

Improving safety and the environment

煤氣公司引進天然氣啟動儀式
Towngas Natural Gas Commissioning Ceremony



煤氣
Towngas



With a drop in greenhouse gas emissions in the town gas production process following introduction of environmentally-friendly natural gas as partial feedstock, Towngas is helping to improve Hong Kong's air quality.



Health, Safety and the Environment

The Company sought to raise gas safety awareness to new levels within the community in 2006, and furthered its commitment to reduce atmospheric pollution by starting to use cleaner natural gas as partial feedstock for producing town gas. Safety and environmental enhancements within our mainland JVs also received close attention during the year.

Health and Safety in Hong Kong

During 2006, Towngas held a number of educational sessions for various agencies, associations, district councils and government departments regarding public gas safety, prevention of gas leaks and readiness for emergency situations. These presentations were well-supported with user-friendly literature and promotional tools. By the end of the year under review, 1,900 personnel had attended the talks, including representatives from 14 District Council's Fire Safety Committees and from some major property management companies. Similar programmes are in hand for housing and occupational safety groups.

In-house, the Company's corporate emergency plan was substantially enhanced with improvements made to communications, IT hardware and software support. Safety documents were also revised,

a guideline on fire and explosion prevention and protection introduced, and our emergency operation centre upgraded. To augment our preparedness for any future gas crises, a table top exercise was organised for the corporate emergency management team in November.

Occupational health and safety are kept at the forefront of employees' minds partly through an annual competition and safety and environmental day, held in June and December respectively during 2006. In August, a seminar was also arranged for contractors to heighten their safety awareness and knowledge. The Accident Frequency Rate for 2006 was 0.59 for every 100,000 person-hours worked, and the Injury Traffic Accident Rate was 3.39 for every 100 vehicles. Third party damage to underground gas pipes dropped from 17 to 13 cases year-on-year.

Safety first with regular pipe surveys



Sharing safety experiences with representatives and professional practitioners from various local and overseas organisations is also an important facet of our corporate risk management strategy. Towngas staff presented a paper on safety culture at an international conference held in Hong Kong in 2006, and took part in a number of local safety and health forums.

Environmental Sustainability in Hong Kong

Natural gas is more environmentally-friendly than other fossil fuels since it emits lower levels of harmful pollutants into the atmosphere, such as carbon dioxide (CO₂), nitrogen oxides (NO_x) and sulphur oxides (SO_x). CO₂ is a main greenhouse gas so any cutback in CO₂ emissions combats global warming and slows down climate change. NO_x is a main component of smog-forming haze, whilst both NO_x and SO_x reacting with water vapour create acid rain.

Although using naphtha to produce town gas is a very clean process, the Company recorded a fall in CO₂, SO_x and NO_x emissions between October and December 2006 after it introduced natural gas as partial feedstock replacement for naphtha. This change in the feedstock mix is expected to ultimately reduce overall emissions of CO₂ by 26 per cent, SO_x by 40 per cent and NO_x by 42 per cent in the next few years.

We furthered our environmental protection commitment in other ways as well during 2006. In January for instance, we arranged a two-day eco-tour to Guangdong province for contractors and dealers to enhance their environmental

awareness, and in December the Company became a Green Participant of the Federation of Hong Kong Industries 1-1-1-Programme (One Factory–One Year–One Environmental Project) with the target of lessening pollution in Hong Kong and the Pearl River Delta region. In June, our environmental credentials were acknowledged by the Hong Kong Sustainable Communications Association when we were crowned Energy Champion for the third year running. The Company was also awarded the Gold Wastewi\$e logo in 2006 for the fifth time in recognition of our on-going waste reduction measures.

Health, Safety and the Environment



Tree planting to help reduce climate change

One of Towngas' major sustainability aims is to increase appreciation for the conservation of natural resources within the community so as not to compromise the needs of future generations. In February, the Company joined with the Conservancy Association to sponsor training of eco-tour guides to show people around Long Valley, an outstanding area of wetland bird habitat and traditional farming in the New Territories. During the same month, a Towngas team also completed a Green Power Hike to help fund the teaching of green issues within the education sector. March and October saw staff taking part in the World Wide Fund's Walk for Nature series, while in April our U-Tech team won the Friends of the Earth's tree planting challenge in the corporate category. In a new

strategy, we also sponsored a local theatre group to take an environmental road show round 60 secondary schools, from October 2006 to January 2007.

HSE in Mainland China

To maintain and enhance safety standards, all our JVs place continuing emphasis on raising awareness and technical skills of employees. Throughout 2006, each JV general manager undertook a monthly safety inspection of one of 12 areas identified for particular attention, such as gas plant operation or fire safety management. This scheme will become a regular practice from now on. In addition, over 30 mainland employees were certified as safety engineers during the year.

Singing contest to nurture green awareness



To further develop and instil a culture of safety, our first JV Gas Safety and Occupational Safety Quiz was held in 2006. The grand finale in November proved a nail-biting event that resulted in Wuhan JV coming in as overall winner, followed by Xuzhou JV, Weifang JV and Qingdao Dongyi JV as 1st, 2nd and 3rd runners-up.

A comprehensive safety and risk management auditing system for our piped city-gas JVs was launched in April 2006, with 21 audits completed to date. A risk assessment exercise taken place in April also enabled 23 water treatment plants, under the management of Hua Yan Water business, to substantially enhance their chlorine-handling safety standards.

To underpin all these initiatives, a technical instruction on permit-to-work system was circulated to all JVs in February, a business risk self-assessment guideline distributed in May, and an improved incident reporting system implemented in August. New corporate emergency plans for our piped city-gas and water businesses are also now in place to further standardise the Group's crisis management procedures.

Raising fire prevention, detection and emergency handling awareness was an equal priority for 2006. We would like to pay tribute to FSD, who ran, for the second time, a five-day Gas Safety and Fire Fighting train-the-trainer course for 27 JV safety personnel in May. In addition,

more than 120 senior mainland government fire services officials and JV employees attended our seminar held in Nanjing in October, co-organised with FSD, Institution of Fire Engineers (Hong Kong Branch), Guangdong Fire Protection Association and Jiangsu Fire Protection Association.

Besides enhancing safety standards, the Group is also working to support the central government's environmental and energy improvement policies. Our main strategy to date has been the introduction and marketing of cleaner natural gas by our piped city-gas JVs to homes and business enterprises, where consumption is continuing to increase. In 2006, we made an additional step to expand our environmental footprint by

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Environmental Performance Table

All legal requirements relating to environmental protection were fully complied with

Ozone Layer Protection	99.8% of our vehicle air conditioning systems now operate with refrigerant R134A All BCF portable fire extinguishers have been replaced by dry powder extinguishers
Air Quality	Total NOx output was 6.82 kg / TJ of town gas Total SOx output was 0.03 kg/TJ of town gas Total CO ₂ output was 14.44 metric tonnes/TJ town gas
Greenhouse Gas Emission	Annual total greenhouse gas emissions of 391,062 metric tonnes in terms of CO ₂ equivalent
Water Quality	Total waste water output was 6.44 m ³ / TJ of town gas
Chemical Waste	Total chemical waste output was 0.57 kg/ TJ of town gas
Noise	All installations and operations complied with the statutory requirements No noise abatement notice has ever been received



Wuhan JV's OHSAS 18001 certification, a testament to international standards

investing in a facility to make LNG from coalbed methane in Shanxi province, which will eventually help to reduce greenhouse gas emissions and cut atmospheric pollution.

The Group's decision to focus on city water projects is also a further move on the road to strengthening the mainland's environmental protection initiatives. By building on the central government's proactive approach to reforming the water sector, and taking action to improve all three of our existing water JVs during 2006, we are gradually starting to make a difference to both quality and supply of clean water to urban customers.