

2013

Sustainability
Summary Report



煤氣
Towngas

Greening up your life

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

In Achieving Sustainability, We...

- Maintain the highest standards of corporate governance.
- Follow strict internal Codes 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.
- Take the lead in our industry on all of these imperatives.
- Recognise the importance of our employees and our responsibility to keep them safe, engaged and equipped to undertake our mission.

Major Corporate Awards and Recognitions in 2013

Overall ranking of 878th and local ranking of 24th in "Forbes Global 2000 Leading Companies" by Forbes

Innovation and Creativity Grand Award – Hong Kong Awards for Industries 2013
by Hong Kong General Chamber of Commerce

Constituent company of the Hang Seng Corporate Sustainability Index series
by Hang Seng Indexes

Excellence in Practice Citation 2012
by American Society for Training and Development

United Nations' World Summit Award 2012 – Mobile Content in the "m-Government and Participation" by United Nations' World Summit

Green Enterprise Awards 2013
by CAPITAL Entrepreneur

HSE Policy

We strive to:

Ensure health and safety at work, and to minimise HSE and climate change risks

Achieve a zero accident rate as well as a high standard of environmental care through continuous improvement

Eliminate HSE hazards in our operations, applications and services

Carry out necessary HSE assessments for all major projects and to conduct regular HSE audits in our operations

Promote HSE awareness and consciousness among employees, contractors and business associates through education and training

Achieve full compliance with all relevant legislation

Use environmentally-friendly materials and technologies, promote economic recycling of materials and conserve resources

As a major energy supplier, we strive to safely and reliably supply gas to our customers while working to preserve, protect and improve our environment. Sustainable development, full compliance with environmental laws and regulations and ongoing commitments to reducing waste and carbon emissions are indispensable to our corporate DNA. The Company's environmental management system (EMS) puts care for the environment at the heart of our daily operations.

CLEAN ENERGY

Natural Gas

Our use of natural gas in both Hong Kong and mainland China significantly reduces emissions of pollutants, resulting in both improved air quality and reduced climate change impacts. The Chinese government's promotion of natural gas as the leading clean fuel of the future will magnify our contribution to a greener environment throughout the country as we expand our business portfolio.

Vehicular Clean Fuel

Liquefied petroleum gas (LPG) reduces the emission of suspended particulates and helps improve air quality in Hong Kong. In response to mainland Government's initiative to deal with issue on air pollution, we will maintain our momentum to develop more stations in the future.

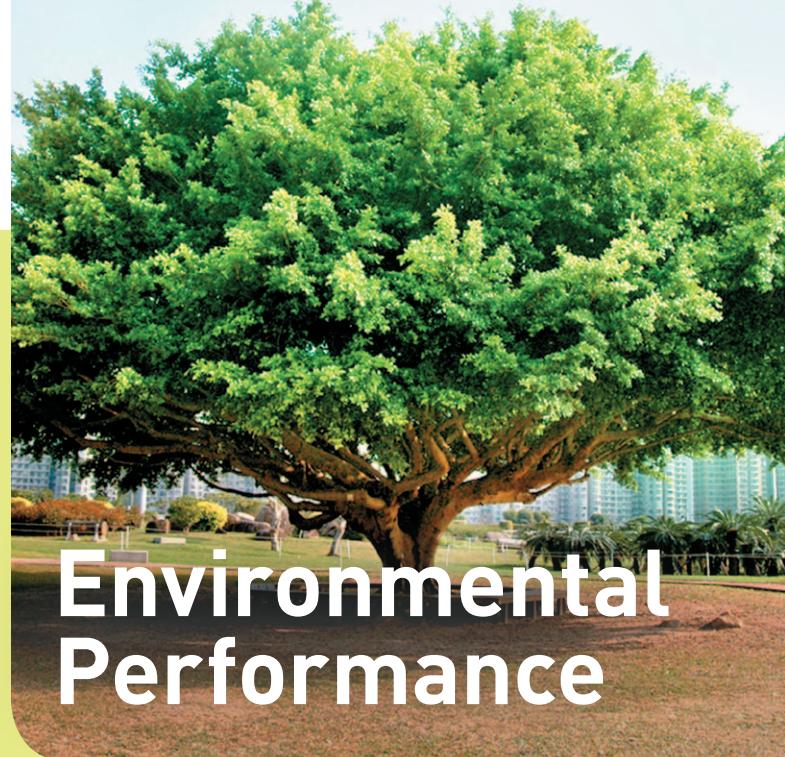


25 Filling Stations

Turning Waste into Energy

Landfill Gas

Our North East New Territories (NENT) landfill gas utilisation project is one of the largest examples of "green" energy recovery and re-use in the world. Landfill gas now accounts for about 2% of our total production fuel, and this will increase once negotiations regarding the utilisation of landfill gas from the South East New Territories (SENT) landfill site are complete.



Environmental Performance

Coalbed Methane Activities

We constructed and operate China's first large-scale coal bed methane (CBM) liquefaction and utilisation plant, in Shanxi province. The extraction and liquefaction of CBM turns it into a safe, environmentally-friendly, clean fuel with high energy density, whilst also providing a safer working environment for miners.

Alternative and Non-conventional Energy

Clean Coal Energy

Capitalising on the vast stores of coal in China, we have been developing coal gasification techniques to create syngas, which can then be further synthesised into methanol. The process is free from SOx and NOx emissions, and any CO₂ generated is captured and stored for other uses. Our methanol production plant in Inner Mongolia finished trial production in late 2013. We have also begun construction on a new project in Inner Mongolia to upgrade methanol into a high-quality gasoline substitute.



Green Diesel

We have completed testing for a new process (patent still pending) for upgrading plant fatty-acids (palm oil residue and used cooking oil) into green-diesel-type chemical products. Our first project, with an annual capacity to upgrade 150,000 tonnes of plant fatty-acid, is located in Jiangsu province.

Coke Oven Gas

Our liquefied natural gas (LNG) operations expanded in 2013 as we began utilising coke oven gas, a by-product of the coke-making industry which can be synthesised into methane and refrigerated to a liquid state. Two facilities, in Jiangsu and Shanxi provinces, will go operational in 2015.

New Energy Developments

Our new-energy research and development centre continues to develop innovative technologies for the production of clean fuels and chemicals. We believe considerable environmental and economic benefits resulting from investment in innovation lie ahead.

REDUCING OUR ENVIRONMENTAL FOOTPRINT

Through our Carbon Audit programme, we are committed to a Carbon Reduction Charter. The programme allows us to calculate carbon emissions during the gas production process together with carbon inventory accounting procedures.

Carbon Intensity (Hong Kong)

CO₂ emission per unit of town gas

2005

0.79kg



2013

0.62kg

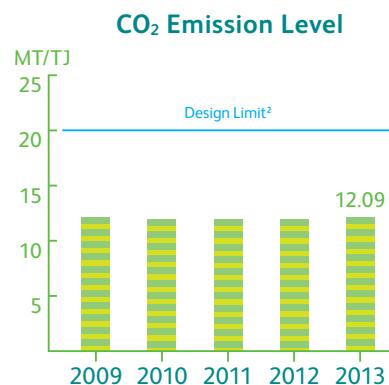
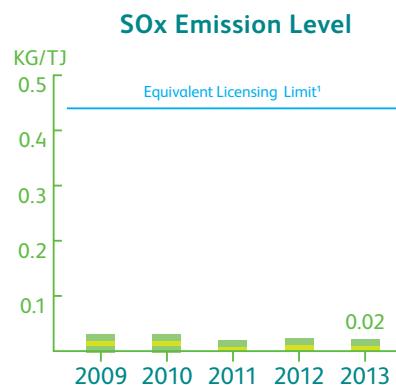
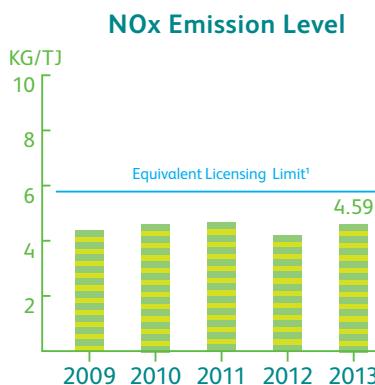
Our research has shown that actual usage of a typical gas cooking appliance accounts for more than 90% of its carbon footprint. We now provide our customers with useful gas-saving tips based on our findings.

We now also offer a wide range of consumer appliances that come with various energy-saving and eco-friendly features. Some models improve energy efficiency by almost 6% against more conventional models.

In the commercial and industrial sectors, the new flue ducts we have developed for our wok ranges and stockpots mean that flue gas in commercial kitchens can be more effectively extracted, which cuts down on energy use for ventilation.



Emission Levels of Gas Production Plants (Hong Kong)



1. "Equivalent Licensing Limit" (kg/TJ OR m³/TJ) = "Weighted average of actual licensing limit" (kg/hr or m³/hr) ÷ production rate of the plants for the year 2013 (TJ/hr).

2. 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.

Saving Electricity

Upgrading the rooftop chiller systems at our Hong Kong headquarters to a more environmentally-friendly, water-cooled model.



Paper Saved
10.83 tonnes annually

Saving Paper

Becoming a paperless operation and encouraging our customers to make the transition to e-Billing.

Saving Water

Installing a rainwater collecting system at our Tai Po gas production plant.



Our Carbon Reduction Competition anchors our efforts to reduce our carbon footprint in mainland China. In 2013 the competition received 23 submissions, resulting in the saving of 19,400 tonnes of carbon emissions a year – the equivalent of the total CO₂ absorbed by 840,000 trees. The winning entry was from the Group's Inner Mongolia Coal Chemical Technology Company Limited, which suggested installing a hydro-turbine in its recycled water cooling tower to replace the old electrical motor driven system.

847 tonnes of CO₂ emissions saved
every year by our 2013 Carbon Reduction Competition winner.

Saving Energy Costs
RMB **400,000** annually



Recycling



Over 80 KG

Our latest target was to collect 50 kilograms of old "red packets" for reuse.

Wastewater and Hazardous Waste



The reverse osmosis water treatment facility has saved more than 127,000 cubic metres of effluent water compared to the previous facility.

GREEN ACTIVITIES 2013 – SPONSORSHIP AND PARTICIPATION



In 2013, we continued to participate in and support a series of initiatives organised by green groups in Hong Kong, including Green Power's Waste to Energy study programme; WWF's annual Earth Hour initiative; Green Sense's No Air-Con Night; the Green Council's Hong Kong Green Day; and many more.

For a ninth consecutive year, Towngas teams took part in the Annual Tree Planting Challenge organised by Friends of the Earth (HK). In partnership with our subsidiaries, the Group also unveiled the Towngas China Green Journey Programme to reduce smog and together we planted over 20,000 trees, covering an area of over 50,000 square metres, on the mainland.



Safety Performance

Our Health, Safety and Environment (HSE) management system aims to ensure that our operations pose no risk whatsoever to the health, well-being or safety of our employees, contractors, customers and the public at large. We draw upon our leadership position in the industry to exemplify the highest standards of safety and professionalism in the global gas business.

Customer Safety and Supply Reliability

We carry out a rigorous schedule of inspections of our pipeline network in Hong Kong. In 2013, we completed 174,048 inspections at 13,675 sites, surveying approximately 7,000 kilometres of pipelines.

The safe day-to-day operation of our network also depends on our sophisticated Supervisory Control and Data Acquisition (SCADA) System. SCADA monitors and controls over 3,500 points in our network and across all our strategic pressure-regulating stations, and improves our ability to track down and address emergencies quickly and effectively.

Regular safety inspections are the backbone of our efforts to ensure customer safety. Towngas offers both on-demand maintenance services and regular safety inspections (RSIs) in domestic premises every 18 months in Hong Kong and every 12 months on the mainland.

Supply Reliability
of our networks in
Hong Kong

99.99%

We check both gas appliances and pipe conditions and encourage customers with faulty or older appliances to upgrade to safer models. Over the years, this has resulted in a steady decline in the number of customer-related emergency reports.

In addition, we have focused on encouraging our customers to replace old gas pipes when renovating their properties. This has been a highly successful campaign, with the level of pipe replacement growing in 2013 by 33.8% against 2012.

Leakage and Pipeline Surveys

Type of Pipeline

Frequency of Leakage Survey

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 (PE) or steel pipes over or enclosed within structures	.....	At least twice a year
Others	.....	At least once a year

Occupational Health and Safety

We continue to raise our standards of performance in our Occupational Health and Safety (OHS) activities through strong leadership, training and educational programmes that actively reinforce a safety culture. We empower our people to take responsibility for their safety and the safety of those around them.

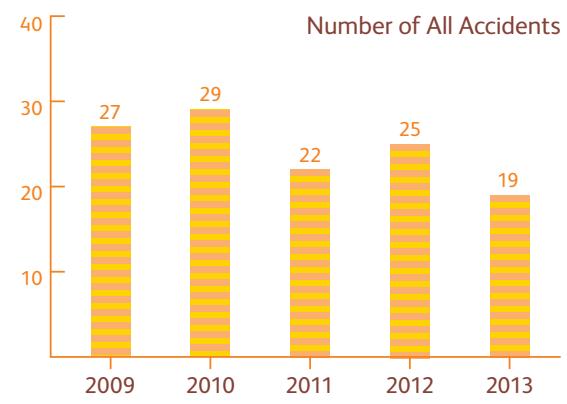


In 2013, we staged a number of joint fire safety exercises with the fire services department, which was helpful in fine-tuning our emergency response protocols. We also promoted our core OHS messages to more than 2,500 employees and contractors with a Health, Safety and Environment (HSE) month. We also launched a "Pointing and Calling" pilot programme in 2013 at production plants and ECO gas-filling stations in Hong Kong.

Towngas Health, Safety, Environment and Caring Programme

In March 2013, we launched our "the Caring Programme". Aimed at reducing the accident rates of new employees, it strengthens their safety awareness by providing up-to-date and relevant HSE training, in addition to mentoring from senior colleagues.

Industrial Safety Performance of Employees



Number of Accidents
per 100,000 working hours fell
from 0.31 to 0.24 in 2013

0.31
0.24

Our Internal Safety Awareness Enhancement Programmes

Enhancement training on risk assessment techniques and skills

Seminar on corporate emergencies

Preparedness for influenza pandemics

OHS talk on prolonged display screen equipment users

Fire and safety forum

HSE and asset management quiz

Fire and safety competitions

OHSAS 18001 implementation and internal auditing

Transport safety quiz

Refresher training course on handling bomb threats without indicating exact location(s)

Health, Safety and Environmental Day

Health, Safety and Environmental Bulletin



Social Performance

As a sustainable business we continue to support, participate in, invest in and sponsor social and development programmes that reach out to our employees, communities and business partners. Our goals are to show that we care, to give back and to lend a helping hand, particularly to the vulnerable and needy in our society. In doing so, we hope to be regarded as a business that can be trusted, loved and respected within the community.

Our People

We recognise our people are our most important asset – they are indispensable to our ongoing success. It is therefore an absolute priority that we cultivate, grow and retain a competent, committed and professional team of employees who are passionate, involved and driven to give their all in everything that they do.



Healthy Living Every Day

In 2013, "Healthy Living Every Day" was the campaign theme of our employee wellness programme. This involved holding health workshops and seminars; promoting regular exercise through competitions including a Distance Run and a Staircase Walking competition; a Health Day, where we offered staff free basic health checks; and a Serene Oasis Tour, which allowed employees to explore gardening as a means of stress therapy. Free pedometers were also distributed to allow employees to monitor their walking habits and exercise levels.



Employee Relations

- Our equal opportunities policy seeks to maintain a pleasant and harmonious working environment that is free from any discrimination related to sex, age, race, religion, marital status, family status, or any health disabilities or conditions.
- We comply with and respect all legal requirements with regards to freedom of association, union membership and/or collective bargaining in the countries we operate.
- The Company is committed to ensuring competitive remuneration is offered to our employees at all levels in order to attract and retain talents, as well as to raise standards of performance. Through our annual performance appraisal and pay review exercise, employees' compensation levels are benchmarked against external compensation data obtained by pay survey consultants.

Training and Education

2013 Average Training Hours

 12.3 Hours Male Employee	 12.6 Hours Female Employee
 10.5 Hours General Employee	 29.2 Hours Managerial Employee

We invest heavily in the continued learning and development of our people by providing a wide range of training in management, leadership and technical skills – both internally and by offering subsidies for external training opportunities.

2013 Employee Performance and Career Development Reviews



Internal programmes operated by Towngas include a highly successful Graduate Trainee (GT) Programme, and the Towngas Leadership Competency Acceleration Development Programme, which identifies and develops young employees with significant potential to be future leaders. Meanwhile, a total of 194 senior Towngas managers and executives attended Executive Development Programmes (EDPs) – leadership courses run in conjunction with top-tier universities – in mainland China throughout 2013.

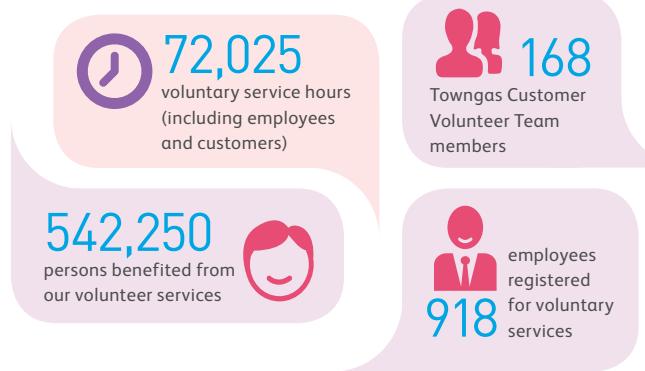
Customer Service

Treating our customers fairly and providing high-quality services is essential to earning and maintaining their trust. In order to assess customer satisfaction, we employ a third-party company to carry out monthly customer satisfaction surveys.



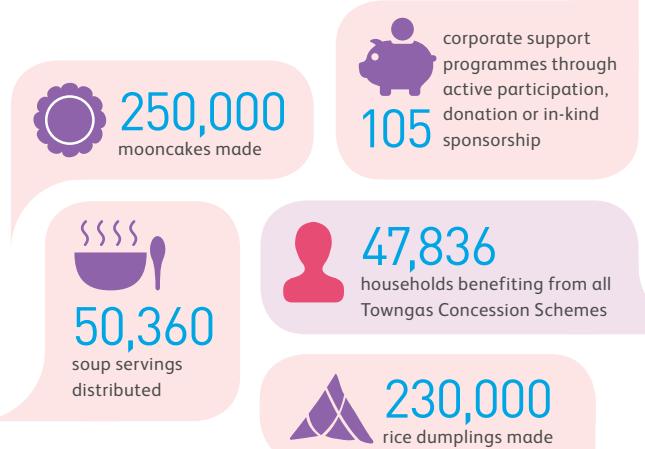
At Towngas, we strive to give our customers “Caring, Competent and Efficient Service”, as promised in our Mission Statement. In 2013 we formally launched a Courtesy programme intended to strengthen awareness of courtesy among employees and sustain a courteous culture at Towngas. The programme focused on three elements of courtesy – etiquette, politeness and caring (“禮儀”, “禮貌”, “禮讓” in Chinese).

Community Services



Initially focused on providing help and assistance to the elderly, our community programmes have over the years widened to also help the financially underprivileged, new immigrant families, people with physical or mental impairments, and others.

Among our key community activities are the Towngas Warmth and Care Fresh Food Aid Programmes, which were launched in 2012 in partnership with The Salvation Army, the Hong Kong Council of Social Service and CookEasy. In 2013, we distributed 15,600 nutritious fresh food packs to underprivileged single-parent families in Tung Chung and Kwai Chung, with deliveries made twice a week throughout the year. The programme's success led to its extension in 2014 to help other single-parent and low-income households in Sham Shui Po and Kowloon City.



In March 2013, we launched the Gentle Breeze Movement as an umbrella for all of our community projects in mainland China. During the year, we upgraded the facilities of seven schools in Jiangxi and Anhui provinces, including donating more than \$200,000 to establish a library at a primary school in Maanshan City, Anhui Province. In partnership with the Sichuan Youth Foundation, we provided financial assistance to enable 100 promising students from underprivileged families affected by the Ya'an earthquake in Sichuan province to attend university.

Review of 2013 Targets

Targets	Progress
The Environment	
To achieve a Wastewi\$e label for 12 consecutive cycles.	Obtained our 12th consecutive Wastewi\$e Label, demonstrating our high commitment to environmental protection.
To complete modification works at Ma Tau Kok gas production plant to enable making town gas from natural gas as feedstock and fuel.	Government approval applied in Q1 2014 and expected to commence the modification work from Q2 2014.
To save the pipe material by utilizing the redundant pipe left over from previous projects.	An additional buffer for air system using redundant pipe materials left over from previous projects was installed.
To design and commission the rainwater collecting system at naphtha tank farm for reuse.	Design of the rainwater collecting system was completed.
To reduce electricity consumption by replacement of existing chiller plants in North Point Building to more energy efficient ones.	The Phase 1 of Upgrading Central Chiller Plant was completed in mid of 2013.
To further improve the energy efficiency of our commercial gas appliances with the development of a high-efficiency stockpot.	A stockpot with flue heat recovery systems was developed, enhancing and reinforcing a cooler kitchen environment.
To promote office energy saving by implementing after work office PC shutdown scheme.	Energy management of IT infrastructure has been included as one of the responsibilities of the Environmental Working Committee.
Safety	
To organise and hold an HSE Day in order to promote safety awareness and foster a safety culture in our colleagues and contractors.	Towngas HSE Day 2013 was successfully held and its target was met.
To implement a probationary licence programme as well as an online HSE integrated self e-learning and evaluation platform in order to improve overall safety performance.	The probationary licence programme and the online HSE integrated self e-learning & evaluation platform were completed.
To implement a safety audit scoring system for ECO mainland CNG/LNG filling stations.	The safety audit system was successfully launched in 2013. A total of 7 mainland CNG/LNG filling stations completed their first safety audits.
To implement a pointing and calling programme.	The pointing and calling programme was implemented.
To review a set of 60 corporate safety procedure or guidelines to be implemented in ECO mainland JVs.	60 corporate safety procedures and guidelines were reviewed and issued.
To include the report of near-miss incidents of ECO mainland JVs in the quarterly HSE statistics reports.	The reports of near-miss incidents of ECO mainland JVs were included in the quarterly HSE statistics reports since the first quarter of 2013.
Employees	
To institutionalise a Talent Review mechanism at locomotive level to facilitate talent development and succession planning process for future business growth.	The talent review process was implemented for a few locomotives and corporate functions in phases, depending on the business development stages.
To prepare manpower plans to ensure a continuous workforce supply in order to support daily operations, business growth and maintain high standards of safety and quality.	The Company has been actively recruiting qualified individuals to support the manpower needs of different businesses.
To enhance the functionality of Human Resources Information System for better data management and streamlining of work process.	Functionality of Human Resources Information System was enhanced by capturing detailed information of employees.
To review the Corporate Code of Conduct and organise refresher workshops to all employees.	A Corporate Code of Conduct, incorporating the new whistle blowing policy and listing the principles of business conduct and ethics, was established and promoted among management staff.
To promote Employee Wellness by launching Health campaign and programmes.	Various health campaign and programmes were organised to promote healthy habits among employees, focusing in 4 areas.
Community	
To distribute a grand total of 1,800,000 rice dumplings, 1,300,000 mooncakes and 295,000 servings of hot soup by the end of 2013.	Distributed a grand total of 1,835,000 rice dumplings (since 2000), 1,360,930 mooncakes (since 2001) and 322,738 servings of hot soup up to the end of 2013.
“Farming for Fun” was organised in 2013.	The programme was started in August 2013. Our volunteers made 22 visits to the farm to learn and practise organic farming.

Future Targets and Initiatives

2014 Targets

Medium Term Targets (Two to Three Years)

Environment Performance	
To achieve a Wastewi\$e label for 13 consecutive cycles.	Renew the BEAM Plus certification for Headquarters Building.
To acquire energy labels for all models covered by the Voluntary Energy Efficiency Labelling scheme.	
To commission the natural gas system at Ma Tau Kok gas production plant to enable making town gas from natural gas as feedstock and fuel.	
To study and explore the feasibility of utilizing landfill gas from SENT landfill for other potential customers.	To continue the study on utilizing other landfill gas and biogas to save fossil fuel by using “green” energy recovery and reuse.
To install and commission the rainwater collecting system at naphtha tank farm for reuse.	Identify and explore new initiatives on Emissions Reduction.
Complete assessment of carbon footprint for various pipe laying approaches to explore.	Identify and explore new initiatives on Sustainable Use of Resources.
Disclose corporate's information on carbon footprint and share corporate's successful stories on carbon management and practices through the dedicated website developed by the Environmental Protection Department.	Upgrade corporates' ESG data management system to cater for increase demand for ESG data and information disclosure.
To organise the 5th mainland carbon reduction project competition in 2014.	
Promote gas cooking green tips to customers in leaflets and bill inserts etc.	
To save material and reduce electricity consumption by minimizing the number of Data Transit Station (DTS) installed in AMR projects.	
Launch a Pilot PC Power Management Programme.	
Complete Upgrading Central Chiller Plant Phase 2 to further reduce electricity consumption in Headquarters Building.	
To assess and ensure our domestic gas cooking appliances meet the requirement of Voluntary Energy Efficiency Labelling Scheme.	
Safety Performance	
To organise HSE Quiz and hold an HSE Month and Contractor Programme to promote safety awareness and foster safety a culture among colleagues and contractors.	To conduct a safety culture survey to measure the “Safety Culture” of employees and identify improvement opportunities on corporate safety performance.
To set up an HSE Experience Centre for workers to experience acceptable hazards.	To further promote the safety awareness and safety culture of ECO mainland JVs through education and training and experience-sharing visits.
To conduct the second round safety audit with scoring for ECO mainland CNG/LNG filling stations.	
To implement a safety audit scoring system for ECO mainland chemical business.	To achieve the certification of all managerial staff in our mainland JV's Risk Management Department as Certified Safety Engineers.
To publish a pocket size safety golden rules handbook for ECO mainland chemical business.	
Social Performance	
To strengthen leadership and management development by formalizing Towngas' own leadership programmes for different management levels, and launching the 3rd Corporate TLC programme for talent development.	To support new businesses in launching their locomotive's HIPO programmes to strengthen the Towngas Leadership Competencies of their young leaders.
	To continuously enhance the topics in corporate leadership and management development curriculum to support both business growth and development of our employees.
To implement a web-based Employee Self Service system for streamlining of work process.	To apply web-based and mobile technology to promote knowledge transfer from senior executives for knowledge management.
To promote Employee Wellness through positive thinking, happy at work campaign and programmes.	
To distribute a grand total of 2,050,000 rice dumplings, 1,560,000 mooncakes and 330,000 servings of hot soup by the end of 2014.	To distribute a grand total of 2,500,000 rice dumplings, 1,700,000 mooncakes and 380,000 servings of hot soup by the end of 2016.

Key Statistics

	Unit	2013	2012	2011	2010	2009
Business						
Operations (Company)						
Customers as at 31 December	Number	1,798,731	1,776,360	1,750,553	1,724,316	1,698,723
Employees as at 31 December (Hong Kong gas business only)	Number	1,966	1,943	1,938	1,923	1,908
Average turnover of workforce (Hong Kong gas business only)	%	5.1	4.6	4.6	4.5	3.3
Average turnover of workforce (all Hong Kong staff)	%	5.9	5.5	6	5.5	5.4
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	28,556	28,360	28,147	27,578	27,274
Financial						
Revenue	HK\$ million	28,246	24,923	22,427	19,375	12,352
Manpower costs	HK\$ million	2,282	2,013	1,700	1,467	1,120
Taxation	HK\$ million	1,655	1,485	1,344	1,039	751
Dividends	HK\$ million	3,346	3,042	4,148	2,514	2,285
Safety and Social						
Safety (Hong Kong)						
Trench inspections	Number	13,675	17,599	16,533	18,400	17,496
Regular safety inspections – home visits	Number	1,021,089	1,114,409	1,177,367	1,110,744	1,177,170
Community safety exhibitions	Number	12	12	13	12	12
Community safety talks	Number	5	6	5	6	11
In-house safety training	Number of man-hours	17,822	20,254	14,047	19,075	18,031
External staff safety training	Number of man-hours	6,181	6,720	7,071	8,002	7,626

	<i>Unit</i>	2013	2012	2011	2010	2009
Occupational Health and Safety						
Accidents – all industrial for injuries ¹	Number	15	10	10	16	14
(Accident Frequency Rate ¹)	(Number of accidents per 100,000 man-hours)	0.24	0.19	0.19	0.31	0.27
Reportable accidents ^{1,2}	Number	12	7	9	14	9
(Accident Incidence Rate ^{1,2})	(Number of reportable accidents per 1,000 employees)	4.9	2.5	2.9	5.7	3.7
Traffic Accident Injury Rate ³	Number of traffic accident injuries per 100 vehicles	1.47 (1)**	3.74	3.11	3.71	3.05
Industrial Injury Man-days lost	Number of man-days	194	111	160	430	412
Fatal accidents • Hong Kong employees	Number	1	0	0	0	0
Fatal accidents • HCIL, TCCL and JV employees	Number	0	0	0	0	0
Customer Service (Hong Kong)						
Customer compliments	Number	6,026	6,090	5,658	5,532	5,554
Customer complaints	Number	16	7	10	9	17
Community Involvement (Hong Kong)						
Employees participating in voluntary services	Number	918	1,079	1,215	1,112	1,230
Voluntary service hours (including employees and customers)	Number of hours	72,025	68,508	64,956	48,815	44,939

	Unit	2013	2012	2011	2010	2009
Environmental						
Resource Use/Conservation (Hong Kong)						
Naphtha saved [#]	Metric tonnes	9,982	13,355	13,996	13,657	11,234
Town gas saved [#]	Cubic metres	3,406,278	3,404,587	3,528,364	4,089,133	3,626,266
Water saved [#] (Gas Production)	Cubic metres	230,288	218,887	177,463	224,358	213,971
Grid electricity saved through PV Panels	kWh	86,700	86,500	86,600	86,600	86,900
Electricity saved [#] (North Point headquarters and Ma Tau Kok office)	kWh	4,823,309	4,254,325	4,234,225	4,142,825	3,993,105
Electricity Consumption at Headquarters	kWh	6,370,540	6,913,514	6,840,479	6,945,157	7,177,509
CO ₂ emissions avoided equivalent to electricity saved * (North Point headquarters and Ma Tau Kok office)	Metric tonnes	3,376	2,981	2,963	2,900	2,795
Landfill gas utilisation as heating fuel in gas production	Cubic metres from Shuen Wan	2,526,000	2,362,000	2,364,000	2,761,000	2,361,000
Landfill gas utilisation as heating fuel in gas production	Cubic metres from NENT SNG	14,619,749	20,129,181	20,789,390	19,925,269	16,065,375
Air Emissions (Hong Kong)						
CO ₂	<i>Daily average in metric tonnes (Metric tonnes per million MJ of town gas)</i>	931 (12.09)	904 (11.92)	913 (11.91)	896 (11.96)	896 (12.13)
NOx	<i>Daily average in kg (Kg per million MJ of town gas)</i>	353 (4.59)	318 (4.20)	356 (4.65)	344 (4.59)	324 (4.39)
SOx	<i>Daily average in kg (Kg per million MJ of town gas)</i>	1.2 (0.02)	1.5 (0.02)	1.5 (0.02)	1.9 (0.03)	2.5 (0.03)
Greenhouse gases ⁴ (Production equipment)	<i>Metric tonnes in terms of CO₂ equivalent</i>	365,981	360,634	362,307	355,958	357,043

	Unit	2013	2012	2011	2010	2009
Aqueous Emissions (Hong Kong)						
Wastewater	<i>Daily average in cubic metres (Cubic metres per million MJ of town gas)</i>	323 (4.20)	435 (5.74)	447 (5.84)	351 (4.68)	404 (5.47)
Waste Avoidance/Recycling (Hong Kong)						
Chemical waste generated	<i>Daily average in kg (Kg per million MJ of town gas)</i>	150 (1.94)	93 (1.23)	51 (0.67)	178 (2.37)	64 (0.87)
Spent catalyst collected for metal recovery	<i>Metric tonnes</i>	39.7	35.3	41.1	36	12
Metal chemical drums reused	<i>Number</i>	90	318	216	161	211
Plastic chemical drums reused	<i>Number</i>	914	969	1,064	818	882
Spent lube oil recycled	<i>Metric tonnes</i>	46.7	25.3	16.1	15.17	3.41
Scrap Metal recycled – Old gas appliances	<i>Metric tonnes</i>	1,278	926	840	989	930
Scrap Metal recycled – From construction and maintenance of plant and pipelines	<i>Metric tonnes</i>	28	35	11	47	125
PE pipe recycled	<i>Metric tonnes</i>	12.6	10.7	27	11.66	10.9
Gas appliances polyfoam packaging materials avoided	<i>Metric tonnes</i>	1.31	1.52	2.19	4.33	4.12
Awareness Raising and Training (Hong Kong)						
In-house environmental training (Hong Kong)	<i>Number of man-hours</i>	1,420	1,951	549	4,008	3,036
External environmental training (Hong Kong)	<i>Number of man-hours</i>	818	1,120.3	255	773	403

Remarks:

- 1 Contractor employees are excluded.
- 2 Employees of subsidiaries are excluded.
- 3 Only Towngas employees in Hong Kong are included.
- 4 From 2013 onwards, emission factors of greenhouse gas emission due to the consumption of electricity are obtained from the sustainability reports of the two local electricity companies which are released one year prior to our reporting year.

* 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).

** Figure in bracket denotes the number of fatality.

Your Feedback

This publication provides a quick snapshot of our key sustainability activities in 2013. If you would like any further information, our full Towngas Sustainability Report 2013 is available online at www.towngas.com.

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

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