

# business review

year at a glance



## January

Won three prizes in annual Solar Cart Race to promote use of renewable energy. Our cart beat 12 teams to win for the second consecutive year. We also won the “Earth Design Silver Award” and “Most Artistic Design Silver Award”.



## February

Began construction of Hong Kong's first commercial-scale wind turbine, located on Lamma Island. The 800 kW wind turbine is expected to produce 1 million units of electricity a year. It stands 71 metres, or as tall as a 24-storey building.



## March

Launched Hong Kong's first ecological website with Green Power, [www.hk-ecosite.com](http://www.hk-ecosite.com). The site introduces 25 of Hong Kong's Sites of Special Scientific Interest to help educate the public.



## July

Introduced a new corporate website that provides more diversified information and interactive services on-line, including a “Virtual Tour” of company facilities. In addition to very positive feedback from customers, we won two awards for the website.



## August

Opened the Power Quality Centre in North Point to help customers with the reliability of electrical installations and power quality. The Centre uses real life examples to demonstrate the effects of power or voltage interferences and how to mitigate them.



## September

Won a Government contract to manage, operate, install and maintain Hong Kong's public lighting systems. Hongkong Electric illuminated the territory's first 50 street lamps back in 1890. Today, we service over 18,000 street lights on Hong Kong and Lamma.



## April

Submitted a response to Stage I consultation on the future development of the electricity market. We will continue to stress the need to balance the interests of customers and shareholders while providing a secure and reliable supply of electricity.



## May

Kicked off a 3-year project, Green Lamma Green, with the Conservancy Association to plant 2,000 trees on Lamma Island. The aim is to promote tourism and sustainable development on the Island, while enriching its ecological value.



## June

Celebrated the first anniversary of the Hongkong Electric Volunteers team. Around 700 dedicated staff donate their time throughout the year to various services including helping senior citizens and protecting the environment.



## October

Commenced submarine cable installation work for transmitting electricity to Hong Kong Island from the Lamma Power Station Extension. The two circuits of 275kV cables will be commissioned by mid-2006 and mid-2007 to help meet electricity demand in Central and Wanchai.



## November

Launched Smart Power Campaign 2005/06 with the theme of renewable energy (RE) by inviting the public to name Hong Kong's first wind power station. A wide range of activities will be organised to promote public understanding of RE, including exhibitions at MTR stations.



## December

Concluded financing arrangements for Thai power station project, in which HEH has a 25% stake. Also in December, we sold part of our interests in our Australian businesses, generating a gain of HK\$1,560 million for year 2005.



progressive  
policy



# business review

## HONG KONG OPERATIONS

### Generation

Hong Kong depends on reliable and uninterrupted electricity supply from Hongkong Electric to help maintain its position as a leading financial and commercial centre. In 2005, the Generation Division continued to play its part in this role.

One of the most significant developments of the year was the addition of a renewable energy source for Hong Kong with the construction of the territory's first wind turbine on Lamma Island. The 800 kW turbine started to generate electricity on 26th September 2005. An exhibition centre has been built adjacent to the wind turbine so the public can learn about wind power and its benefits.

Our continuing programme to lower emissions from the Lamma Power Station by reducing our dependence on coal-fired plant progressed in 2005 as we made substantial headway in the construction of our natural gas handling facilities. The laying of the 93 km submarine gas pipeline from Shenzhen to Lamma Power Station was completed and will be ready to receive gas by mid-2006. The Liquefied Natural Gas Terminal in Shenzhen in which we have a 3% interest is under construction, with targeted completion set for mid-2006. We have set up a safety management system for the natural gas facilities and have planned extensive natural gas safety training for early 2006.

The price of coal remained high for most of 2005, presenting challenges for us. We were able to mitigate in part higher coal costs by adjusting the varieties of coal we burned, while still maintaining the reliability of our generation units. In 2005, we consumed over 4.3 million tonnes of coal. Our expectation in 2006 is for a continued volatility in coal markets with prices above historic levels.

Work on the Lamma Power Station Extension continues. Unit L9, a new 300 MW class gas-fired combined-cycle unit, is on schedule for a target commissioning date in August 2006. All superstructure works, including the Main Station Building and the 275 kV Switching Station building, were completed in 2005. Construction of the chimney and some underground works are underway.

The Plant Ownership Scheme, which seeks to empower staff by making them responsible for plant performance at the Lamma Power Station now covers 31 plant areas. Through the scheme we expect to be able to further improve reliability of our equipment and reduce operational and maintenance costs.

Ongoing refurbishment and maintenance projects have resulted in cost savings by enhancing the reliability and productivity of our operations.



The first gas-fired unit of Lamma Power Extension is scheduled for commissioning in August 2006.



**reliable**  
**power**



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## Transmission and Distribution

The Transmission and Distribution Division (T&D) continued to achieve world-class service standards. Supply reliability in 2005 was in excess of 99.999%, this is the ninth consecutive year, since 1997 that this level of reliability has been achieved.

Unit sales growth in electricity for 2005 was 1.5%. Of the 10,755 million kWh of electricity sold, commercial sales made up 73.2%, domestic sales 22.7% and industrial sales 4.1%. Maximum demand in 2005 was 2,565 MW compared with 2,588 MW in 2004.

## Ensuring Supply Meets Demand

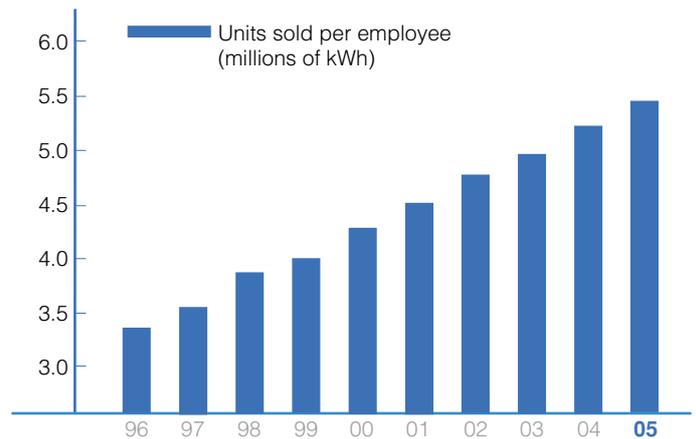
Improving and refurbishing the transmission and distribution system to meet customer demand is an ongoing requirement. Installation of the 275 kV cable circuits from Lamma Island to the Marsh Road Switching Station has made good progress. The laying of submarine cables across the East Lamma Channel started in November and construction of the switching station superstructure started in December 2005. In 2005 we completed several transmission projects, including the commissioning of the 132 kV gas ring main units at Morrison Hill and improvement work at the 11 kV zone substation at Chung Hom Kok. Altogether 40 new distribution substations were commissioned in 2005, bringing the total number of distribution substations to 3,597. We also laid 240.7 km of cabling in 2005 for new supply and system reinforcement.

## Loss Prevention and Reliability Review

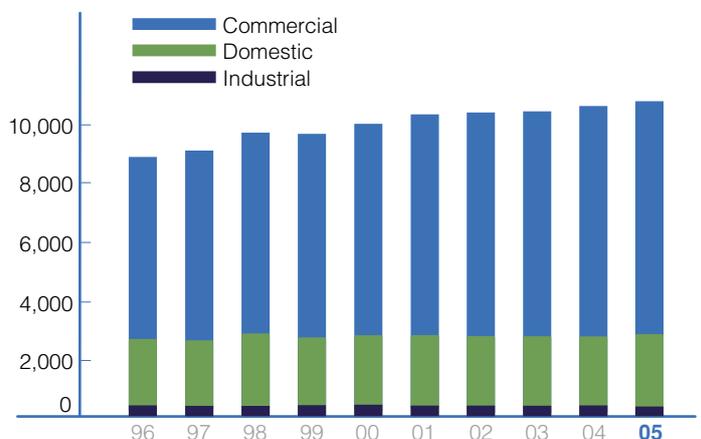
We continued to review the transmission and distribution system in 2005 with the objective of further improving reliability and operational safety. The recommendations arising from the 2004 Loss Prevention and Reliability Review were progressively implemented in 2005. We

continued to study major blackout incidents in other countries in order to map out preventive measures. We looked at mitigating risks from such events as hill fires, landslips, flooding and other interferences with our transmission and distribution system and we also launched initiatives to mitigate the effect of equipment failure in high-traffic and other high impact areas.

## Productivity 1996-2005



## Units Sold 1996-2005 (millions of kWh)

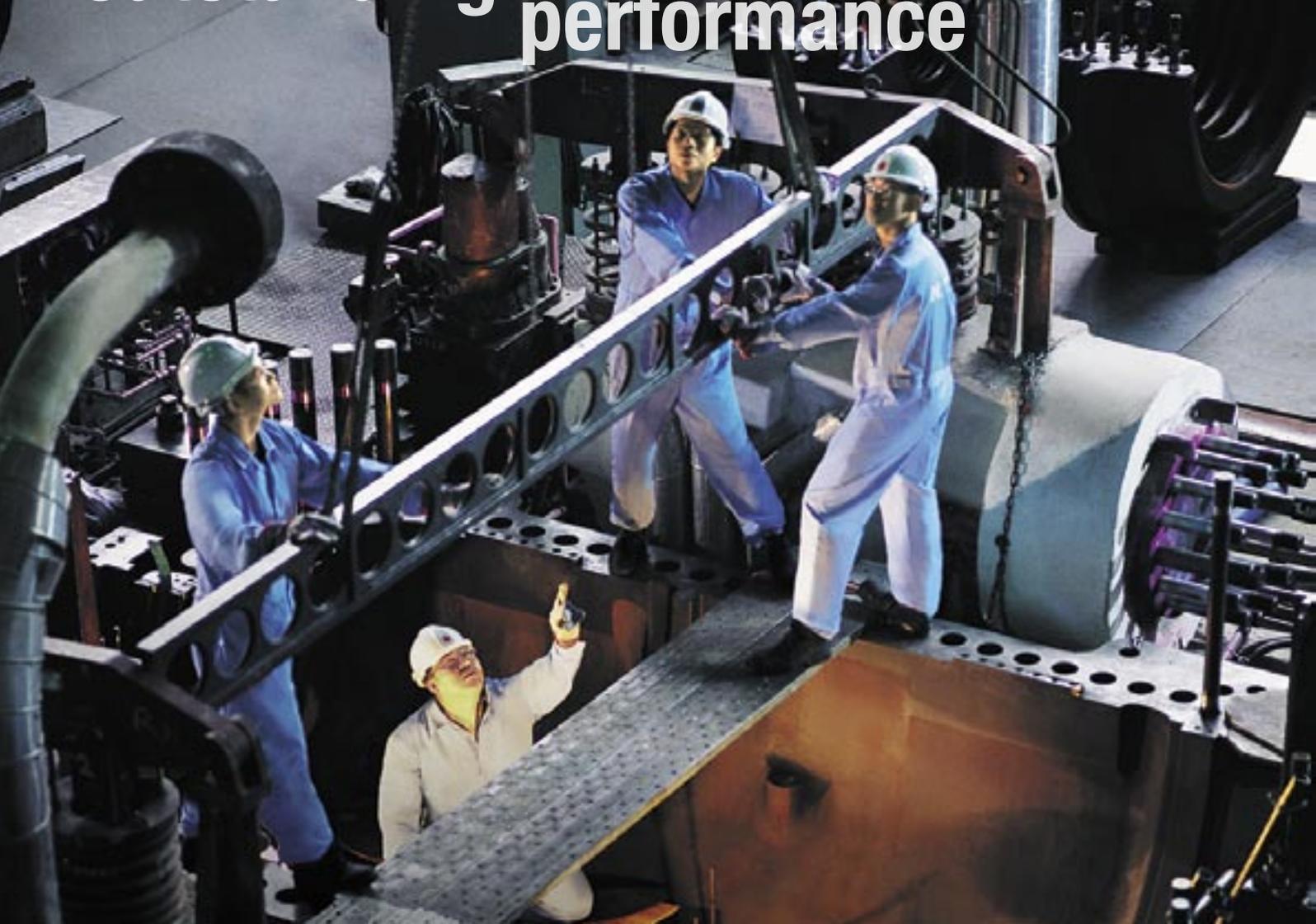


Note:

A detailed analysis of the ten-year operating statistics can be found on Page 105.



outstanding performance



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## Customer Service

Our mission is to deliver superior customer service while maintaining a culture of integrity, respect, trust and care. Chief among our goals each year is to achieve or surpass all of our pledged Customer Service Standards, once again we accomplished this in 2005. In one area related to the average time to restore supply after interruption, we achieved an average time 41 minutes faster than our service pledge time of within 2 hours. The number of calls to our Customer Emergency Services Centre decreased by 20% in 2005, and the average waiting time for our customers' calls to be answered was only 5 seconds, well below our service target of less than 9 seconds. Our customers demonstrated their satisfaction with our services by making 1,020 unsolicited commendations. This was a record high for the fifth consecutive year.

## Service Enhancements

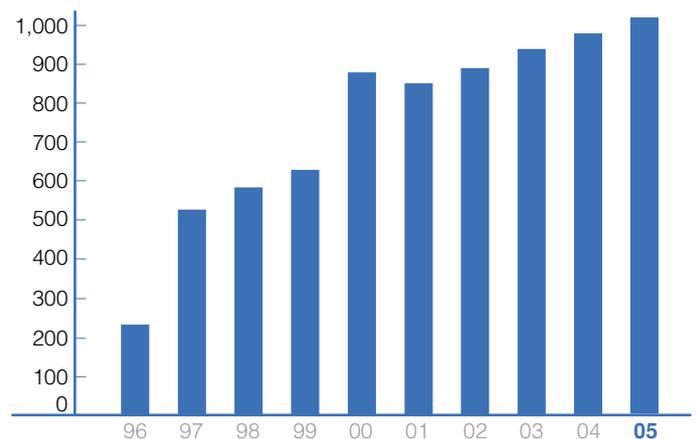
The Customer Liaison Group, which was set up in 1992 to help improve service quality by providing a communication channel with our customers, was revamped in 2005. To enhance our service culture, we held a customer services symposium in May 2005. Representatives from leading service organisations were invited to share their ideas and experiences about customer service. A Power Quality Centre (PQC) was inaugurated in August 2005 to strengthen our advisory services on power quality issues. The PQC is equipped with an array of mock-up installations and display modules to demonstrate the effect of power or voltage fluctuations and how to mitigate their effects.

The 4th Edition of the "Guide to Connection of Supply" and its CDROM was issued in 2005 to provide customers and contractors with updated information on the latest interface requirements with our supply equipment.

In June 2005, we introduced a credit card autopay service as a new payment method for electricity bills. Later in the year, we launched a large-font bill and booklet to assist senior citizens and those with impaired eye-sight. In 2006, we plan to start developing and implementing the Hongkong Electric Customer Information System, with this new system we expect to be able to further improve our customer services.

We launched a new corporate website in 2005 to enhance content and user-friendliness in browsing. Various new e-services and functions were introduced, such as a virtual tour of our facilities, an on-line energy survey, and an e-subscription for updated news and services. Positive feedback from customers on the new website has been received and the site was recognised with two awards.

## Written Commendation Statistics 1996-2005





human  
resources



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## Health and Safety

Hongkong Electric promotes a “safety first” culture in all of its activities. A Corporate Health and Safety Committee was established in 2005 to enhance our existing safety management organisation structure.

“Safe Working at Height” was one of our successful safety promotions organised in 2005. We also established a safety management system for natural gas facilities in preparation for the use of natural gas at the Lamma Power Station.

Once again, in 2005 our staff participated in several safety quizzes and health and safety award competitions. We won the Cup Championship in the Occupational Safety and Health (OSH) Quiz jointly organised by the Labour Department and the Occupational Safety & Health Council. We were awarded the Gold Award for Safety Management and the Silver Award for Best Presentation in the 2005 Hong Kong Occupational Safety & Health Forum.

## Improving our Talent Base

We place a high priority on training and career development as a way to maintain and enhance operational efficiency. In 2005, there was a substantial increase in training, with Generation and T&D investing over 77,400 (up 27%) and 22,400 (up 35%) man-hours respectively in training activities. We organised training seminars, workshops and on-the-job training exercises in such areas as technical skills, safety, quality management, environmental awareness, and computing skills.

As we prepare for the commissioning of our new natural gas handling facilities, we have increased the number of trainees and apprentices that we employ and the amount of time we devote to their training. For the third consecutive year, one of our craft apprentices received an outstanding apprentice award from the Vocational Training Council.



For the 8th year, our team won the OSH Quiz Cup Championship jointly organised by the Labour Department and the Occupational Safety & Health Council.



Training the next generation of managers and leaders is an ongoing process at Hongkong Electric. Our workshops cover everything from project management to environmental protection.



community engagement



# business review

## Community Activities

During the year, we continued to organise and participate in many community, social and recreational activities. In 2005, we received the Community Chest's President's Award for our support of "Corporate and Employee Contribution Programme", "Walks for Millions", and "Dress Casual Day". We were named a "Caring Company" by the Hong Kong Council of Social Service for the third consecutive year.

The Hongkong Electric Volunteers team, now numbering over 700 employees, continued to provide active service to the community through two programmes for the benefit of senior citizens. One programme involved visiting senior citizens in public housing estates to inspect and replace any sub-standard plugs and sockets in their homes. The other programme was jointly organised with the Christian Family Service Centre and promoted the use of music therapy to benefit the mental and physical health of senior citizens.

We participated in the Community Chest's Walks for Millions and Oxfam's Trailwalker. We were also active in supporting environmental causes such as Green Power and the Conservancy Association. The Company won the Utilities/Transport Trophy for the sixth consecutive year in the 24-hour Hong Kong Grand Prix Round Table Pedal car race. We took top honours in the 5th Solar Cart Race organised by Friends of the Earth.

On the first two Sundays in October, we hosted the Hongkong Electric 2005 Family Day at the Lamma Power Station which attracted 3,300 employees, family members and friends. Our employees acted as guides to their family members and friends of the power station facilities and the places where they worked.

Celebrating its 16th year of giving, the Hongkong Electric Centenary Trust once again provided financial assistance

to organisations serving senior citizens and to secondary school students in the form of scholarships. The trust awarded 170 scholarships and promoted life-long learning and volunteerism for senior citizens. The Lamma Fund which was established to improve community facilities and promote environmental conservation on Lamma Island supported the reconstruction of the Tin Hau Temple.



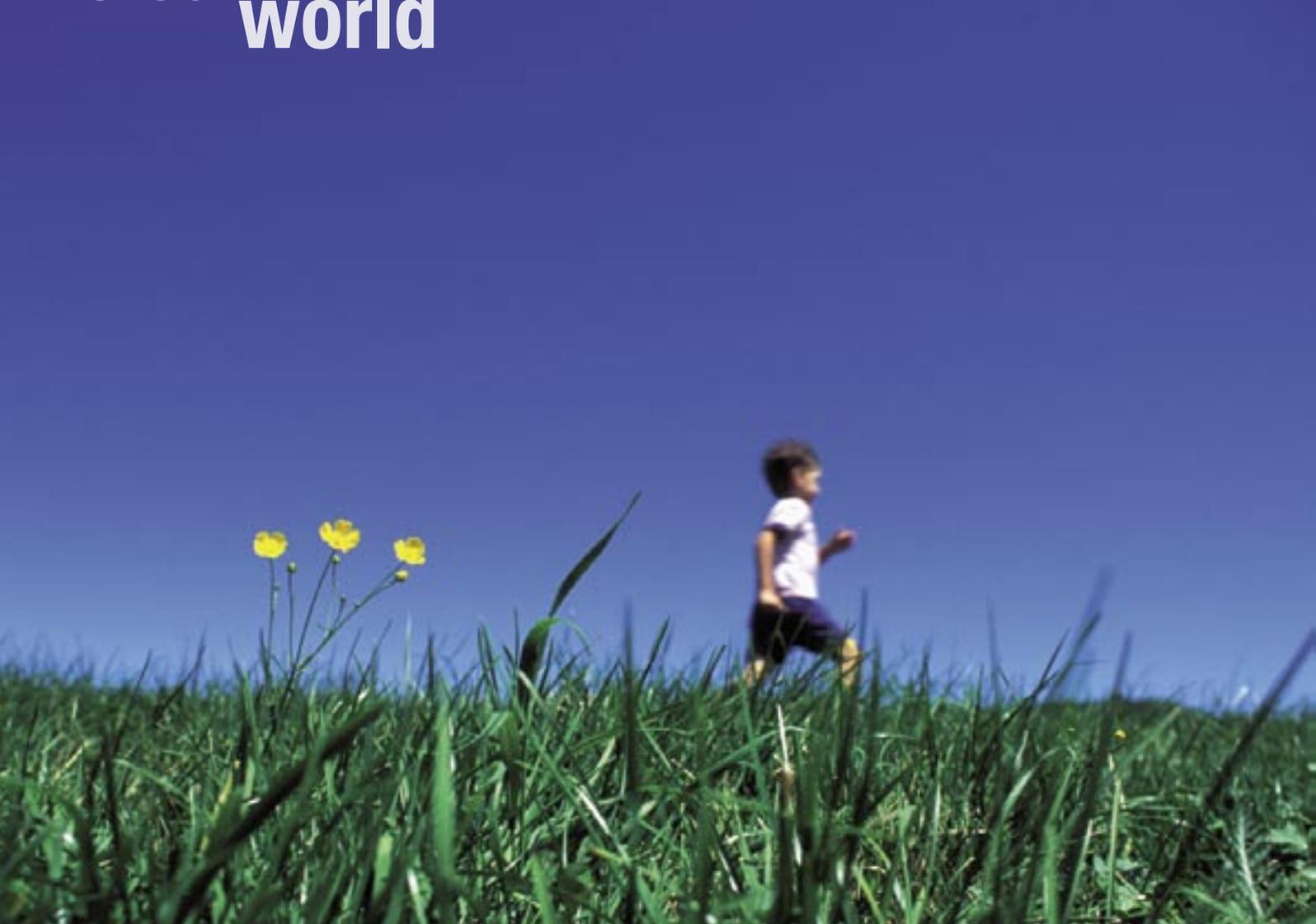
Our Volunteers team, made up of over 700 colleagues, invested more than 2,500 hours of service in 2005 helping the senior citizens and protecting the environment.



Over 3,300 staff and their family members and friends enjoyed the rare opportunity to tour the Lamma Power Station on HEC Family Day in October.



**clean  
world**



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## Environmental Activities

Reaffirming the Company's commitment to developing renewable energy, our 800 kW wind turbine began generating electricity last year. As Hong Kong's first wind turbine, it is a promise of cleaner energy. An exhibition centre at the site has been opened to promote public understanding of wind power and other forms of renewable energy.

During 2005, we continued to increase our usage of wastewater and rainwater to reduce consumption of fresh water, and we used fly ash for land reclamation and formation at our Lamma Power Station Extension site.

Last year, both the T&D Environmental Management System and the T&D Integrated Management System, successfully obtained independent certification to the respective ISO standards by the Hong Kong Quality Assurance Agency. These two certificates were the first of their kind for our Company and further demonstrate our commitment to environmental protection.

For the 10th consecutive year we were the title sponsor of the "Clean Up the World in Hong Kong" Campaign organised by Green Power. More than 100 staff and their families removed 50 kilos of waste from Aberdeen Country Park after the Mid-Autumn Festival. We also collaborated with Green Power to launch Hong Kong's first ecological website devoted to Sites of Special Scientific Interest (SSSIs) at [www.hk-ecosite.com](http://www.hk-ecosite.com). The website profiles 25 SSSIs around Hong Kong that are of special scientific interest because of their flora, fauna, geological, geographical or physiographic aspects.

In 2005, we teamed up with the Conservancy Association to launch a 3-year programme aimed at greening Lamma Island and promoting sustainable development. Our target by the end of 2007 is for a total of about 2,000 trees to have been planted along the Family Trail.

Promoting energy efficiency among students is the aim of our Smart Power Campaign, launched in 2003. In 2005, close to 4,000 students from 23 primary schools took part in various activities. We launched a new round of activities in November 2005 with the theme of renewable energy.



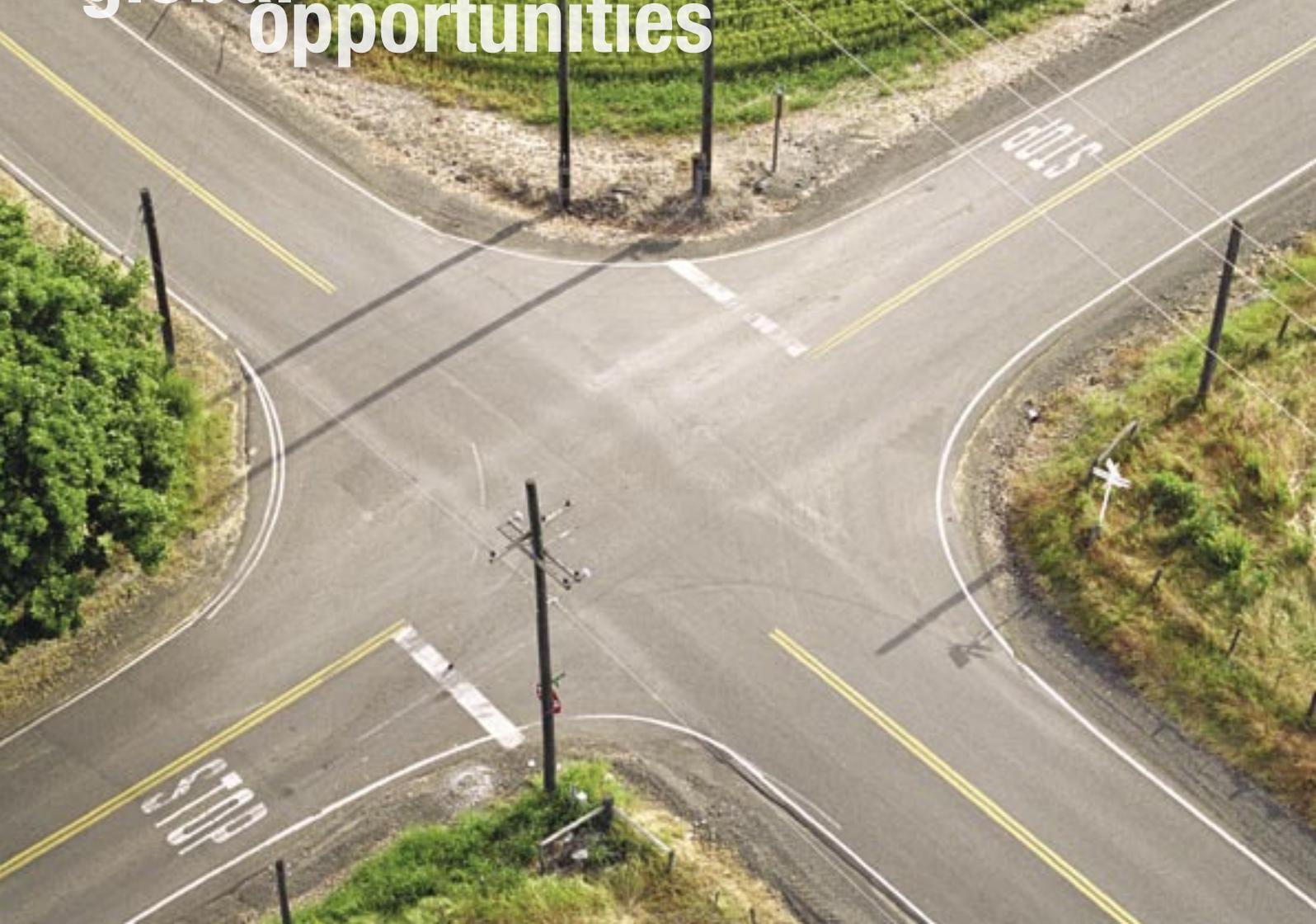
The Green Lamma Green programme jointly organised by Hongkong Electric and the Conservancy Association has pledged to plant 2,000 trees in 3 years to promote eco-tourism and sustainable development.



As part of Hong Kong's first wind power station, an adjacent exhibition centre educates visitors on renewable energy and provides real-time data on wind velocity and power output.



global  
opportunities



# business review

## INTERNATIONAL OPERATIONS

Internationally the Company looks at investment opportunities that offer earnings predictability at acceptable levels of risk. In order to capitalise on our technical expertise, we focus on the areas of power generation, transmission and distribution.

### Australian Operations

Our operations in Australia continued to perform well in 2005. Solid financial performance was achieved through a combination of increased electricity consumption and customer growth, as well as a continued focus on operational efficiency. During the year, the businesses concluded tariff resets which should ensure stable returns over the next five years.

In December 2005, Hongkong Electric International (HEI) sold 22.07% of its attributable interest in ETSA Utilities, Powercor and CitiPower, realizing a gain of HK\$1,560 million. HEI will continue to benefit from the earnings generated by the remaining 27.93% ownership in the three Australian electricity distribution networks.

### ETSA Utilities

ETSA Utilities is the sole electricity distributor in the State of South Australia, serving over 758,000 customers. The business exceeded key financial targets, maintained its safety performance and continued to focus on improving customer service.

### Powercor Australia Limited

Powercor Australia is the State of Victoria's largest electricity distributor, with a network serving over 620,000 customers. Despite some severe weather during 2005, Powercor recorded its best-ever result in terms of supply reliability, surpassing regulatory benchmarks. Customer satisfaction also continued to rise.

## CitiPower I Pty Ltd

CitiPower delivers through its distribution network electricity to over 280,000 premises across Melbourne's central business district and inner suburbs. The network set new records for supply reliability. Annual surveys of employee and customer satisfaction remained strong.



CitiPower captures rainwater in storage tanks at two of its depots for use in the high pressure washing of its vehicles.



Two ETSA Utilities employees go over plans for new customer connections near Adelaide. ETSA now installs underground powerlines in all new developments.

# business review



Melbourne at night. CitiPower supplies electricity to the heart of Melbourne and to more than 280,000 customers in the inner suburbs.



CitiPower and Powercor took the lead in introducing technology that accurately pinpoints the location of an underground cable and minimises the area needed to excavate to repair a fault.

## U.K. Operations

### Northern Gas Networks Limited

The acquisition of a 19.9% stake in Northern Gas Networks Limited (NGN) was completed in June 2005 and the business has already made a strong start in achieving both its operational and financial targets. NGN is one of eight gas distribution networks in the UK supplying gas to 2.5 million consumers in northern England from the Scottish border to South Yorkshire. The NGN network comprises 36,000 km of gas pipes.



## **Thailand Operations**

### **Ratchaburi Power Company Limited**

Financing arrangements were concluded in early 2006 for the construction of a 1,400 MW gas fired power station in Ratchaburi Province Thailand in which we have a 25% interest. Construction is scheduled to commence in 2006 and the power station is expected to be commissioned in stages commencing in 2008.

## **Associated Technical Services Limited**

Associated Technical Services Limited (ATS) is a wholly-owned subsidiary specialising in a full range of professional consultancy and engineering services in Hong Kong and overseas. In 2005 ATS completed major projects in Turkey, Thailand and the Philippines and secured eight new overseas projects and three new projects in Hong Kong.