

	Year of Establishment	Project Investment Rmb M	Registered Capital Rmb M	Equity Share %		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	772	30%					
7 Chaoan	2007	192	100	60%					
<b>Central China</b>									
8 Wuhan	2003	1,200	420	50%					
<b>Eastern China</b>									
9 Tongxiang	2003	83	58	76%					
10 Huzhou	2004	200	87	95%					
11 Yixing	2001	246	124	80%					
12 Taizhou	2002	200	83	65%					
13 Zhangjiagang	2003	150	60	51%					
14 Wujiang	2003	150	60	80%					
15 Xuzhou	2004	245	125	80%					
16 Danyang	2004	150	60	80%					
17 Jintan	2006	150	60	60%					
18 Tongling	2006	240	100	70%					
19 Yuhang	2006	240	160	50%					
20 Suzhou Industrial Park	2001	245	100	55%					
21 Changzhou	2003	248	166	50%					
22 Nanjing	2003	1,200	600	50%					
23 Fengcheng	2007	150	60	55%					
					<b>Shandong Province</b>				
					24 Jinan East				
					2003				
					610				
					470				
					50%				
					<b>Northern China</b>				
					25 Jilin				
					2005				
					247				
					100				
					63%				
					26 Yingkou				
					2006				
					80				
					40				
					100%				
					27 Beijing Economic-Technological Development Area				
					2005				
					111				
					44				
					50%				
					<b>Northwestern China</b>				
					28 Xi'an				
					2006				
					1,668				
					1,000				
					49%				
					<b>Midstream Projects</b>				
					29 Guangdong LNG				
					2004				
					7,628				
					2,289				
					3%				
					30 Hangzhou NG				
					2005				
					760				
					304				
					10%				
					31 Anhui NG				
					2005				
					245				
					200				
					25%				
					32 Hebei NG				
					2005				
					660				
					220				
					45%				
					33 Jilin NG				
					2007				
					360				
					120				
					49%				
					<b>Upstream Projects</b>				
					34 Yanan LNG				
					_*				
					200				
					_*				
					70%				
					35 Shanxi Coalbed Methane				
					2006				
					500				
					140				
					70%				
					36 Jilin NG				
					2007				
					140				
					5				
					50%				
					<b>Water Projects</b>				
					14 Wujiang				
					2005				
					1,400				
					500				
					80%				
					20 Suzhou Industrial Park				
					2005				
					3,500				
					2,123				
					50%				
					37 Wuhu				
					2005				
					700				
					300				
					75%				
					<b>Other Projects</b>				
					38 Xianyang CNG Filling Station				
					2007				
					22				
					4				
					60%				

<b>Towngas China Piped City-gas Projects</b>							
<b>Guangdong Province</b>		<b>Shandong Province</b>		<b>Northeastern China</b>		<b>Southwestern China</b>	
39 Foshan		46 Jimo		55 Benxi		62 Ziyang	70 Chengdu
40 Shaoguan		47 Laoshan		56 Chaoyang		63 Weiyuan	71 Zhongjiang
41 Qingyuan		48 Zibo		57 Tieling		64 Pengxi	72 Jianyang
		49 Longkou		58 Fuxin		65 Lezhi	73 Pengshan
		50 Jinan West		59 Changchun		66 Pingchang	74 Mianyang
		51 Jinan Changqing		60 Gongzhuling		67 Dayi	75 Qijiang*
		52 Weifang		61 Qiqihar		68 Yuechi	
		53 Weihai				69 Cangxi	
		54 Taian					
<b>Eastern China</b>							
42 Nanjing Gaochun							
43 Maanshan							
44 Anqing							
45 Chizhou							

\* JV company to be established



# A Quality Living Experience

We continue to consolidate our growth in Hong Kong. In addition to providing one of the safest and most reliable supplies of gas in the world with a continuity rate of more than 99.99 per cent, we are expanding our activities to create a “quality living” environment for our customers and the community.





## HONG KONG CORE BUSINESS

Despite the maturing of our market in Hong Kong, our operations in the territory continue to form the mainstay of our business, apart from also providing the springboard for the diversification of our activities, and the broadening of our horizons, into the region. Our aim is to provide a wealth of economic and energy efficient services that will create a quality lifestyle for our customers.

At work in a hotel kitchen. In addition to our residential customers, we offer inspection services to our business customers to ensure safe operations.



### Our Residential and Commercial Activities

At the end of 2007, we were serving a total of over 1.6 million customers in Hong Kong. Whilst this figure represents an increase of 23,844 customers compared to the end of 2006, there is no doubt that today's lifestyle and the warmer climate in recent years are taking their toll, and we are seeing a slight decrease of gas sales in the residential sector. However, commercial and industrial gas sales posted a healthy rise of 2.1 per cent.





Our advertising campaigns during the year highlighted the many benefits of flame cooking.

In the commercial sector, we consolidated our market position, further developing the commercial and industrial use of gas in the competitive energy market. These efforts, which have been particularly effective in the restaurant, hotel and hospital trades, are based on our close relationships with customers. Understanding their needs, we are able to use our industry knowledge and expertise to offer innovative and cost-effective solutions. During the year for example, we introduced a range of European-style equipment – including commercial gas ranges with ovens, fryers and griddles – manufactured in mainland China, which provide customers with a lower-cost alternative for their cooking needs. Regular newsletters and active public relations involvement in the market also keep our business customers up-to-date on new service initiatives as well as the latest product information. Coupled with the rebound in the economy as well as the upturn in tourism, we are seeing healthy growth in this sector.

In view of the challenges experienced on the domestic front, we are taking the opportunity to broaden our horizons, furthering our commitment to not only improve the quality of our service to our customers but also to create a “quality living” environment with the introduction of innovative services and products that will improve the quality of life for the people of Hong Kong.

To create this “quality living” environment, gas must first expand its role, moving from its traditional perception as a simple cooking or heating fuel into a modern, eco-friendly and dynamic source of energy. Therefore, in addition to our safe and reliable gas supplies, we provide a range of innovative and sophisticated gas appliances for residential, industrial and commercial use. Apart from providing convenient and comprehensive one-stop services to our customers, our selection of appliances and equipment ensures that customers have access to



alternative options, which may offer more economical as well as more environmentally friendly operations.

During the year, not only did the Housing Authority resume its sale of Home Ownership Scheme flats, completing phase one with the sale of some 4,000 flats, both the property and stock markets soared to new highs. This improving economic situation thus stimulated appliance sales. Boosted by new and innovative products that cater to public market needs, plus the turnaround after the sharp slow down in production of new housing units both public and private in recent years, together with a series of effective promotional campaigns, sales during the year improved substantially over 2006.

## HONG KONG CORE BUSINESS

### New Appliances

New products launched during the year included hotplates with a timer function as well as new, high-end water heaters from Japan. To capture more customers, a range of LPG cooking and water heating appliances also helped to stimulate sales. The most successful product however was our clothes dryer – a promotion campaign celebrating the sale of our 100,000th dryer since the product's launch in 1995, resulted in 30 per cent more unit sales compared to the previous year.

### Flame Cooking

The star of the year was the Towngas Cooking Centre which celebrated its 30th Anniversary. This milestone birthday was celebrated with a number of activities marking the many benefits of "flame cooking". A number of local celebrities, for example, were invited to take part in cooking events, demonstrating both the benefits of cooking with gas as well as their passion for cooking and their culinary abilities.

A "Flame Cooking Campaign" featuring a new TV commercial together with several print advertisements supported these activities. "Flame Cooking" also made its way into the corporate world with our Team Building Cookery Workshops, which use group cookery sessions to help

build cooperation and team work in the workplace. Response to this initiative has been overwhelming.

### Customer Service

Our 16 customer centres continue to reach out to our customers as they promote the convenience and benefits of town gas in the home. Towngas Avenue, our unique "lifestyle" centre continues to be well patronised as customers come to see and try out our full range of appliances for themselves, while at the same time enjoying the cooking demonstrations by our distinguished chefs in our open kitchen environment.

During the year, a service ambassador campaign encouraged customers to vote

Our "Vote for Service Ambassador Campaign" encouraged customers to show their appreciation to frontline staff for their service excellence while also improving customer communications.



## Results of Towngas Service Pledge 2007

		Results
<b>Reliability</b>	Uninterrupted gas supply (over 99.99%)	<b>99.994%</b>
	In case of supply interruption on account of maintenance or engineering work (3 days prior notification)	<b>100%</b>
	Restoration of gas supply within 12 hours	<b>99.98%</b>
<b>Safety</b>	Emergency Team arrived on site within 30 minutes (at 90% of the times) <sup>1</sup>	<b>93.22%</b>
<b>Appointments</b>	Availability of maintenance and installation services within 2 working days	<b>Average 0.99 day</b>
<b>Speed and Convenience</b>	Customer Service Hotline (calls answered within 4 rings)	<b>96.35%</b>
	Connect or disconnect gas supply within 1 working day	<b>100%</b> (upon customer's request)
	Deposit refunded at Customer Centres (2 hours after disconnection of gas supply)	<b>99.91%</b> (upon customer's request)
<b>Service Quality</b>	Efficiency <sup>2</sup>	<b>8.71</b>
	Courteous and friendly attitude <sup>2</sup>	<b>8.71</b>
<b>Handling Suggestions</b>	Reply within 3 working days	<b>100%</b>
	Resolution, or a statement of when the matter will be resolved, within 2 weeks	<b>97.92%</b>

1. Average 20.78 minutes.

2. The result was based on monthly surveys conducted from January to December 2007 by an independent research company. Our target is to exceed a score of eight out of ten.

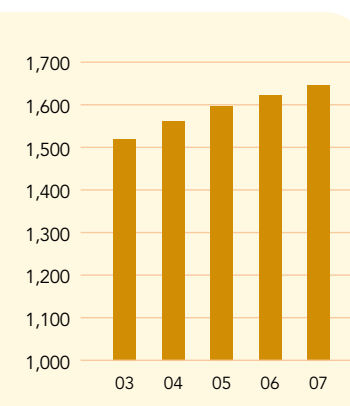
for their "most caring service ambassador". This initiative not only improves interaction between employees and the public, it provides positive customer feedback on the performance of our frontline staff and makes sure that good service and positive performances are suitably rewarded.

We are delighted to report that these efforts have received recognition from both our customers and our peers in the local business community. Through close and ongoing

communication with both customers and employees, we have registered greater customer satisfaction for both our installation and maintenance services. At the same time, we received the prestigious Best Brand Enterprise Award from the Hong Kong Productivity Council in 2007. Such recognition reveals valuable feedback from the market on our performance, reaffirming that overall our business is on the right track and that our services do indeed add value to the community and to Hong Kong.

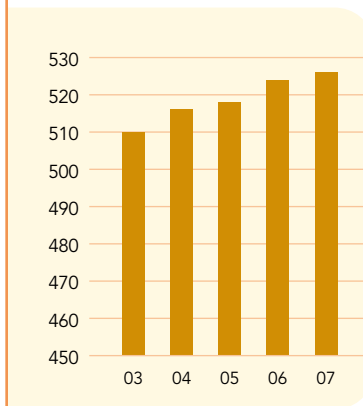
## Number of Customers

Company (Thousand)



## HONG KONG CORE BUSINESS

### Number of Customers per km of Mains Company



### Gas Infrastructure

Hong Kong enjoys one of the safest and most reliable supplies of gas in the world with a continuity rate of more than 99.99 per cent. Despite this positive achievement, we continue to work towards safer, more reliable as well as more environmentally friendly gas services.

Attesting to the quality management of our infrastructure assets, including our gas transportation network, we received PAS 55-1:2004 certification during the year, the first gas company in the region to receive this honour. In addition to ensuring that we manage our assets more effectively, the accreditation also affirms that the value and sustainability of our plant and network assets are fully maximised.

Ensuring more reliable services and enhancing supply security, we continue to expand our supply network with a number of new pipeline projects. The first of these, our Eastern Transmission Pipeline project, which consists of 24 km of high pressure pipeline from Ma On Shan via Sai Kung to East Kowloon is at its completion stage. Testing will take place in 2008 and upon commissioning it will greatly enhance supply capacities and service reliability to urban areas in the territory.

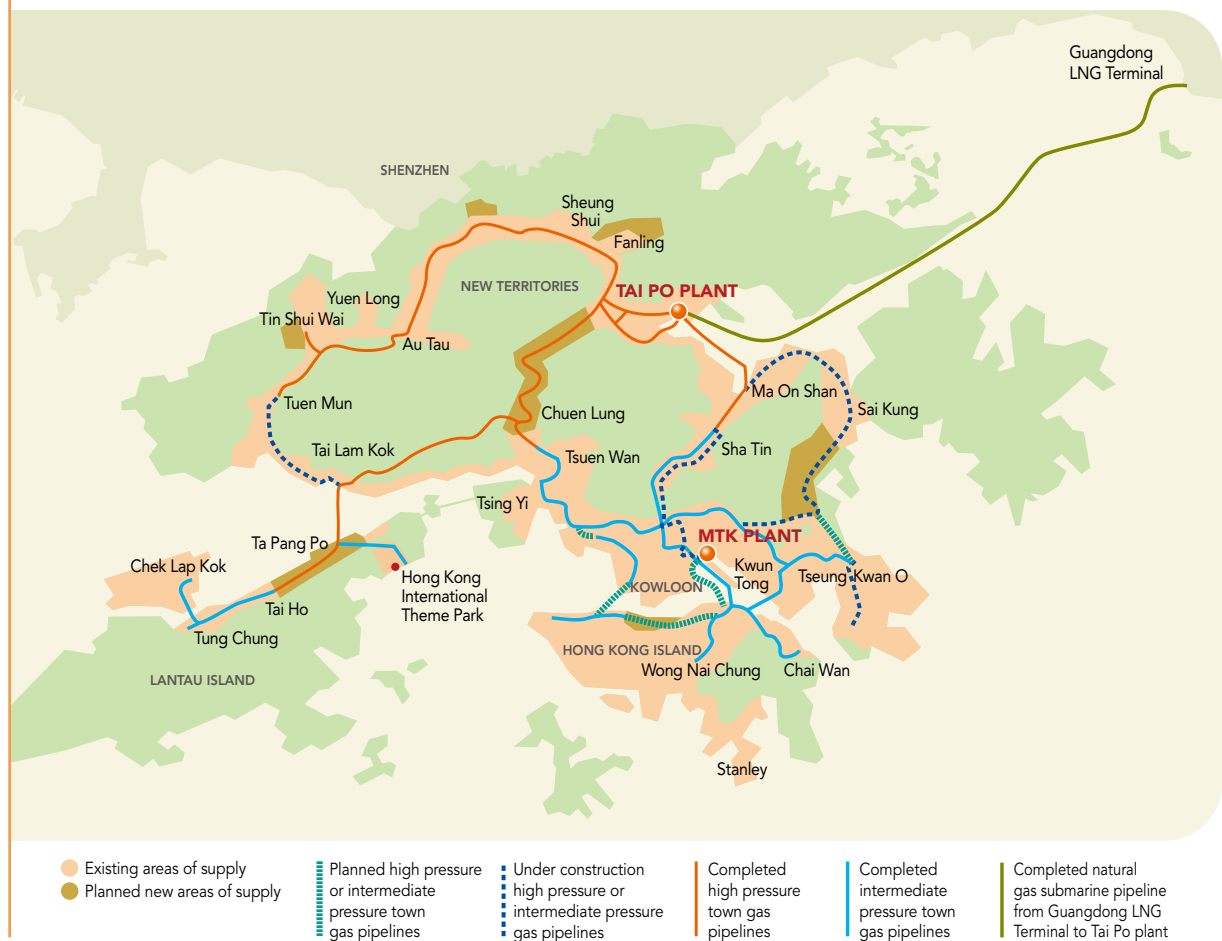
Construction of a nine km ring-feed network in the Western New Territories is also proceeding apace. Scheduled for completion in 2010, it will greatly improve network security in the region. The laying of a third pipeline, to carry natural gas from Tai Po to the Ma Tau Kok gas production plant as feedstock, also commenced during the year. In view of the widespread development due to take place in South East Kowloon, we are also working closely with the government to coordinate gas requirements and ensure necessary supplies when the development is up and running.

We are also speeding up the replacement of some 150 km of medium-pressure ductile iron pipes which have been in use for over 20 years. This effort to rejuvenate our gas network is continuing on schedule.

### Ensuring Clean and Green Energy

2007 also saw our first full year of natural gas usage in the town gas production process. First introduced in October 2006, natural gas not only gives us a clean feedstock in the production of town gas, it is also providing a more economical and reliable energy source for Hong Kong. With a 25-year supply of natural gas secured in 2003 at a much lower price than

## Towngas Network in Hong Kong



current oil prices, customers were able to enjoy a reduction of as much as 12 per cent in their gas bills during the year.

The second major milestone in the gas production process was the commissioning of our North East New Territories (NENT) landfill gas utilisation project, which literally turns organic rubbish into energy. In 1999,

we made history with our pilot project, Hong Kong's first commercial landfill gas utilisation project at Shuen Wan which converts landfill gas into a methane-based heating fuel. In May 2007, NENT came on stream. In addition to becoming one of the largest landfill gas export systems in the world, the project will not only reduce carbon dioxide emissions by up

to 135,000 tonnes a year, it will also reduce our consumption of naphtha by up to 43,000 tonnes annually for the next 25 years.

### Empowering Our People

A business is only as good as its people. Our aim is therefore to develop a quality work environment that will attract, encourage and retain quality people within the organisation.



## HONG KONG CORE BUSINESS

We also need to ensure that they match our commitment to provide safe and reliable gas services as efficiently and caringly as possible and that they continue to work towards the preservation and conservation of the environment in every aspect of their activities.

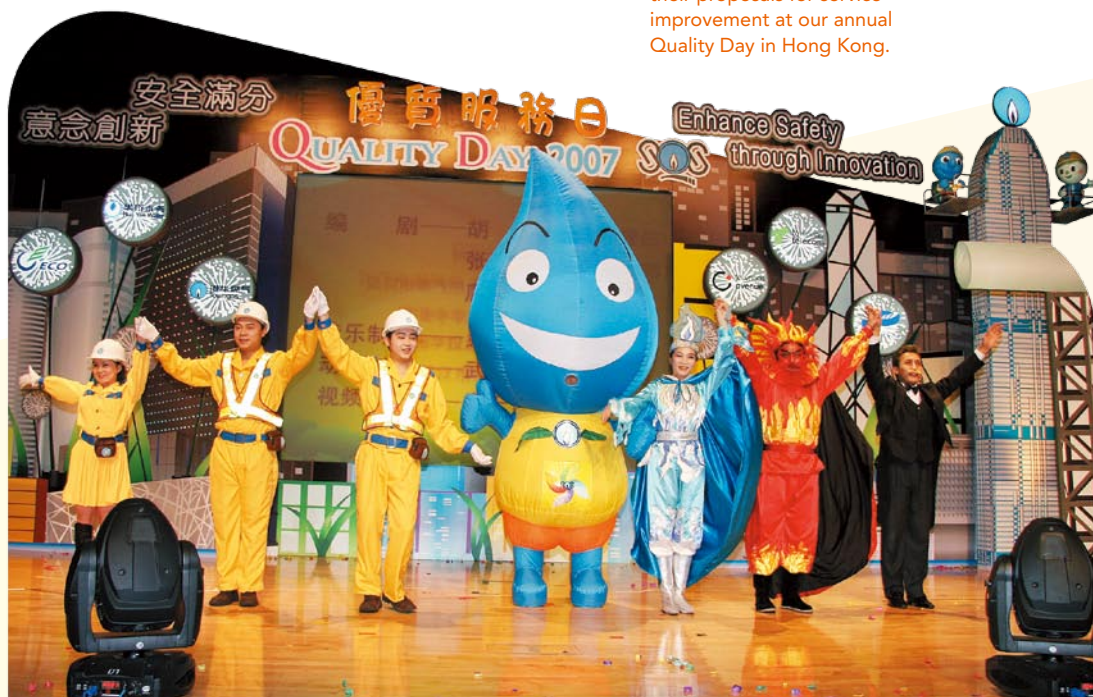
Our business is growing rapidly in scale and in diversity on the mainland. We will therefore need many more capable leaders within the Group, able to cope with the increasingly complex and competitive environment into the future. Training, management development and succession planning thus play a key role in our activities as we seek to

create a talent pool that will serve our needs both in Hong Kong and mainland China. To this end, we implemented our Towngas Leadership Competency (TLC) model to define and crystallise our human capital requirements for the future. Identifying any performance gaps in the Group, TLC provides a development plan for individual executives so as to improve our organisational capabilities and build a leadership pipeline for future growth.

Our Talent Acceleration Programmes – Leadership Mobility Programme accelerates identified young talent, grooming them to take

on higher managerial responsibilities in mainland China while TLC+ accelerates identified young talent to build a ready pool of talent for leadership requirements. Employees with high potential move into a fast track career lane with mentorship, more learning opportunities through project work and job rotation to prepare them for higher management responsibilities and more rapid opportunities to move up the corporate ladder. As a start, some 30 young executives have been selected for the acceleration programme and we are looking at a further 300 talented individuals to complete the programme in the five years to come.

Superior Quality Service teams from JVs present their proposals for service improvement at our annual Quality Day in Hong Kong.



In our general training activities, we marked a number of milestones in 2007. Our Graduate Trainee Programme celebrated its 25th Anniversary while our Gas Fitter Apprentice Training Scheme, run by our Technical Training Centre, passed its 40th birthday. Since its inception in 1982, around 100 Graduate Trainees have completed the programme and some 40 per cent of our current executives are graduates of this initiative. Similarly, over 1,000 gas professionals have been trained through our various technical training schemes in the past 40 years.

Our long term partnership with the Vocational Training Council (VTC) for the training of apprentices in the gas industry also passed a milestone – in 2007 we received a 25th Anniversary Strategic Partner Award from the VTC. At the same time, attesting to the effectiveness of the programme, one of our gas apprentices won the VTC’s outstanding apprentice accolade.

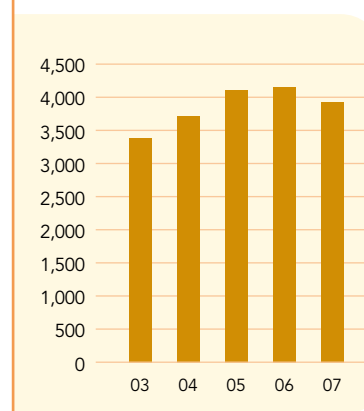
In view of the success of our Superior Quality Service (SQS) programme, our quality circle equivalent which focuses on measurable targets for improved service delivery, work

procedures and reduced costs, it is also expanding rapidly into our operations on the mainland. During the year, a total of 3,104 mainland employees participated in SQS activities, completing 299 projects with tangible and intangible benefits worth RMB 8.3 million. The fourth Quality Day for mainland JVs was also held successfully in Wuhan with 700 participants from various JVs, local government officials, customer representatives and the media. Building on this momentum, the quality message is spreading rapidly on the mainland. Our JVs also enjoy this first-hand opportunity to learn from global practices and to gain a view of what other successful companies are doing in their quality activities around the world.

Our training activities have been particularly satisfying on the mainland, with management and employees showing keen enthusiasm to learn from international best practices and the latest industry developments. We currently run two Technical Training Centres – in Guangdong and Shandong – to ensure that employees in mainland China are not only professionally qualified but also to ensure that their practical skills do indeed meet international standards.

## Revenue per Employee

Company (HK\$ thousand)

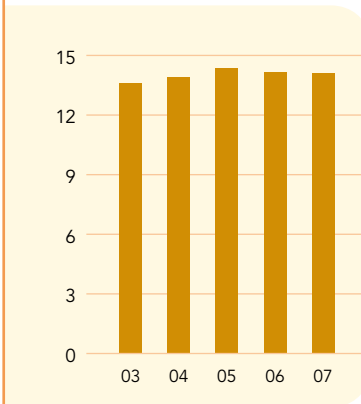


## Employee Welfare

We take care of the health of every member within the Group. As such, a number of initiatives, in addition to our training and development programmes, are in place to ensure the well-being of our people. Apart from a range of leading employee welfare programmes, we were one of the first companies in Hong Kong to launch a “Port-a-Protection” Plan, providing subsidies to employees for medical insurance. Reflecting the changing environment and the expected revamp in Hong Kong’s public medical services in the near future, the plan has been introduced to generate greater awareness amongst employees with regard to their health and health-planning in an environment where there is an increasing need for medical insurance.

## HONG KONG CORE BUSINESS

### Town Gas Sales per Employee Company (million MJ)



### Serving the Community

No business would be successful if it is not closely allied to the community that it serves.

Accordingly we have a committed community service programme based on areas where we feel there is a strong need for support.

The “Rice Dumplings for the Community” initiative, our largest annual community event, once again brought our employees and the public together to wrap rice dumplings for distribution to the needy in Hong Kong. Celebrating both the Dragon Boat Festival and the Hong Kong Special Administrative Region’s 10th anniversary, the event not only raised over HK\$840,000 in funds

for the Community Chest, it once again placed Hong Kong in the international spotlight with the establishment of a new Guinness record – making the largest collection of rice dumplings ever, 34,056 in total, on a single occasion.

During the year, we were particularly proud of the help and support we were able to offer to various social enterprises in Hong Kong. There has been growing interest in such businesses in response to the government’s call to support such organisations. These businesses, which exist to serve social or environmental purposes, generate income to maintain their operations and further their social goals without having to depend on subsidies or donations.

Our specialist cooking and marketing skills are put to good use in our “COOK EASY” social enterprise scheme which offers employment opportunities for the mentally-handicapped.





A view of the 1,000 “wrappers” who gathered together to wrap over 34,000 rice dumplings. The event created a Guinness world record while also raising funds for the Community Chest.

In conjunction with the Tung Wah Group of Hospitals (TWGH), Towngas also unveiled “COOK EASY”, Hong Kong’s first food pack delivery service and our first social enterprise initiative. Based on special recipes created by our Towngas Cooking Centre, TWGH’s catering service produces “COOK EASY” food packs, providing employment opportunities for the mentally-handicapped and other disadvantaged individuals. These employees assist in the cleaning, preparation and assembly of the food packs. “COOK EASY”, as its name suggests, provides fresh and nutritious pre-prepared ingredients, allowing meals to be ready in minutes. Busy Hong Kong people can thus enjoy

healthy home-cooked meals with minimum effort. “COOK EASY” has also gained the support of Henderson Land Development Company Limited, who is promoting the service to residents in their housing developments throughout Hong Kong.

Another social enterprise activity includes the charity lunches held to raise funds for the Hong Chi Association. The Association works with mentally-handicapped trainees seeking to sharpen their catering management skills. We offered a helping hand with Towngas Avenue sponsoring the ingredients for the Association’s “Love and Shine Charitable Lunches” held at their Hong Chi

Garden View Lounge. We also shared our expertise in cooking and running a restaurant at these events. The lunches provide an excellent opportunity for the trainees to hone their on-the-job skills, enhancing their job competitiveness in the market.

Within the community, our volunteer team, consisting not only of employees and their families but also our customers, participated in a range of volunteer services. Accumulating over 30,000 service hours last year, our volunteer services included hot soup deliveries, distribution of turnip cakes and mooncakes, as well as free hair cuts and other services for senior citizens in Hong Kong.



# Growing Diversification for Success

In 2007, with the rapid diversification of our businesses on the mainland, we took massive strides into the eco-energy sector with our natural gas, coalbed methane and alternative coal-based fuel activities. These pioneering strategies are establishing the groundwork for our future expansion into a market with virtually unlimited potential.



## DIVERSIFYING OUR BUSINESS

Growth and diversification are essential to the development and success of any business. We are therefore pleased to report that in 2007, we took a number of critical and dynamic steps forward in our different areas of activity, and in the exploration, production and supply of eco-energy in particular.

### ECO Energy

The major highlight for ECO was the commissioning of its NENT landfill gas project during the year. Coming on stream in May 2007, it is now sending the treated landfill gas via a 19 km pipeline to our town gas production plant in Tai Po. The project brings significant environmental benefits to the community. Not only does it reduce emissions from flared gas at the landfill site, the use of naphtha at our gas production plant is also accordingly reduced. In view of these benefits, ECO is seriously looking into similar opportunities at Hong Kong's two other strategic landfill sites.

The Company is also seeing steady growth in LPG sales at its five dedicated filling stations. With Hong Kong's 18,000-strong taxi fleet now running on this environmentally friendly fuel,

The natural gas liquefaction plant taking shape in Shanxi.



there is steady demand for LPG. Set to reduce air pollution by as much as 25 per cent in respirable suspended particulates and 6 per cent in nitrogen oxides emitted from the existing vehicle fleet, sales are climbing as public light buses gradually make the transition to this fuel as well.

In 2002, ECO entered into a 40-year franchise agreement with the Airport Authority Hong Kong for the development of a Permanent Aviation Fuel Facility at Tuen Mun Area 38 to serve the Hong Kong International Airport. The facility consists of two jetties with berthing capacities of 40,000 and 80,000 tonnes, as well as a tank farm which will ultimately house 12 aviation fuel tanks. Construction of the facility is progressing well with the first phase of development expected to be operational by early 2010.

Mainland China currently consumes over 340 million tonnes of fuel a year to meet its energy needs. A large portion of this demand is met by importation in the form of crude oil. Finding a substitute is thus a priority for the mainland. Rising to the challenges, as well as the many new opportunities in this business market, ECO will

spearhead developments in this rapidly emerging new energy market.

Building on its experience in the vehicular fuel business in Hong Kong, ECO is now constructing a Compressed Natural Gas (CNG) filling station in Shaanxi province to serve the coal trucks plying between the coal mines and cargo destinations in the province. With the station expected to be operational by mid 2008, we are also working to develop new routes and more stations under similar business arrangements.

In 2006, a JV was set up to make use of the huge coal reserves in Shanxi province – believed to be among the largest in the world – to turn coalbed methane (CBM) into a liquefied natural gas (LNG) equivalent. The liquefaction plant is now under construction with phase one having the capability to liquefy 300,000 cubic metres of CBM a day. The plant is expected to come into operation in 2008. The project, which holds a 30-year licence for the liquefaction of CBM, not only marks a milestone for the Group, we are also taking a pioneering role in making use of these potentially huge energy resources in the country.

In view of the vast reserves of coal in mainland China, we are also aggressively exploring business opportunities with regard to the production of methanol and dimethyl ether (DME) using coal as feedstock. Methanol and DME, through blending or direct substitution, can be used as alternative transportation fuels to both gasoline and diesel. Methanol, in its simple chemical form, can be used as a feedstock in the chemical industry, which is currently dominated by petroleum-based feedstock. The production of methanol and DME also enables the much cleaner use of coal as an energy source since waste can be more readily captured and recycled.

### **Towngas Telecom**

Since its establishment in 2004, Towngas Telecom (TGT) has proudly offered high-end telecommunications infrastructure and optimum quality network solutions to telecom carriers, service providers and large corporations. Riding on our existing territory-wide gas pipe network, TGT installs optical fibres within pipes, through glass-in-gas (GIG) or glass-along-gas (GAG) techniques, to provide high bandwidth, accessible, cost effective and environmentally friendly telecommunication networks.



## DIVERSIFYING OUR BUSINESS

During the year, TGT achieved its objectives to expand into mainland China with the establishment of its first JV in Shandong province. Using the GAG technique, the new company provides a relatively low cost and much more environmentally friendly telecommunications network and infrastructure for local operators. This GAG technique reaps tremendous synergies between the two networks and we also benefit from the collaboration between local telecom operators and our JV company in Shandong.

The technique significantly reduces network building costs with the installation of both gas and telecom pipes in the same underground trench at the same time. Recognising these benefits, our top-line customers include telecom carriers, mobile phone operators as well as broadcasting networks. As these services grow and expand throughout the mainland market, they will not only enhance the value of our gas network, they will also offer collaborative and cost-effective solutions to underground utility systems for the rapidly growing towns and municipalities throughout the country.

U-Tech created yet another project record when it completed the relining of these huge 1.4 m diameter pipes for the Water Supplies Department in Fanling.



### U-Tech

As one of Hong Kong's leading players in the use of "trenchless" technology, U-Tech carries out many pipeline construction projects without the need to excavate trenches in roads. This ensures minimal disturbance to the environment and reduces the inconvenience caused to the general public. Having built a niche as an expert in the market, U-Tech has been extending this specialist expertise to a number of leading utilities and property developers throughout the territory.

Major projects completed during the year included the record breaking relining of two 1.4 m diameter water pipes in Fanling for the Water Supplies Department. These huge water pipes are part of the system supplying water from mainland

Water pipes being put into place in Wujiang, Jiangsu province. When completed, the 76 km pipeline will supply water to entire Wujiang administrative district.



China to Hong Kong. Utilising the polyethylene pipe insertion technique, rehabilitation work was successfully completed, creating yet another record in U-Tech's project list. They are almost certainly the largest water pipes ever relined in such a way in Hong Kong. U-Tech also completed its first salt-water reservoir construction project during the year.

A mega water-pipe rehabilitation project in the New Territories, jointly conducted by U-Tech and Chun Wo, a leading local construction company, worth HK\$255 million, also reached its completion stages during the year. The smooth performance of U-Tech's trenchless technology not only facilitated the project's completion, it also garnered a great deal of praise from the client. With these diverse water projects, coupled with the experience gained from our water businesses in mainland China, U-Tech is rapidly cementing its reputation as a front runner in the engineering requirements of the water industry. At the same time, the completion of U-Tech's above-ground activities at the Group's Grand Waterfront development – U-Tech managed the development's building service installations – has enhanced U-Tech's name and image, while also rounding out its service scope within the industry.

## Property Development

Our property interests continue to flourish. Reflecting the strength of the property market in Hong Kong, take-up at our Grand Waterfront development, at our original Ma Tau Kok southern plant site, has been positive. Consisting of 1,782 units in five apartment towers with a gross floor area of around 1.2 million square feet, pre-sales of the residential units commenced in August 2006. Occupancy began in May 2007 and by the end of the year, approximately 1.17 million square feet had been sold. The Group is entitled to 73 per cent of the net proceeds of these sales. Rental of the 150,000-square foot commercial areas began in the second half of 2007, and by the end of the year over 70 per cent of the space had been leased by retail tenants supplying daily necessities to the neighbourhood. The Group also owns approximately 300 parking spaces at Grand Waterfront, with take-up being extremely satisfactory so far.

We also hold a 50 per cent interest in Grand Promenade, a residential development in Sai Wan Ho. Consisting of 2,020 individual units with a total floor area of some 1.7 million square feet, 1.67 million square feet of space had been sold by the end of the year.

The Group holds approximately 15.8 per cent interest in the successful and highly prestigious International Finance Centre in the Central business district. In addition to the shopping mall and office towers, which are fully let, the complex also includes the Four Seasons Hotel and its serviced apartments, Four Seasons Place. Both continue to enjoy high occupancy levels.

## Water Businesses in Mainland China

Hua Yan Water is currently operating three water projects on the mainland. Growing consumption coupled with tariff increases resulted in a consolidated profit that jumped five times in comparison to 2006.

At the same time, all three projects are increasing their production capacities; the Suzhou Industrial Park venture added two more towns to its service network, Wuhu commenced the laying of a 36 km pipeline to supply water to the nearby Nanling district, and Wujiang began adding 200,000 tonnes of water treatment capacity as well as some 76 km of piping to its water supply network. Looking forward, we will bring further value to these assets – enhancing water quality, improving productivity and lowering power consumption.

# Our Commitment to the Future

We are committed to people – our staff and customers, shareholders and the community. Only with happy employees, satisfied customers and a sustainable business, can we take our activities forward to better serve our shareholders and the community.





# HEALTH, SAFETY AND THE ENVIRONMENT

The nature of our work demands that safety form an integral part of our everyday operations. During the year we continued to enhance every aspect of our safety practices.

## Gas Safety

We continue to implement a number of measures to enhance safety even further. The first of these is the strengthening of our communications and contingency management in the event of an emergency. Ensuring that the on-site emergency team will have access to first hand information, they will receive a recording of the actual dialogue between the caller and Emergency Hotline staff. The emergency liaison coordinator will also take a crucial role in our emergency teams to centralise requirements and facilitate communications. Supporting on-site requirements, our emergency operation vehicles carry the most up-to-date

information on our underground pipeline locations throughout Hong Kong. They are equipped with computers to enable on site staff to immediately locate information as it is needed.

To avoid the accumulation of any escaped gas in voids below buildings, a comprehensive survey has been carried out to identify any such situations. Openings found have been sealed to stop the entry or exit of gases of any kind and the resulting data has been entered into our electronic network mapping system for future reference. At the same time, we have been working with other utilities in Hong Kong to plug ducts connecting manholes to avoid any possible collection of gases in an enclosed chamber.

We also introduced a Laser Methane Gas Detector which enables the remote detection of

Territory-wide gas leakage surveys are conducted regularly to ensure public safety.



gas leakages. This means that leakages can now be detected in more remote or previously inaccessible locations; and manholes surveys on Hong Kong's carriageways can also be conducted safely. As this new detector is unique in that it is only triggered by methane gas, an existing component in town gas, it will reduce the number of false alarms while also enhancing the accuracy of our leakage surveys.

Despite the fact that our activities and appliances meet stringent international standards, we continue to make every effort to enhance their safety even further. Our pipes are checked rigorously from anywhere between six times a year to once a year to determine their condition and check for leakages, while in the home, we continue our regular safety inspections every 18 months. In addition to checking pipe conditions within customer premises, these inspections help to identify appliances in need of maintenance or repair. Customers are also encouraged to upgrade their appliances if their current equipment is out of date, if it does not have any flame failure devices, for example. These regular inspections were further expanded during the year, when they were extended to cover the supply pipes of our commercial customers as well.

We also carried out a comprehensive check of all gas risers located in Hong Kong's back lanes to ensure their safety. In addition, we provided safety inspections on flueless and open-flue water heaters.

## Occupational Health and Safety in Hong Kong

Health and safety are opposite sides of the same coin. As such, we place as high a priority on the health and well-being of our employees as we do on safety. In recent years, our training and initiatives introduced to improve health and safety have shown an effect, and the number of industrial accidents and the accident frequency rate fell significantly, both coming down by almost 50 per cent in 2007. The introduction of a reverse parking alert system, reversing video system and other such devices in our drive to improve transport safety have, for example, reduced the traffic accident rate by almost 30 per cent.

Despite these improvements, our communications, training and other promotional activities have not let up. In addition to our Health, Safety and Environment (HSE) Day which is held every year, we also organised a HSE Quiz to promote the message and

generate greater awareness of its importance, not only at home and in the workplace, but also in the community. During the year, we also published a Corporate Risk Management Manual and held a series of HSE workshops for employees and contractors.

Training focused on risk assessment and a number of health talks – on such diverse areas as the effects of prolonged computer usage; our ability to deal with a flu pandemic, if it were to occur; as well as food safety and the benefits of organic vegetables – also took place. Additional initiatives included a Fire and Safety Forum with the Fire Services Department as well as a Safety Forum, which was held in conjunction with Hong Kong's other utilities. In total, together with environmental awareness talks, professional and general safety and health training, employees received over 27,000 man-hours of training during the year.

## Occupational Health and Safety in mainland China

Our JVs in mainland China not only benefit from our commercial and financial expertise but also from our considerable health, safety and environment-focused experience and activities.

## HEALTH, SAFETY AND THE ENVIRONMENT

Over the years, building on our established processes in Hong Kong, we have been implementing international safety standards with the adoption of modern safety management systems. These include sophisticated fire prevention systems, up-to-date gas detection procedures as well as tried and tested emergency handling strategies. Together with our regular safety inspection programme for customers, we have established an excellent track record for safety among our JVs. These activities have been so successful that our JV in Wuhan gained its OHSAS 18001 Certification during the year, becoming our first large-scale mainland gas establishment to gain recognition from an international certification body for its health and safety management system.

At the same time, a number of safety manuals and guidelines for both the gas and water business were published and implemented. These included an updated HSE policy and HSE manuals, a guideline on safety signage and pipeline colour codes, fire evacuation plans, JV general manager monthly safety and risk management inspection programmes, as well as corporate emergency plans.

Generating greater awareness and driving home the safety and environmental message, a number of educational and promotional activities were also held during the year. In addition to safety DVDs, leaflets and posters, these ranged from the 2007 Safety Olympics, a green photography competition, to training, experience exchanges and workshops. These workshops, dealing primarily with safety and risk management as well as gas safety, were held for our JVs throughout the mainland. Regular safety and risk management audits and inspections were also conducted, ensuring ongoing understanding and compliance with the highest industry standards.

Regular testing of the fire system in a gas station on the mainland ensures the highest safety standards.

### Preserving, Conserving and Sustaining our Environment

As the world grows increasingly concerned with the effects of global warming and as there is increasing discussion about the need to reduce the world's carbon footprint, we are fully aware that, looking forward, the sustainability of our business is only possible if we take a responsible and caring attitude towards the preservation of the environment and the conservation of resources on this planet.

We are therefore making every attempt to produce town gas from the cleanest resources available to address the issue of climate change. We took a major step in this direction when we started using natural gas, one of the cleanest fossil fuels available, in our production



We sponsored Friends of the Earth's Tree Planting Challenge to plant 10,000 trees each year for three consecutive years.



process. Completing our first full year of natural gas usage as a fuel in our production processes, we were able to reduce our carbon dioxide emissions by 20 per cent during the year, an achievement which won us the 2007 Hong Kong Awards for Industries: Environmental Performance Grand Award.

In addition to the use of natural gas, our two landfill gas projects in Hong Kong – the original pilot project in Shuen Wan and the much larger NENT project are now contributing to the use of cleaner energy. Though the use of landfill gas does not bring in any significant financial benefits, its contribution to the environment is considerable.

Firstly, it greatly reduces the amount of methane and carbon dioxide released into the atmosphere, both significant sources of global warming. Landfill gas is also a renewable energy that can be used to replace naphtha and other fossil fuels, thus enabling greater conservation of the earth's resources. We are therefore exploring the considerable scope for development in this area. Hong Kong's three landfill sites – South East New Territories and West New Territories in addition to NENT – have a total capacity for 139 million cubic metres of rubbish when fully developed, providing a potentially rich source of renewable energy into the future.

We are committed to our activities as a forward looking eco-based energy concern. At one end of the spectrum, our LPG filling stations provide an environmentally friendly alternative to more polluting fuels. On the other, our natural gas exploration, coalbed methane and liquefaction projects provide cleaner fuels and thus greener operations in mainland China. At the further end of the spectrum, there is the research and development work that we are putting into the production of coal-based alternatives to petroleum-based fuels. These developments will not only help us to become one of the foremost clean energy suppliers in Asia, they will also help to build a cleaner, greener and more sustainable world.

## Environmental Awards Received for 2007

**2007 Hong Kong Awards for Industries** : Environmental Performance Grand Award

**2007 Hong Kong Eco-Products Award** : Bronze Award

**ACCA Hong Kong Awards for Sustainability Reporting 2007** : Commendation

**2007 Eco-Service Enterprise Award by Next Magazine**



## HEALTH, SAFETY AND THE ENVIRONMENT

### Environmental Performance Table All legal requirements relating to environmental protection were fully complied with

<b>Ozone Layer Protection</b>	100% 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 4.68 kg / TJ of town gas Total SO <sub>x</sub> output was 0.04 kg / TJ of town gas Total CO <sub>2</sub> output was 12.33 metric tonnes / TJ of town gas
<b>Greenhouse Gas Emission</b>	Annual total greenhouse gas emissions of 333,161 metric tonnes in terms of CO <sub>2</sub> equivalent
<b>Water Quality</b>	Total waste water output was 6.98 m <sup>3</sup> / TJ of town gas
<b>Chemical Waste</b>	Total chemical waste output was 0.37 kg / TJ of town gas
<b>Noise</b>	All installations and operations complied with statutory requirements No noise abatement notice has ever been received

On a more day-to-day level, we are doing everything we can to use less energy and conserve resources. In this area, we are making a significant impact with our recycling programmes. When replacing appliances, we recycle as much of the metal as possible from the discarded equipment, using any revenues raised to fund further green practices and educational activities. The initiative is so successful – it is estimated that the weight of the metal recycled is equivalent to that of 1,000 motor cars every year – that we are extending the programme to collect old gas pipes within our network as well.

Our green data centre too provides a typical example of our green operations in action.

The centre optimises energy usage with thermal services and state-of-the-art smart cooling facilities, while also adopting new technology to replace machines and storage facilities with items that require less electricity and which emit less heat in operation. Automatic synchronisation minimises the need for air-conditioning and a structured cable design – data and power cables for instance are separated – improves air flow and reduces cooling requirements.

Within the community, we are active in a number of initiatives in partnership with leading green groups such as Green Power, Friends of the Earth, World Wide Fund for Nature, the Conservancy Association

and other similar organisations. These include employee educational initiatives such as Dolphin Watch tours, Eco walks and tours in Long Valley, the Mai Po Marshes and the Hong Kong Wetland Park as well as tree planting activities and clean Hong Kong campaigns such as the Green Mid-Autumn Festival and Green Christmas events. On a more strategic level, we participated in various regional and international events ranging from the International Conference on Climate Change organised by the Hong Kong Institute of Engineers and the Clean Air – Clear Choices seminar organised by the Council for Sustainable Development to ECO Expo Asia, organised by the Hong Kong Trade Development Council.