



煤氣  
Towngas

150 Warming  
Everyday Life 1862-2012





## Vision

To be Asia's leading energy supplier and service provider, with an environmentally friendly focus.

## Mission

To provide our customers with a safe, reliable supply of energy and the caring, competent and efficient service they expect, while working to preserve, protect and improve our environment.

## 2011 Key Statistics and Achievements



- Operate 138 projects in mainland China, with a market value of over HK\$150 billion.
- Serve 15 million customer accounts, benefitting around 50 million people in Hong Kong and the greater China region.
- Our city-gas operations on the mainland consist of 100 city-gas ventures serving over 13.2 million customers.
- Our environmentally friendly energy arm, ECO operates 20 projects including landfill gas and coalbed methane operations, clean coal activities, coal resource projects as well as logistics hubs for coal transportation.
- Our "Carbon Reduction Project Competition" on the mainland brought in 47 submissions, reducing carbon emissions by a significant 10,000 tonnes a year.
- Launched our Wenxin programme to reinforce our caring family culture.
- Became the first utility in Hong Kong to receive designation under the World Health Organisation's (WHO) Safety Community's International Safe Workplace Programme (ISWP).
- Achieved our best safety record in Hong Kong with a total of 10 accidents and no serious injuries during the year.

## Awards and Recognitions

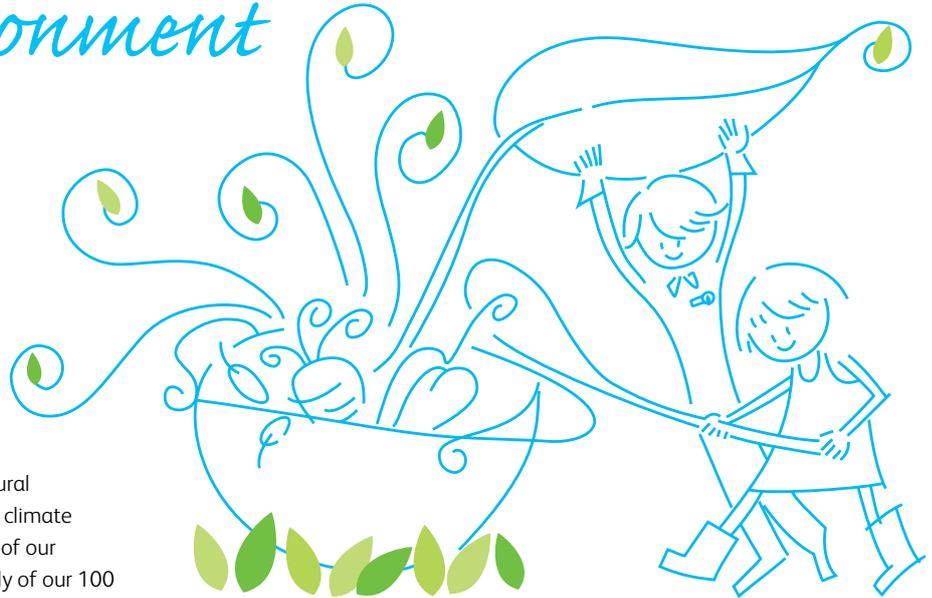


- Hong Kong Awards for Environmental Excellence – Gold Sectoral Award 2011: Public Organisations and Utilities.
- 2011 Hong Kong Occupational Safety & Health Award – Gold Award: Safety Management System  
Gold Award: OSH Annual Report  
Safety Performance Award
- Global Chinese Business 1000 – Outstanding Performance Award by Yazhou Zhoukan (Third year running)
- cnAAA rating – Standard & Poor's Greater China Credit Rating Scale: Towngas
- cnA rating – Standard & Poor's Greater China Credit Rating Scale: Towngas China
- 2011 Excellence of Listed Enterprise Awards by Capital Weekly
- The Most Valuable Listed Company during the Twelfth Five-Year Plan Award – 2011 Golden Bauhinia Awards by Ta Kung Pao and various financial institutions.
- The Best Model for Public Satisfaction in China's Public Utilities Service by Economy magazine and Association of China Industrial Newspapers.
- Hong Kong Green Awards – Silver Category: Green Management Award 2011
- "Class of Excellence" – Wastewi\$e Label 2011
- "Class of Good" – IAQwi\$e Label 2011

## Driving our sustainability, we –

- Maintain the highest standards of corporate governance.
- Follow a strict internal Code of Conduct on best practices and ethical behaviour.
- Ensure open, accountable and transparent communications.
- Guarantee efficient, effective and reliable business practices and operational controls.
- Act in the best interests of our stakeholders.
- Fulfill our corporate social responsibilities to our stakeholders, the environment and our community.

# Promoting a Clean and Green Environment



## Green Energy

### Natural Gas

Currently the cleanest fossil fuel available, natural gas improves air quality and mitigates against climate change. It currently accounts for around 60% of our feedstock in Hong Kong and is the major supply of our 100 city-gas businesses on the mainland.

### Clean Fuel Facilities

Providing cleaner fuel for vehicles, we operate five dedicated liquefied petroleum gas (LPG) filling stations in Hong Kong and nine compressed natural gas (CNG) and liquefied natural gas (LNG) filling stations in Shaanxi, Shandong, Shanxi, Liaoning, Henan and Anhui provinces on the mainland.

### Landfill Gas (LFG)

A pioneer in the use of LFG, we began harvesting LFG in 1999 for use as a heating fuel in our operations. In 2007, these activities expanded to the much larger North East New Territories (NENT) landfill site, resulting in one of the largest examples of this “green” energy recovery and reuse in the world. LFG now accounts for about 2.3% of our total production fuel in Hong Kong.

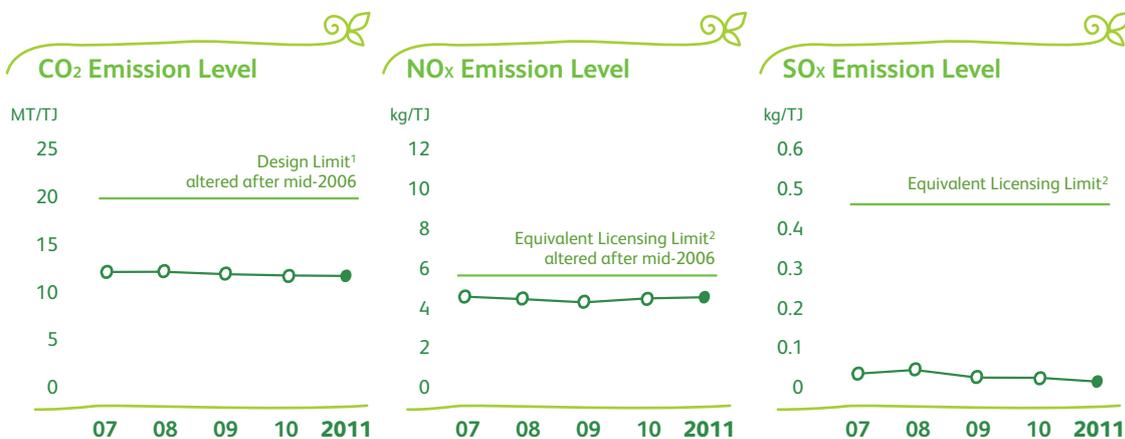
### Coalbed Methane (CBM)

In December 2008 we made history with the opening of China’s first large-scale CBM liquefaction and utilisation plant in Shanxi province. This use of CBM not only turns a highly polluting waste material into a valuable resource, LCBM (Liquefied CBM) is also a safe, environmentally friendly, clean and quality fuel that is easily transportable. The extraction of CBM also provides a safer working environment for miners.

### Clean Coal Energy

Our clean coal utilisation techniques took a major step forward during the year with the completion of our coal-based methanol plant in Inner Mongolia. Methanol has dual applications as a chemical feed as well as a highly efficient and clean burning fuel.

## Emission Levels of Gas Production Plants (Hong Kong)



Note:

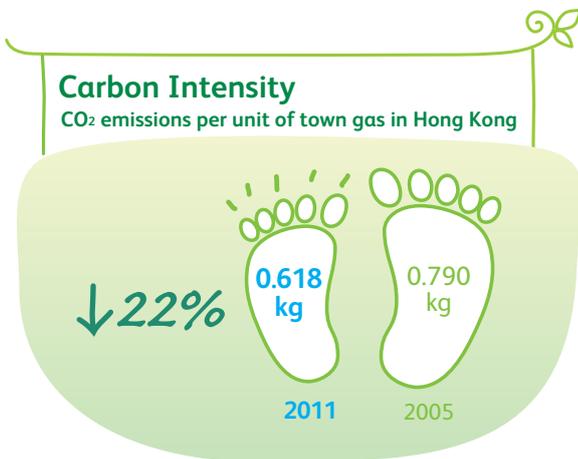
- As there is no Licensing Limit for the emission levels of the substance, we apply the design limit of our production plants as a reference point for the emission level.
- “Equivalent Licensing Limit” (kg/TJ or m<sup>3</sup>/TJ) = “Weighted average of actual licensing limit” (kg/hr or m<sup>3</sup>/hr) ÷ production rate of the plants for the year 2010 (TJ/hr).

## New Energy Developments

Our in-house new-energy research and development centre works in close partnership with relevant research and technology institutes to study new and more diverse ways of producing clean energy. Particularly interested in the use of biomass energy, renewable resources and waste materials, we are looking into the possibility of using biogas generated from Hong Kong's potential Organic Waste Treatment Facilities (OWTF) in the future.

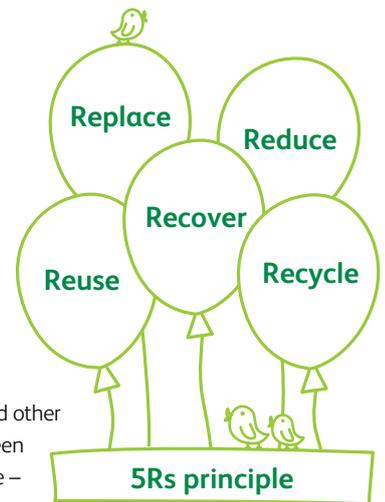
## Reducing our Carbon Footprint and Conserving Resources

Our Carbon Audit Programme provides a baseline for the calculation of carbon emissions during the gas production process together with carbon inventory accounting procedures.



A Green Development Steering Committee was established in 2011 to work towards reducing our carbon footprint even further. For instance, it has studied the carbon footprint of a typical gas appliance to identify improvement areas to lower carbon emissions.

The winning proposal in our Carbon Reduction Project Competition 2011 came from the Suzhou Water Company. Their simple suggestion to prevent rainwater from entering the wastewater system, reduced the amount of wastewater to be processed by an impressive 3 million tonnes annually, saving over RMB 3 million in costs and 885 tonnes of CO<sub>2</sub> emissions every year.



Our Carbon Reduction Project Competition was held again in 2011, leading to the submission of 47 entries resulting in the reduction of 10,000 tonnes of CO<sub>2</sub> emissions during the year.

Efforts to save electricity, water and other resources such as paper have all been highly successful. Initiatives include –

- The large-scale introduction of LED lighting in our customer centres – 18 out of 20 centres have now made the switch, has resulted in a two-thirds saving in electricity costs.
- Together with a lucky draw, held to promote our eBilling services during the year, we had 59,676 registered eBilling customers at the end of 2011. This figure translates into the saving of 7.5 tonnes of paper annually.
- The new reverse osmosis water treatment facility in our Tai Po Plant, saved more than 40,000 cubic metres of effluent water as well as 65,000 kg of sulphuric acid and 96,000 kg of sodium hydroxide in its first year of operation.
- Installed a heat recovery system to recover and use waste heat generated from our production processes.

“We are pleased to cooperate with Towngas both in our Save Food cooking competition as well as our Lai See packet recycling programme. They are committed to many different environmental initiatives and also show strong leadership with regard to the environment and in the area of social responsibility. I hope they will continue to help more local and smaller NGOs.”

**Angus Ho**  
Executive Director  
Greens Action



## Minimising Waste

We received our “Class of Excellence” Wastewi\$e Label for 10 consecutive cycles.

Our Used Gas Appliance Recycling Programme collects unwanted gas appliances for recycling. During the year, some 841 tonnes of unwanted equipment were saved from the landfills for recycling.

We also recycle plastic waste and use recycled protective tiles, made from concrete waste, to protect our underground pipes.

Committed to the management of food waste, we are looking into the installation of a food waste treatment machine at our in-house catering facilities in Hong Kong.



## Types of Materials Collected for Recycling or Reuse

- |                                       |  |                                   |
|---------------------------------------|--|-----------------------------------|
| • Paper                               | • Metal Drums                          | • Used CDs/DVDs                   |
| • Spent Catalyst                      | • Plastic Chemical Drums               | • Retired Uniforms                |
| • Spent Laser Toner Cartridges        | • Computers                            | • Obsolete Rechargeable Batteries |
| • Polystyrene Foam                    | • Retired Safety Helmets               | • Spent Fluorescent Tubes         |
| • Used Gas Appliances and Spare Parts | • Old Gas Meters                       | • Abandoned Aquaknect Hoses       |
| • Used Polyethylene Pipes             | • Abandoned Service Pipes and Fittings | • Plastic Waste                   |

## In Partnership with our Stakeholders

### Our Employees and Contractors

We encourage our employees and contractors to purchase and use green products and services, conserve natural resources and practice recycling. We also continued our eco talks and seminars, suggestion schemes and environmental awards as well as our eco tours and tree planting days. On the mainland for instance, more than 90 companies participated in the “Month of Tree Plantation and Carbon Reduction” programme.

### Our Customers

Providing cleaner choices and a green lifestyle for our customers, we offer a comprehensive range of modern, eco-friendly and energy-efficient appliances. All our gas water heaters, for example, have received approval from Hong Kong’s Gas Authority to carry energy efficiency labels.

In 2011, we launched our Towngas smartphone app supporting different operating systems which enables users to keep track of their low carbon activities via a low carbon action diary.

We sold more than 2,000 Mia Cucina units which offer total kitchen solutions tailored to meet individual customer requirements in a cost-efficient and environmentally friendly manner.



During the year, our self-developed “Cool Kitchen Four Treasure” series won the “Machinery and Machine Tools Design Award” in the “Hong Kong Awards for Industries”. Featuring the four most common appliances in a commercial Chinese kitchen, the appliances use heat recovery and heat transfer techniques to enhance their heating efficiencies.



## The Community

We continued our Low Carbon Action! campaign, calling on the Hong Kong community to lower carbon emissions by a million tonnes. One of the highlights was a Low-Carbon Mid-Autumn Fun event together with Low-Carbon Graffiti Lantern Workshops to encourage Hong Kong’s young people to lead a low-carbon life.

We sponsor, support and participate in many of the activities carried out by green groups in the community. These include WWF’s Earth Hour 2011, Friends of the Earth (HK)’s Tree Planting Challenge, Hong Kong Green Sense’s No Air-Con Night, the Conservancy Association’s Green Leader’s Bloc as well as Green Power’s World Environmental Day – Let’s Go Low Carbon campaign.

# Ensuring Better Health and Safety



Our Health, Safety and Environment Policy aims to ensure that our operations pose no risk whatsoever to the health, well-being and safety of our employees, contractors, customers and the public-at-large.

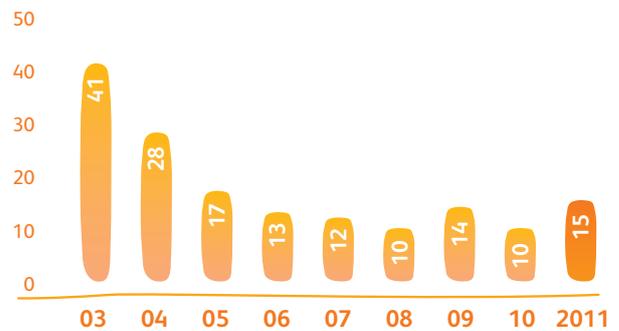
## Network Safety

With a rigorous schedule of inspections for our pipeline network in Hong Kong, we carried out 167,053 inspections at 16,533 sites and surveying over 7,000 km of pipelines in 2011.

On the mainland, we extended our “Year of Safe Production” campaign, which analyses every aspect of a business to identify risk areas and establish Key Performance Indicators, to Shandong province in 2011.

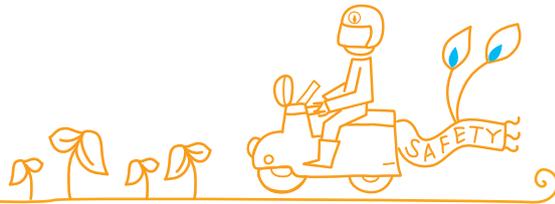
This commitment to safety won our business in Xinmi, Henan “Safety Production Model Company” award. Dalian Changxing and Shandong Jihua also received “Building up of a Safety Culture Model Company” and “Work Safety Pioneer Company” awards respectively.

## Number of Third Party Damage Incidents



## Leakage and Pipeline Surveys

Type of Pipeline	Frequency of Leakage Surveys
All high pressure and intermediate pressure mains	At least once a year
Medium pressure ductile iron pipes or all galvanised iron pipes	At least six times a year
Low pressure ductile iron pipes	At least three times a year
Polyethylene or steel pipes over or enclosed within structures	At least twice a year
Others	At least once a year



## Our Safety Practices

- Meeting all relevant Health and Safety legislation requirements
- Benchmarking against the highest standards of health and safety
- General Manager Monthly Safety Inspection programme
- Safety Inspections by Group Managing Director
- Safety Teams report directly to General Managers
- Comprehensive Safety Inspections and Safety Audits
- Safety Training
- Emergency Drills and Table-top Exercises
- Safety Promotions and Incentives



“Seeking to achieve higher standards and benchmarking themselves against the highest international standards of health and safety, Towngas has worked hard to achieve its designation as an International Safe Workplace under the framework of the World Health Organisation’s Safe Community Programme.”

**Tang Wah Shing**  
Executive Director  
Occupational Safety and Health Council



## Contractor and Employee Safety

During the year, we became the first utility to receive our designation as an International Safe Workplace (ISWP) under the framework of the World Health Organisation’s Safety Community.



We achieved the lowest accident rate in our history in Hong Kong with the figure falling from 16 in 2010 to 10 in 2011. There were no serious injuries.

## Customer Safety

The backbone of our customer safety activities consists of our regular safety inspections to customer homes, helping to identify problems and prevent the possibility of accidents.

Our diverse range of home appliances also contribute to home safety as we offer safe, convenient and energy efficient products with professional installation, warranties and after sales services.

A wide range of publicity materials, promotional items, exhibitions, visits, talks and special community events also help to take the safety message into the community.



# Corporate Social Responsibilities



## Caring for Our People

Ensuring the well-being of our employees, we offer a comprehensive package of benefits together with learning and development. Our Sports and Recreation Club also offers a comprehensive range of sports, social and recreational events to provide a positive and healthy work-life balance. In 2011, 10,210 employees and their families took part in these programmes in Hong Kong.

As part of our 150th Anniversary celebrations, we launched our Wenxin programme to thank our employees for their services over the years and to gain their greater involvement in our Towngas family. Wenxin translates into “warmth and care” in English.

## Awards Received

- The American Society for Training and Development’s (ASTD) BEST award for our well-established corporate culture and employee development programmes in mainland China. ASTD is one of the world’s most well-known associations dedicated to workplace learning and the development of professionals.

- The “Distinguished Family Friendly Award”, the Hong Kong Family Council.
- The 2010 Human Resources Management Pioneer Company award, the Institute of Human Resources Management in Jilin City.

## Training and Development

Responsible for all our Technical Training, Professional Qualification and Superior Quality Service Functions, our Towngas Engineering Academy completed 83,208 hours of training in 2011.

Our highly successful Graduate Trainee Scheme received an award from the Hong Kong General Chamber of Commerce during the year. Set to celebrate its 30th anniversary in 2012, 10 new graduates were selected to join the programme in 2011.

Our Towngas Leadership Competency (TLC) and TLC+ models seek to build a pool of talent for our future management needs. TLC helps to build personal development platforms that advance core leadership competencies while TLC+ focuses on leadership development backed by the necessary financial, communication, knowledge and management skills.

Our Superior Quality Service Scheme aims to improve quality and drive performance throughout our operations. In 2011, 693 employees in 95 teams in Hong Kong completed 71 projects saving HK\$27.7 million. On the mainland, some 7,059 team members completed 563 projects with cost savings of over RMB 78.04 million.

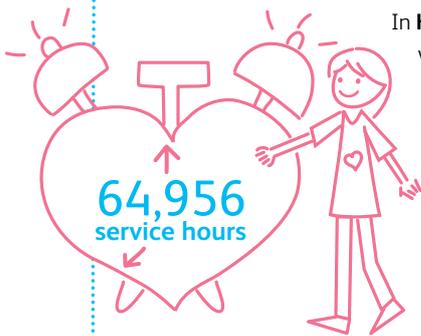
**“In their Igniting Bright Futures programme, Towngas not only provides Hong Kong’s young people with working experience, it also provides them with mentors to inspire and teach them good working skills and a positive attitude. These mentors are patient, enthusiastic and caring. This is truly a wonderful programme that provides these young people with better career paths.”**

**Chan Chi Ho, Emmanuel**  
Social work supervisor, Crisis Centre for Boys’, Youth Outreach

## Our Community Service Achievements in 2011 (Hong Kong)

Corporate support through active participation, donation or in-kind sponsorship (Number of programmes)	89
Number of employees participating in the Company's voluntary services	1,215
Number of Towngas Customer Volunteer Team members	138
Number of voluntary activities in which Towngas volunteers participated	238
Number of voluntary service hours (including employees and customers)	64,956
Number of people benefiting from our services	380,450
Number of rice dumplings made	230,000
Number of mooncakes made	100,000
Number of soup servings distributed	38,838
Number of children attending 'Cooking for Fun' English classes	470
Number of households benefiting from Towngas Concession Schemes (all schemes)	47,000

### Reaching Out to Our Communities



In **Hong Kong**... the number of volunteer service hours increased an encouraging 33% rising from a total of 48,831 hours in 2010 to 64,956 hours in 2011. This won us the championship in the Social Welfare Department's "Highest Service Hour Award 2010, Private Organisations – Best Customer Participation" for the fourth year running.

A highlight was our "Cook For Love" programme which promotes harmonious relations in single-parent families. "Family Volunteer Teams" work with participant families, taking part in cooking lessons and other activities to create happier and more harmonious homes.

On the **mainland**...over 70% of our mainland businesses have established volunteer teams, delivering a total of 151,873 service hours, benefitting 366,194 people in 2011.

Over 90 companies in 17 provinces participated in our Rice Dumplings for the Community initiative on the mainland. Working together with the BEA Charity Fund, Towngas China also organised a "Rice Dumplings for the Community" competition in Sichuan province.



### Our Support to Social Enterprises

Operated in partnership with the Tung Wah Group of Hospitals, CookEasy creates employment opportunities for people with disabilities, with the provision of a pre-prepared food pack service based on "healthy-diet" recipes designed by our Towngas Cooking Centre. The enterprise won Next Magazine's CSE Social Service Award in 2010 and the Home Affairs Bureau's "Outstanding Friends of Social Enterprise" award in 2011.

We use cleaning services provided by social enterprises in our offices in Hong Kong. We also encourage our existing contractors to employ disabled employees wherever possible.

Igniting Bright Futures operates in conjunction with our Flame restaurant in Tsim Sha Tsui, training disadvantaged young people to become professional chefs under the mentorship of our experienced staff in the restaurant.

The Book Donation with Love and Care Campaign, which provides "book corners" for schools in the Sichuan region has now expanded to schools in 10 different provinces. We established a further 10 "book corners" during the year, leading to the opening of our 20th facility in Henan province.

Under the Shanghai Soong Ching Ling Foundation – Bank of East Asia Charity Fund's Firefly Scheme, we helped to establish a further "Firefly Playground" in 2011.

We won "The Enterprise with Outstanding Community Service in China" and "Most Influential Enterprise in Corporate Social Responsibility" awards. Towngas China and Hua Yan Water also received "China Best Corporate Citizenship" awards during the year.

# Review of 2011 Targets



Targets	Progress
<b>Operation and Management</b>	
To implement a risk register programme in ECO's processing plants.	Job completed with the implementation of a risk register system in ECO's processing plants.
To start conducting environmental audits in HCIL and TCCL joint ventures.	A total of 44 environmental audits were conducted in 2011.
<b>Safety</b>	
To be certified as an International Safe Workplace under the framework of the World Health Organisation's Safe Community Programme.	The Hong Kong and China Gas Company Limited was certified as an International Safe Workplace.
To develop an electronic safety information system.	An electronic safety information system was established.
To develop an emergency management system for new energy businesses.	Guidelines for the establishment of emergency plans for new energy businesses were issued in July 2011. An intranet-based incident reporting system was also developed.
<b>The Environment</b>	
To reduce natural gas consumption by using waste heat from the phase II carbonate reboiler.	A waste heat recovery system was installed at the Tai Po Plant. This system reduced natural gas consumption of the hot water boiler by 233,151 cubic metres in four months.
To achieve a Wastewi\$e label for 10 consecutive cycles.	We obtained our Wastewi\$e Label in 10 consecutive cycles, demonstrating our high commitment to environmental protection.
To develop environmental key performance indicators.	20 environmental key performance indicators were developed for different departments.
To launch afforestation schemes in mainland China.	More than 90 companies participated in the Month of Tree Planting and Carbon Reduction Programme.
<b>Employees</b>	
To achieve a 3% increase in the required professional qualifications of staff in designated positions over 2010.	Engineers in Towngas are striving for professional excellence, achieving a 5.5% increase in the required professional qualification of engineers over 2010.
To revamp the Performance Management System for general staff.	Revamped the Performance Management System for general staff and managers. The System provides a framework of planned goals, standards and competence requirements to raise performance standards through a positive and constructive structured dialogue between appraisers and appraisees.
To launch Corporate TLC+ Talent Acceleration Programme for the Group.	19 executives were chosen to participate in the 2011 TLC+ programme, which provides fast track personal growth as well as development opportunities in the building of a talent pipeline for the Group.
To identify and implement company-wide and department action plans based on the results of the Employee Engagement Survey held to make Towngas a better place to work.	Various action plans were identified and are being implemented. These include the revamp of the Performance Management System, the enhancement of medical benefits, the launch of the Employee Assistance Programme as well as the "Leading Others" initiative.
To revamp the company's internal website as a platform for internal communication and the sharing of intellectual capital.	A revamped corporate portal was launched internally to provide a user-friendly and centralised platform for our employees offering easy access to corporate information and the sharing of intellectual capital.
<b>The Community</b>	
To enhance our community service support for the younger generation.	A total of 470 students attended our Cooking For Fun English workshop, a voluntary programme targetted at under-privileged primary students.

# Future Targets and Initiatives

2012 Targets	Medium Term Targets (Two to Three Years)
<b>Safety</b>	
To establish a behavior based safety programme.	To achieve the certification of all managerial staff in our mainland joint ventures' Risk Management Department as certified safety engineers.
To establish a pointing and calling programme.	To further consolidate our safety and risk management systems in our Hong Kong and mainland operations.
To establish a probationary licence programme.	To ensure competence in OSH standards and practices after probation and to provide extra care to all new staff.
To implement a general manager monthly safety inspection programme in ECO's mainland CNG/LNG filling stations.	
To implement a safety audit system in ECO's coal mines.	
To enhance safety awareness and our safety culture through the organisation of workshops and competitions in our city-gas and water ventures.	
<b>The Environment</b>	
To calculate the carbon footprint for a typical gas appliance product.	To continue to explore new carbon management initiatives.
To reduce town gas consumption of water heaters in our Tai Po plant by using waste heat from the phase II carbonate reboilers.	To investigate the feasibility of using landfill gas from other landfills in Hong Kong.
To achieve a Wastewi\$e label for 11 consecutive cycles.	To study the feasibility of collecting rainwater at the naphtha tank farm area in Tai Po Plant for reuse.
To save electricity by introducing solar power supply to the LED display board at our Tai Po production plant.	
To complete modification work at the Ma Tau Kok production plant and associated pipeline construction projects to enable the partial replacement of feedstock with natural gas.	
To organise a carbon reduction competition among our mainland companies.	
To continue to conduct environmental audits in our city-gas and water ventures.	
<b>Employees</b>	
To re-launch the revamped Performance Management System for managers and general staff.	To establish a strong performance culture and equip supervisors with coaching skills for continuous improvement in our workforce performance.
To re-launch our Vision, Mission and Values (VMV) to deepen employee understanding so that they can better embrace and embody these values.	To build a pool of future leaders both in our Hong Kong and mainland operations, while also fostering leadership capabilities within these operations.
To increase the number of channels and platforms for effective internal communications.	To build a highly engaged workforce to drive our business performance and further enhance our employer branding.
To beef up the content and functionality of our corporate portal for knowledge management and interactive communication.	To leverage the internal website to provide more structured documentation and knowledge management, reduce the use of paper and enhance interactive communication.
<b>The Community</b>	
To continue with our family based 18-month Cook For Love voluntary programme with different activities including cooking classes, adventure games and team-building workshops.	To explore new initiatives to help under-privileged low-income groups and to support social enterprises.
To distribute a grand total of 1,500,000 rice dumplings, 1,080,000 mooncakes and 255,000 servings of hot soup by the end of 2012.	To distribute a grand total of 2,000,000 rice dumplings, 1,400,000 mooncakes and 300,000 servings of hot soup by the end of 2014.

# Key Statistics

	Unit	2011	2010	2009	2008	2007
<b>Business</b>						
<b>Operations (Company)</b>						
Customers as at 31 December	Number	1,750,553	1,724,316	1,698,723	1,672,084	1,646,492
Customers per km of mains	Number	538	535	531	526	526
Employees as at 31 December	Number	1,938	1,923	1,908	1,922	1,919
Average turnover of workforce (Hong Kong gas business only)	%	4.6	4.5	3.3	5.6	6.8
Average turnover of workforce (all Hong Kong employees)	%	6 <sup>1</sup>	5.5 <sup>1</sup>	5.4	7.72	7.68
Installed capacity (Hong Kong town gas production)	Thousand cubic metres per day	12,260	12,260	12,260	12,260	12,260
Town gas sales (Hong Kong)	Million MJ	28,147	27,578	27,274	27,583	27,041
<b>Financial</b>						
Revenue	HK\$ million	22,427	19,375	12,352	12,352	14,226
Manpower costs	HK\$ million	1,700	1,466.6	1,120.2	1,006.2	993
Taxation	HK\$ million	1,344	1,038.8	747	562.6	974.3
Dividends	HK\$ million	4,147.8	2,513.8	2,285	2,333	2,121
<b>Safety and Social</b>						
<b>Safety (Hong Kong)</b>						
Urgent reports – total	Number	17,192	16,077	16,947	18,239	17,976
General incidents	Number	16,799	15,736	16,567	17,745	17,463
Gas related incidents	Number	393	341	380	494	513
Major gas emergencies (including suicide cases)	Number	6	4	10	6	13
Incidents involving third party damage to underground pipes	Number	15	10	14	10	12
Average response time for gas incidents	Minutes	19.28	19.22	20.1	19.9	20.4
Third party excavation sites inspected	Number	16,533	18,400	17,496	15,541	14,665
Regular safety inspections – home visits	Number	1,177,367	1,110,744	1,177,170	1,229,128	900,634
Community safety exhibitions	Number	13	12	12	12	12

	Unit	2011	2010	2009	2008	2007
Community safety talks	Number	5	6	11	2	16
In-house safety training	Number of man-hours	14,047	19,075	18,031	21,597	19,819
External staff safety training	Number of man-hours	7,071	8,002	7,626	5,580	5,199
<b>Occupational Health and Safety</b>						
Accidents – all industrial injuries <sup>2,3</sup> (Accident Frequency Rate <sup>2,3</sup> )	Number (Number of accidents per 100,000 man-hours)	10 (0.19)	16 (0.31)	14 (0.27)	12 (0.24)	16 (0.32)
Reportable accidents <sup>2,3</sup> (Accident Incidence Rate <sup>2,3</sup> )	Number (Number of reportable accidents per 1,000 employees)	9 (2.9)	14 (5.7)	9 (3.7)	10 (4.1)	13 (5.4)
Traffic Accident Injury Rate <sup>3,4</sup>	Number of traffic accident injuries per 100 vehicles	3.11	3.71	3.05	4.44	1.81
Industrial Injury Man-days lost	Number of man-days	160	430	412	308	659
<b>Fatal accidents</b>						
• Hong Kong employees	Number	0	0	0	0	0
• HCIL, TCCL and JV employees <sup>5</sup>	Number	0	0	0	0	1
<b>Customer Service (Hong Kong)</b>						
Customer compliments	Number	5,658	5,532	5,554	4,100	4,069
Customer complaints	Number	10	9	17	16	17
<b>Community Involvement (Hong Kong)</b>						
Employees participating in voluntary services	Number	1,215	1,112	1,230	1,040	953
Members of Towngas Customer Volunteer Team	Number	138	138	133	133	100
Voluntary service hours (including employees and customers)	Number of hours	64,956	48,815	44,939	38,852	38,935



	Unit	2011	2010	2009	2008	2007
<b>Environmental</b>						
<b>Resource Use / Conservation (Hong Kong)</b>						
Naphtha saved <sup>#</sup>	Metric tonnes	13,996	13,657	11,234	9,960	3,430
Town gas saved <sup>#</sup>	Cubic metres	3,528,364	4,089,133	3,626,266	3,849,776	3,818,419
Water saved <sup>#</sup>	Cubic metres	177,463	224,358	213,971	220,363	214,075
Photovoltaic (PV) panels installed	Square metres	75	75	75	75	75
Grid electricity saved through PV panels	kWh	86,600	86,600	86,900	86,600	86,200
Electricity saved (North Point headquarters and Ma Tau Kok office) <sup>#</sup>	kWh	4,232,725	4,142,825	3,993,105	3,763,818	3,737,070
CO <sub>2</sub> emissions avoided equivalent to electricity saved (North Point headquarters and Ma Tau Kok office) <sup>*</sup>	Metric tonnes	2,963	2,900	2,795	2,635	2,616
Landfill gas utilisation as heating fuel in gas production	Cubic metres from Shuen Wan	2,364,000	2,761,000	2,361,000	2,528,000	2,716,366
	from NENT SNG	20,789,390	19,925,269	16,065,375	14,381,262	5,390,254 (since May 2007)
<b>Air Emissions (Hong Kong)</b>						
CO <sub>2</sub>	Daily average in metric tonnes	913	896	896	929	909
	(Metric tonnes per million MJ of town gas)	(11.91)	(11.96)	(12.13)	(12.35)	(12.33)
NO <sub>x</sub>	Daily average in kg	356	344	324	342	345
	(Kg per million MJ of town gas)	(4.65)	(4.59)	(4.39)	(4.55)	(4.68)
SO <sub>x</sub>	Daily average in kg	1.5	1.9	2.5	3.6	3.1
	(Kg per million MJ of town gas)	(0.02)	(0.03)	(0.03)	(0.048)	(0.04)
Greenhouse gases <sup>6</sup> (production equipment)	Metric tonnes in terms of CO <sub>2</sub> equivalent	362,307	355,958	357,043	370,647	360,388

	Unit	2011	2010	2009	2008	2007
<b>Aqueous Emissions (Hong Kong)</b>						
Wastewater	Daily average in cubic metres	447	351	404	493	515
	(Cubic metres per million MJ of town gas)	(5.84)	(4.68)	(5.47)	(6.55)	(6.98)
<b>Waste Avoidance/Recycling (Hong Kong)</b>						
Chemical waste generated	Daily average in kg	51	178	64	185	27
	(Kg per million MJ of town gas)	(0.67)	(2.37)	(0.87)	(2.45)	(0.37)
Spent catalyst collected for metal recovery	Metric tonnes	41.1	36	12	114	23
Metal chemical drums reused	Number	216	161	211	201	219
Plastic chemical drums reused	Number	1,064	818	882	878	660
Spent lube oil recycled	Metric tonnes	16.1	15.17	3.41	5.85	3.91
Scrap metal recycled						
• Old gas appliances	Metric tonnes	840	989	930	891	1,091
• From the construction and maintenance of plant and pipelines	Metric tonnes	11	47	125	116	45
PE pipe recycled	Metric tonnes	27	11.66	10.9	10.5	1
Abandoned aquaknect hoses	Number	9,084	17,221	23,024	26,012	–
Abandoned service pipes and fittings	Kg	2,206	3,509	10,715	6,434	–
Gas appliances polyfoam packaging materials avoided	Metric tonnes	2.19	4.33	4.12	5.04	4.45
<b>Awareness Raising and Training</b>						
In-house environmental training (Hong Kong)	Number of man-hours	549	4,008	3,036	967	1,094
External environmental training (Hong Kong)	Number of man-hours	255	773	403	890	1,027
Environmental training for JVs	Number of attendants	213	135	168	48	30

## Remarks:

- 1 Employees from The Hong Kong and China Gas Company Limited, Towngas Avenue, U-Tech Engineering Company Limited, Towngas Telecommunications Company Limited, TSC Systems HK Limited, Manufacturing Business, Towngas International Company Limited, Towngas China Company Limited, ECO Environmental Investments Company Limited, ECO Aviation Fuel Services Limited are included.
  - 2 Contractor and joint venture employees are excluded.
  - 3 A revised definition for accidents was adopted in 2005.
  - 4 Only Towngas employees in Hong Kong are included.
  - 5 Towngas China Company Limited's employees are not included before 2008.
  - 6 Emissions were revised due to a change in calculation method according to EMSD/EPD accounting guidelines. Recalculated values may be slightly different from figures provided in previous company publications.
- # These figures are the savings achieved compared with the data of a reference year before implementing the respective environmental initiative
- \* The default value to account for the GHG Emission Factor of electricity sold to customers in Hong Kong is 0.7kg/kwh. Reference: Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings of Commercial, Residential or Institutional Purposes in Hong Kong (by EPD & EMSD)



## Give Us Your Feedback!

This booklet provides a brief overview of our key sustainability activities in 2011. If you would like any further information, our full Towngas Sustainability Report 2011 is available online at [www.towngas.com](http://www.towngas.com).

If you have any questions or feedback, we would very much like to hear from you. Please feel free to contact us :

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