



Hong Kong

Hong Kong's economic recovery was reflected in high electricity maximum demand in 2004 and, most dramatically, on 2 July 2004 when our local demand reached a historical peak of 6,329MW. This represented an increase of 7.7% from the previous maximum demand of 5,874MW recorded in summer 2003. This was the highest year-on-year increase in maximum demand since 1989. Local electricity sales for 2004 increased at a modest rate of 2.1% compared to 2003.

Managing such increases in maximum demand requires the elements of our Hong Kong electricity business, be it generation, transmission and distribution, to be operating to high standards of reliability, adequacy and availability. In 2004, despite the challenges imposed by these sharp increases in demand, electricity supplies were maintained at the customary high levels – a tribute to the expertise and dedication of our staff and the quality of our electricity infrastructure.

On the generating side, the increase in maximum demand compared to 2003 was 455MW, the equivalent to almost one-quarter of the current generating capacity at Black Point Power Station. On an overall basis, our

reserve margin of generating capacity (that is to say the relationship between the total installed capacity available to serve our Hong Kong consumers and the highest past demand for electricity from those consumers) fell from 40.7% to 30.6%. Our plant responded well to a challenging year, with availability at 88.4%, although this was lower than the 90.7% achieved in 2003 because of an increase in major planned preventative maintenance within our power stations.

Our transmission and distribution network coped well, notably when, in June, a period of hot and humid weather contributed to significant incremental load increases of up to 38% in some residential areas, particularly over the evening periods. Despite this, 2004 saw the best level of supply reliability we have ever achieved.

CLP continued to work hard to make the most productive and effective use of our people, infrastructure and systems. Our record in tariff management and supply reliability is a clear measure of our performance in this respect, as is our productivity which, in terms of electricity output per employee, has increased by 127% over the past 10 years.

In 2004 we continued to improve our efficiency through developments such as:

- a 400kV Gas Insulated Switchgear upgrade, which both improved reliability and reduced maintenance requirements;
- enhanced operation practices, filter performance and control and sequence optimisation at Black Point Power Station – improving gas turbine efficiency and plant performance;
- a Boiler Optimisation System for all Castle Peak “B” units which raised boiler efficiency and reduced NO_x emissions;
- ongoing roll-out of our Enterprise Work Management Systems which streamline work processes, allow better understanding of asset costs and enhance the management of assets over their full life cycle;
- the first full-year operation of our new Customer Care and Marketing System which supports the entire end-to-end service operations for customers, ranging from supply applications, meter reading and billing through to payment follow-up;
- opening our new training school at Shatin, which is equipped with the most up-to-date power systems equipment, simulators and other resources to provide an effective environment to train our workforce; and
- enhanced information technology through systems enhancements in call centre and customer service processes.

The overall strength of the management of our Hong Kong electricity business was recognised when CLP Power was named Overall Winner of the Hong Kong Management Association Quality Award 2004.

More information about our operational performance in 2004, including on tariffs and reliability, is set out in the “CLP and its Customers” section of this Annual Report.

Present demand for electricity can only be met by past investment. CLP’s policy of prudent and continuing investment, backed by certainty in the regulatory regime which enables those investments to be made and reasonable returns to be earned by our investors, continued to ensure in 2004 that Hong Kong has an



electricity infrastructure which meets the needs of our community.

Such investment is ongoing. During 2004, in order to enhance plant performance, supply quality and reliability, as well as to provide for demand created by new residential and infrastructure development projects in our supply area, CLP and CAPCO carried out a capital works programme amounting to HK\$7 billion. Major projects included the continued construction of Black Point Units 7 and 8 through CAPCO, establishment of substations (such as at San Shek Wan, Shan Mong Road and Tsing Yi Road), the laying of 3x132kV submarine cables between Lantau and Cheung Chau and the replacement of 132kV Oil Filled Cable by more environmentally friendly XLPE Cable.

A large scale project at Castle Peak Power Station saw the installation of two new Continuous Shipment Unloaders (to replace the previous Grab Unloaders). This fast track project took less than 21 months from contract award to commercial operation and improves coal unloading capacity by more than 15%. The new unloaders also reduce coal spillage and, thereby, the environmental impact of coal unloading.

In addition to such major projects we make ongoing investments in replacing or extending our system to meet demand. These, whilst they might be regarded as routine, are nonetheless on a significant scale. For example, on any typical working day we lay about 2 km of distribution cable and install one new substation.

How did we do in 2004?

In 2004 we continued with the planning of two major investments concerning our generating business.

The first of these is a package of emissions reduction measures for our coal-fired plant at Castle Peak, of which the retrofit of flue gas desulphurisation (FGD) would be the largest component. This will be a major investment, involving substantial expenditure over several years, which is necessary to allow the continued operation of Castle Peak to the latest environmental standards and to maintain coal as part of our diversified fuel mix. Our proposals in this respect were submitted to Government as part of our 2005 Financial Plan and Government approval is awaited.

The second of these projects is the development of the infrastructure needed to assure the availability of natural gas in Hong Kong, including building a LNG receiving and storage terminal for our use by early next decade. Work has started on matters such as site selection and on liaison with Government as to the environmental, risk assessment and other procedures which need to be incorporated into our planning.

The level of electricity sales, capital investment and careful management of operating costs translated into a good financial performance in 2004 from our Hong Kong electricity business.

	2004 HK\$M	2003 HK\$M
SoC revenue	26,773	25,739
Operating expenses	(19,874)	(19,522)
Profit before taxation	6,899	6,217
Taxation and Profit on China sales	(1,240)	(957)
Transfers under SoC	(296)	(365)
Share of CAPCO's net return	5,363	4,895
SoC earnings	1,425	1,386
Earnings from China Sales	6,788	6,281
Earnings from China Sales	90	82
Fixed Assets and Investment		
– SoC Fixed assets (CLP Power Hong Kong)	42,415	39,258
– Investment in CAPCO	6,296	5,983



Breakthrough at the Chi Ma Wan Tunnel on the South Lantau to Cheung Chau 132kV cable project

Electricity Sales

Our total electricity unit sales for 2004, including those to the Chinese mainland, grew 2.2% to 31,719GWh. As there was no tariff increase during the year, the increase in turnover by 4.0% to HK\$26,773 million was mainly due to fuel clause adjustment as a result of higher composite fuel price.

Local electricity sales recorded moderate growth of 2.1% to 28,632GWh. Sales were affected by the weather, which on average was cooler compared to 2003. The Commercial sector registered a rebound with 3.6% growth in sales, reflecting the economic recovery. Sales to the Infrastructure and Public Services sector also increased by 3.6%, attributable in part to the new railway infrastructure. The Residential sector recorded marginal decline of 0.4%. The decline in sales to the Manufacturing sector slowed down as a result of improved export performance.

Sales to the Chinese mainland increased by 2.6% to 3,087GWh and comprised 2,200GWh sold to Guangdong Guang-Dian Power Grid Group Company Limited and 887GWh to the Shekou Industrial Zone. The export sales assist Guangdong to meet its electricity demand and provide additional revenue that will offset costs for our Hong Kong customers. They also contribute to shareholder earnings because the profits from such sales are allocated on an 80/20 basis between customers and shareholders.

A breakdown of the unit sales growth by sector during 2004 is as follows:

	2004		Sales Increase/ (Decrease) over 2003 %	Average Annual Sales Change over 2000-2004 %
	Number of Customers '000	Electricity Sales GWh		
Residential	1,869	7,149	(0.4)	2.1
Commercial	180	11,086	3.6	3.1
Infrastructure and Public Services	75	7,564	3.6	5.5
Manufacturing	36	2,833	(0.8)	(3.7)
Total local sales	2,160	28,632	2.1	2.6
Export sales	–	3,087	2.6	37.3
Total sales	2,160	31,719	2.2	4.2

Operating Expenses

Operating expenses, including finance costs and CAPCO's operating expenses and profit, increased by 1.8% to HK\$19,874 million.

	2004 HK\$M	2003 HK\$M
Operating costs	3,166	2,817
Fuel	3,482	2,901
Purchases of nuclear electricity	4,763	5,134
Depreciation	3,452	3,439
Operating interest	415	459
	15,278	14,750
Deferral premium payment	176	494
CAPCO's profit before taxation ¹	4,420	4,278
	19,874	19,522

¹ This represents CAPCO's share of the SoC profit and China sales profit before taxation. It forms part of CLP Power Hong Kong's power purchase cost from CAPCO.

Operating costs increased by 12.4% to HK\$3,166 million in 2004 primarily due to higher government rent and

rates and disposal of obsolete fixed assets. Fuel expense rose 20.0% to HK\$3,482 million. This was attributable to higher average fuel price and more units generated during the year. The average fuel cost was about HK¢13.84 per unit generated, HK¢1.64 per unit higher than in 2003. During the year, we also purchased 9,318GWh (2003: 10,069GWh) of nuclear power from GNPS under contracts covering 70% of its output for HK\$4,763 million, a decrease of 7.2% compared to 2003. The reduction was due to extended outage period of GNPS. The decline in operating interest of HK\$44 million was mainly due to lower average interest rates and lower loan balances after ongoing repayments of CAPCO's loans.

Deferral premium payment, representing the payment for the additional costs incurred by vendors for deferred delivery of the generating plants for Units 7 and 8 of the Black Point Power Station, amounted to HK\$176 million in 2004. A special provision account has been set up to absorb this expense and was fully utilised by the end of 2004.



Transporting, lifting and installing an exhaust duct at Black Point Power Station

How did we do in 2004?

Earnings


Earnings from the electricity business in Hong Kong are determined in accordance with the requirements of the SoC. Transfers required under the SoC totalled HK\$296 million in 2004 and included:

- transfer to the Development Fund which represents the difference between the SoC profit and the permitted return;
- transfer from the special provision account which is to offset the amount of deferral premium charged to operating expenses as shown above; and
- transfer to the rate reduction reserve which represents a charge of 8% per annum on the sum of the average balances of the Development Fund and the special provision account.

Transfers under SoC

	2004 HK\$M	2003 HK\$M
To Development Fund	(219)	(572)
From special provision account	176	494
To rate reduction reserve	(253)	(287)
	(296)	(365)

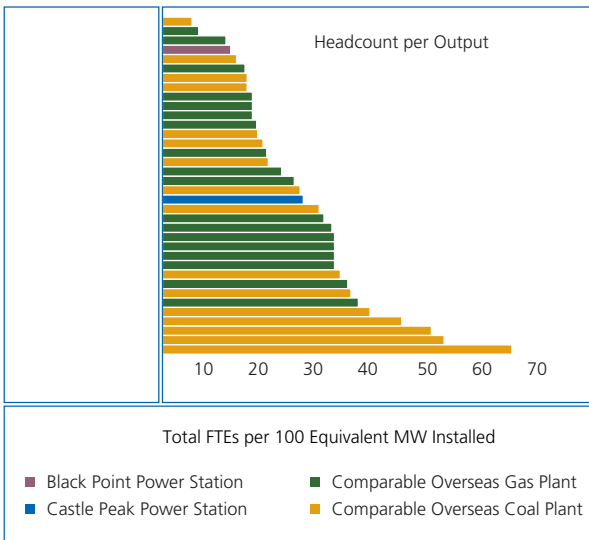
The SoC earnings, including our share of CAPCO's net return, amounted to HK\$6,788 million, an increase of 8.1% over last year. This resulted from the combined effect of on-going investments in capital work programmes to meet new demand and to enhance services to customers and lower interest cost to shareholders. Profit from China sales was HK\$90 million (2003: HK\$82 million).



Has CLP conducted any detailed benchmarking study on the efficiency of its Hong Kong electricity business in terms of headcount productivity and operating costs?

Mr. Bill Laukka
Managing Director,
J.P. Morgan Securities (Asia Pacific) Ltd.

2001 Generation Benchmarking




Headcount per Output

Total FTEs per 100 Equivalent MW Installed

- Black Point Power Station
- Castle Peak Power Station
- Comparable Overseas Gas Plant
- Comparable Overseas Coal Plant

2003 Transmission Benchmarking



Composite Service Level (Higher/Lower)

Total Overall Operations and Maintenance Cost Per Asset Base (Higher/Lower)

- Benchmarked utilities
- Global or regional average

Yes. We benchmark all the links in the electricity supply chain, from generation right through to customer services.

On the generation side, we track operating costs per output and match ourselves against the top 10% of comparable U.S. utilities. Between 1999 and 2004 we reduced operating costs per output by 24.5% and were on a par with the top U.S. performers. We also engage an external consultant every 3 years to benchmark the productivity of our Black Point and Castle Peak Power Stations against comparable overseas plant. These studies measure electricity output per Full Time Equivalent (FTE). FTE is a measure of manpower which takes into account in-post staff, contractors, overtime etc. We use this measure because utilities have differing manpower structures, varying from only directly employed staff to a high proportion of outsourcing to contractors. The latest studies, in 2002, ranked Black Point and Castle Peak as a top performer and median performer respectively.

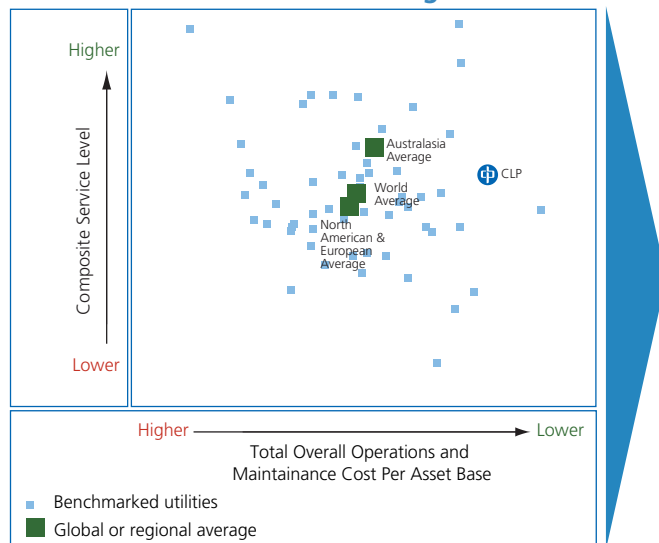
We carry out benchmarking exercises on our transmission and distribution functions at about four-year intervals. We also conducted a benchmarking study in 2003 on customer services. These exercises analyse our performance on costs and service and compare this to benchmarked utilities in the U.S.A., Europe, U.K., Asia and Australia. The results of the most recent exercises are summarized below (the current plan is to complete the next benchmarking in 2007 for transmission and 2005 for distribution). They indicate that our Hong Kong electricity business is a cost-efficient performer with above average service levels in customer services, as well as in the operation and maintenance of its transmission and distribution activities.

Much of the present debate on the future of the Scheme of Control post-2008 has focused only on levels of return. The figures set out below indicate that a more balanced reflection is justified – one which takes proper account of the success of the SoC in promoting excellence in productivity, cost-control and service.



Betty Yuen
Managing Director,
CLP Power Hong Kong

2000 Distribution Benchmarking



2003 Customer Services Benchmarking

