



首都工业

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CAPITAL INDUSTRY

Yixing in Jiangsu province is known as the Capital of Clay – even some of the streetlamps are ceramic! In the past most of the pots were fired using coal, creating a grey and dusty haze over the metropolis.

Today, thanks to the promotion of cleaner and more-efficient natural gas by Yixing joint venture company, clearer skies are gradually returning to this world-famous historical centre of pottery, culture and art.



HEALTH, SAFETY AND THE ENVIRONMENT

Towngas' health, safety and environmental policies go way beyond legal compliance. We see our role as supporter, adviser and communicator as we work to ensure piped gas is supplied in the safest and most environmentally-friendly way possible. The strong sense of stewardship we have developed over the years in Hong Kong is now being robustly transferred to all aspects of our mainland JV businesses.



Towngas Hotline Centre links callers directly to knowledgeable staff rather than just recorded voices.

Health and Safety in Hong Kong

In 2005, we conducted 14 further Job Safety Analyses to help identify improvements on high-risk work procedures, organised various safety training courses and held once again our very popular Safety and Environmental Day and Inter-departmental Safety and Environmental Quiz. By raising safety awareness, we are not just trying to ensure a safer work environment, we are also striving to inculcate a culture of personal responsibility within

colleagues to ensure their own safety and the safety of others with whom they work.

In 2005, we redefined our Accident Frequency Rate (AFR) by establishing a separate Injury Traffic Accident Rate (ITAR). This last year, AFR was 0.43 for every 100,000 person-hours worked; ITAR was 3.82 for every 100 vehicles. Safety initiatives for contractors showed third party damage dropping by 40 per cent year-on-year.

During the year under review we received certification for incorporating the internationally-recognised Occupational Health and Safety Assessment Series 18001 into all our gas operations and our safety and risk management system. In acknowledgement of our commitment to enhancing workplace safety, our entry for the 2005 Hong Kong Occupational Safety and Health Award, entitled “Trenchless Technology for a Pipeline Installation or Rehabilitation” won the Safety Technological Achievement Award and Best Presentation Award in June.

Towngas Boy – a cartoon character devised to promote gas safety particularly to younger people – hit the media in the autumn with his own website, theme song, leaflets and even personal exhibition

appearances. Initial public response has been very positive. Customers also responded well throughout the year to safety promotions encouraging them to replace sub-standard appliances, such as cookers and hobs without a flame-failure device or flueless and open-flue water heaters, with newer models.

We were involved in a great deal of health and safety planning and co-ordination in 2005 in preparation for the possible impact from an avian flu outbreak in the territory and for the Sixth World Trade Organisation Ministerial Conference, hosted by Hong Kong in December.

Underpinning these arrangements was our newly-systematised, state-of-the-art Corporate Emergency, Grid Control and Customer Service Hotline Centres.

Our new Grid Control Centre has state-of-the-art facilities to ensure the safe and reliable supply of gas, day in day out.



Health and Safety in Mainland China

Our Hong Kong operations have long used Supervisory Control and Data Acquisition (SCADA) and geographic information systems (GIS) to gather real-time data and maintain security of gas supply. This technology acts as a blueprint for similar installations in our JVs where 12 SCADA and four GIS programmes monitored and controlled gas transmission and distribution networks by the end of 2005. The precision and dependability of such facilities are gaining Towngas a reputation for being at the leading-edge of IT gas security in the mainland and earning us considerable praise from local authorities.

Inculcating a culture of best health and safety practice can only be achieved with determination and wide-spread strategies that permeate all levels of employees. We accomplish this on the mainland through regular audits and risk and safety inspections following which, in 2005, we initiated targeted training courses, improvements to a three-tier risk and safety management system, reviews of transport schemes and loss prevention controls and update of relevant manuals.

Our first Gas Safety and Occupational Safety Day was held in December, co-organised by HCIL and Shenzhen Gas Company with all JVs participating. This proved to be a major stepping stone in promoting safety awareness and on a much wider scale than we have been able to realise previously as it

Our young engineers' highly innovative solar cart won several prizes in the Friends of the Earth's fifth Solar Cart Race competition, helping to promote the concept and environmental benefits of renewable energy to the public.



attracted a number of distinguished guests from gas-associated organisations as well as provincial and municipal officials, employees from gas companies, local residents and safety equipment suppliers. The success of this event has encouraged us to consider similar roll-out possibilities in other areas of the mainland in the future.

Environmental Sustainability

We expect to begin importing natural gas to Towngas' main production plant by the end of 2006. Partial replacement of naphtha for feedstock with cleaner-burning natural gas will contribute to improving Hong Kong's air quality. A project started in 2005 to retrofit 20-year old plant units with deNO_x systems will also benefit the environment by helping to reduce acid rain and smog.

Towngas is a leading exponent of the utilisation of landfill gas for the production of town gas as this enables us to cut down flaring-off of gas on site which releases the greenhouse gas carbon dioxide into the atmosphere, and to capture released methane as a heating fuel. We are on course to complete a treatment plant and a connecting 19 km pipeline from the huge NENT landfill site in the northeast New Territories to our main gas

production plant at Tai Po by the second quarter of 2006. The treated landfill gas will be converted into synthetic natural gas thus lessening our reliance on naphtha. We are proactively exploring opportunities for similar conservation measures at other landfill sites around Hong Kong.

We finished work on our water treatment reverse osmosis filtration system at Tai Po plant in 2005, thus saving 91,491 m³ of water with the expectation this will increase to 106,491 m³ in 2006. Moreover, a whole range of waste avoidance and minimisation projects ensured we retained, for the fourth consecutive year running, the prestigious Gold Wastewi\$e logo in 2005 issued by the Environmental Protection Department.

One of our main salvage schemes – recycling used gas appliances no longer required by residential customers – won us the 2005 Quality Circles Award at the 11th Hong Kong Quality Management and the First Six Sigma Convention in June. In the two years since the programme has been operating we have avoided sending around 1,700 tonnes of scrap metal to landfill sites and at the same time generated revenue for our green creativity fund to foster environmental awareness throughout the community.



Working alongside over 400 other participants, Towngas staff helped to plant over 10,000 trees in the Friends of the Earth's Tree Planting Challenge 2005, at Tai Lam Country Park.

Environmental Performance Table	
All legal requirements relating to environmental protection were fully complied with	
Ozone Layer Protection	99.6% of our vehicle air conditioning systems now operate with refrigerant R134A 80% of BCF fire extinguishers have been replaced by dry powder ones since 1995
Air Quality	Total NOx output was 8.16 kg/TJ of town gas Total SOx output was 0.04 kg/TJ of town gas Total CO ₂ output was 15.31 metric tonnes/TJ town gas
Greenhouse Gas Emission	Annual total greenhouse gas emissions of 418,983 metric tonnes in terms of CO ₂ equivalent
Water Quality	Total waste water output was 8.32 m ³ /TJ of town gas
Chemical Waste	Total chemical waste output was 0.62 kg/TJ of town gas
Noise	All installations and operations complied with the statutory requirements No noise abatement notice has ever been received

We published our 2004 Health, Safety and Environmental Report in October, an honest and transparent account of our sustainable strategies. This sets out our targets and standards which we encourage all employees, contractors and suppliers to work towards as far as possible. As a company we have made enormous strides in paper reduction, purchase of environmentally-friendly products and recycling or reuse of materials in the last few years. In 2005, our well-established waste management practices were extended to include recovery of domestic appliance spare parts and collection of old commercial and industrial appliances and gas meters.

Our young engineers are especially enthusiastic ‘greenies’ so we were delighted when their creative entry, made from PE pipes and cardboard, in Friends of the Earth’s the Fifth Solar Cart Race won three awards in January. We also sponsored several other activities organised by green charities within the territory during the year, such as environmental seminars, hikes, tree planting and photograph-taking. In addition, our focus on operating in an ethically responsible way whilst still meeting society’s demands for gas energy, products and appliances helped us retain, for the second year in 2005, the title of Energy Champion of ECO-PAGES presented by the Hong Kong Sustainable Communications Association.

We are aware however, that our environmental credentials are constantly being monitored, nowhere more so than on the mainland where much of our new business is focused. Our JVs are now beginning to have an increasingly positive impact on the environment. For example, by supplying and promoting cleaner and more energy-efficient natural gas to the ceramic industry, Yixing JV has made a significant contribution to the rapid replacement of hazy grey skies with cloudless blue days. During 2005, JVs continued to make progress in compiling tailored environmental manuals based on Hong Kong guidelines and in assimilating and applying Towngas’ ethos regarding environmental management to their own localities.