

How do we manage risk?

Effective management of risk contributes to management of CLP's reputational risk: the loss of confidence by shareholders and other stakeholders in the Company's ability to manage its affairs and to meet its obligations to them.

Why does risk management particularly matter to CLP?

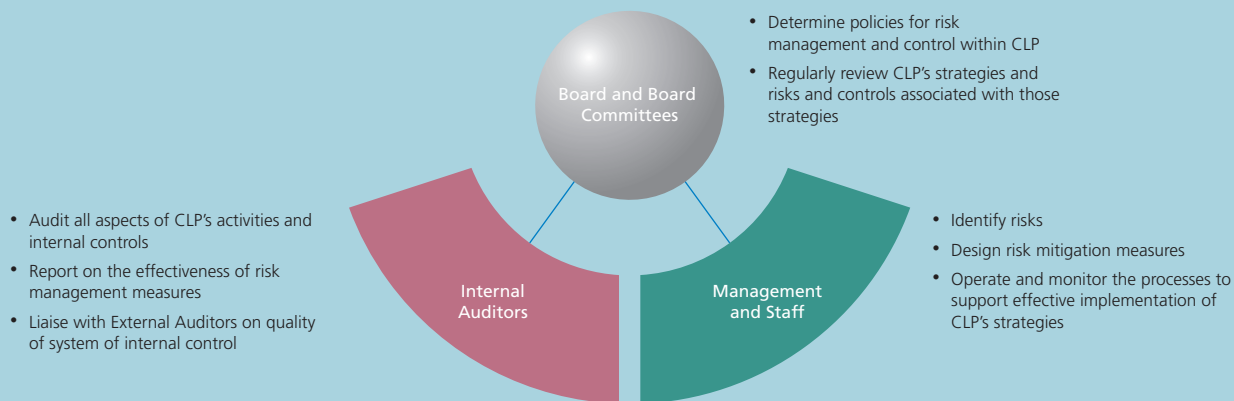
Our "franchise" from the Hong Kong community to provide an essential service depends on the community's trust in our ability to deliver a first-class electricity supply in all respects, including reliability, reasonable tariffs and, of increasing importance, responsible environmental management

The significant extent to which our business, in Hong Kong and elsewhere, is subject to regulation (economic and environmental) and, therefore, vulnerable to the exercise of political and regulatory authority

Our need for firm support from capital providers, both shareholders and lenders, to support the large-scale and long-term capital commitments which our business demands

Our status as a "traditional" utility company, concentrating on the electricity business and aiming to provide stable earnings to our shareholders and a reliable and predictable performance to all our other stakeholders

Who is responsible for managing risk?



How do we analyse risk?

Financial Risks

Mitigation Measures

Market Risks

Mitigation Measures

Operational Risks

Mitigation Measures

This section of the Annual Report is intended to illustrate the attention we pay to the protection of our reputation and our commitment to honest disclosure to our shareholders of risk factors affecting our business.

Financial Risks

Cash Flow and Liquidity

The electricity business is highly capital-intensive and returns are generated over a long term. It is important that CLP guards against the risks arising from cash flow and liquidity problems. Our overall objective is to act prudently to ensure that the Group has adequate cash flow and access to funding sources from our established businesses to fund our working capital requirements, debt service payments, dividends to shareholders and potential new investments.

This risk is managed through prudent treasury policies and management which include the following:

- We closely monitor our cash and resources, including contingent liabilities (see chart on pages 44 and 45) that might call on those resources. We maintain a conservative capital reserve, emphasise that capital is expensive, prioritise competing claims on capital and review our position regularly to ensure that cost-efficient funding is available for operating expenses, capital expenditure needs and for business expansion in Hong Kong and overseas;
- We maintain an appropriate mix of committed credit facilities with staggered maturities which allow us to reduce our refinancing risk in any year. We also seek to tap into the capital markets through established medium term note programmes put in place with the respective wholly-owned subsidiaries of CLP Power Hong Kong (CLP Power) and CLP Australia Holdings Pty, trading as TRUenergy, thereby allowing us to diversify our funding sources and lengthen our average maturity;
- When the Group has surplus cash, we seek to pay down our existing revolving loans to the extent possible. Deposits are only kept with creditworthy financial institutions or invested in safe, liquid instruments consistent with our internal treasury policies and business needs;
- We seek to repatriate dividends back to the Group as soon as practicable unless underlying business needs dictate otherwise. To the extent that our subsidiaries and affiliates have significant cash reserves, we are actively involved in developing and monitoring appropriate cash management policies and strategies; and
- We strive to maintain the credit ratings of the Company, CLP Power and TRUenergy at appropriate high investment grade levels through careful control of our debt to total capital ratios to support funding and investment as well as provide financing flexibility for future growth and acquisitions.

Accounting and Financial Reliability and Integrity

Improper financial reporting and accounting can lead to a significant loss of market confidence that can impact access to funding and underlying company valuations. No company can ever be free from the shadow of individual misdeeds.

CLP does everything reasonably possible to protect itself and its shareholders against such risks, including the following:

- Our Value Framework sets out the principles and ethics which cover all aspects of our operations. It also includes our Code of Conduct which places all employees, officers and directors under specific obligations as to the standards of integrity and behaviour CLP requires;
- CLP's Code on Corporate Governance and the Corporate Governance Report on pages 98 to 111 of this Annual Report explain the systems, checks and balances we implement to ensure that the Company's affairs are properly directed and controlled; and
- The Group is subject to the recent U.S. legislation commonly referred to as the Sarbanes-Oxley Act. Pursuant to that legislation, the Group will report on the effectiveness of its internal controls by year-end in the 2006 annual report. In 2005, the Group completed the testing of all significant internal control processes other than those associated with the new business purchased in Australia. Testing related to the Australian business is currently underway and will be completed prior to the year-end 2006 deadline. Even if CLP successfully deregisters from the U.S. Securities Exchange Act (meaning that we would no longer be subject to the Sarbanes-Oxley Act – see page 77) we believe that we will have benefited from the review of our internal control processes.

Pension Obligations

Long-term financial exposure can arise from under-funded pension obligations owed to employees, particularly at times when stock market performance is poor and the levels of investment returns are low.

CLP has managed most of its exposure in this area by transferring all of its employees in Hong Kong (representing more than 80% of our total workforce) from defined benefit schemes (where the level of pension benefits is, in effect, guaranteed by CLP irrespective of the performance of the underlying investments) to a defined contribution scheme (where the contributions by employer and employee are defined, the investment decisions are made by the employees and the final level of benefits payable is determined by the actual performance of the underlying investments).

In Australia, approximately 30% of the current TRUenergy workforce are members of defined benefit schemes. The under-funded pension and lump sum obligations owed to employees are recognised as a liability in CLP's accounts and CLP is making additional voluntary contributions to accelerate the reduction in this liability, although this liability is not material in the context of the Group as a whole.

Credit Risks

The Company, its subsidiaries and affiliates enter into various forms of transactions including interest rate and foreign currency hedging, deposits, energy hedging and trading.

Prudent risk management policies include:

- All finance-related hedging transactions and deposits of the Company and its direct principal subsidiaries are made with counter-parties with acceptable credit quality in conformance with Group Treasury policies;
- Mark-to-market limits are assigned to each counter-party in order to limit credit risk concentrations relative to the underlying size and credit strength of each counter-party. The Group also monitors potential exposures to each financial institution counter-party utilising value-at-risk methodologies;
- All derivative transactions are entered into at the sole credit of the respective subsidiaries and affiliates. The counter-parties have no recourse (cash collateral, guarantee or other forms of security) to the Company for potential change in market value of derivatives; and
- TRUenergy's energy-related hedging and trading are carried out with approved institutions or counter-parties that have acceptable credit standing at defined limits in accordance with its risk management policies.

Interest Rate Risks

Whether investing or borrowing, interest rate movements create both risks and opportunities that need to be addressed.

It is the Group's policy to mitigate interest rate risk through the use of appropriate interest rate hedging instruments and fixed rate borrowings that protect current and future corporate profitability from interest rate volatility.

- At CLP Power, this is done through an annual review to determine a preferred fixed/floating interest rate mix appropriate for its business profile; and
- In the Group's overseas investments, each project company develops its own hedging programme taking into consideration project debt service sensitivities to interest rate movements, lender requirements, tax and accounting implications. The purpose of each programme is to produce a risk profile appropriate to the specific business, and consistent with the Group's strategic objectives.

At year-end 2005, the Group's fixed rate debt as a proportion of total debt was approximately 54%.

Foreign Currency Risk

Currency exposures exist when assets or liabilities such as cash, receivables, payables (including those related to electricity purchases), securities and project equity investments are denominated in foreign currencies different from the functional currency of the respective Group entity. The Group's major foreign currency exposures arise from investments outside Hong Kong and CLP Power's significant foreign currency obligations related to its U.S. dollar-denominated debt, nuclear power purchase off-take commitments and fuel-related payments.

The Group addresses these risks in the following ways (see also Note 3 to the Accounts):

- Where appropriate and available on a cost-efficient basis, we seek to finance our overseas project investments through the use of domestic funding sources. In addition, certain projects utilise direct and indirect indexing provisions in their project agreements to match the projects' foreign exchange costs. The objective of each project company is to be resilient to adverse movements in key currency exchange rates in order to continue to meet its debt service requirements and achieve an acceptable investment return;
- We do not hedge foreign currency translation gains and losses that are included in the equity section of the Group's balance sheet as a result of the conversion of project company financial statement accounts into the Group's functional currency. Such translation gains or losses do not affect the project company's cash flow or the Group's annual profit until an investment is sold. Our view is predicated on the resilience of the Group's debt/total capitalisation ratios to currency movements, the high cost associated with hedging the exposure, limited availability of effective hedging instruments and our long-term view on our investments and the underlying economic prospects of our target countries; and
- CLP Power's foreign exchange risk is mitigated through the current regulatory regime that allows for a pass-through of foreign exchange gains and losses. As a measure of additional prudence, CLP Power hedges all its U.S. dollar debt repayment obligations for the full tenor and a significant portion of its forward U.S. dollar obligations (nuclear off-take, coal, gas and oil purchases) for up to five years provided that the hedging can be accomplished at rates below the Hong Kong Special Administrative Region Government's historical target peg rate of 7.80.



Dr. Johnnie Chan *Chief Estate Manager, Hutchison Whampoa Properties Limited (left)*

In 2005 there were many news reports on proposals by potential new entrants to sell power in Hong Kong. Could CLP be obliged to open its network to new entrants?



Andrew Brandler *Chief Executive Officer (right)*

There are two principal ways in which new entrants might sell power in Hong Kong. The first is by constructing and operating their own electricity system. There would be significant financial, commercial, operational and environmental challenges to any new entrant proceeding on this basis. It is a matter for new entrants themselves as to whether they wish to tackle these challenges – CLP has no statutory monopoly or protected franchise in our supply area.

The second way is for new entrants to seek to make use of CLP's existing electricity infrastructure to carry power, which they generate or purchase, to their customers. This gives rise to major issues such as third parties seeking to 'cherry pick' particular customers, 'free riding' on the back of infrastructure provided for all customers and interference with the property rights of CLP as the private sector owner of the existing electricity infrastructure. There are also serious implications in terms of the use of systems differently to the manner in which they were originally designed and built and sharing the accountability and responsibility (presently borne by CLP alone) for the provision of an electricity service to Kowloon and the New Territories.

Although I would not rule out efforts by new entrants to seek to sell power to selected customers in Hong Kong, there are many obstacles to this, including our determination to offer local customers a level of tariffs, reliability and customer service which it will be extremely hard to better.



Market Risks

Reliance on a Single Earnings Source

Reliance on Hong Kong's electricity business as the sole source of our earnings would expose the Company to "single market risk" through vulnerability to slowing electricity demand growth in Hong Kong and potential adverse regulatory change.

In response to this risk, CLP has developed businesses in the Chinese mainland and Asia-Pacific region, so as to move the Group away from dependence only on earnings from the existing Hong Kong business. Outside Hong Kong, we have sought to establish a meaningful presence in a number of countries, as opposed to focusing on any one country only and thereby creating a substantial financial exposure to regulatory and market risks in that country. The acquisition of the MEB in Australia during 2005 was an example of our determination to broaden our earnings base.

Regulatory Change in Hong Kong

In Hong Kong, CLP faces regulatory risk in the form of possible adverse regulatory change post-2008 and more stringent environment control.

A range of measures address these risks:

- continued competent and effective operation of the Hong Kong electricity business as measured, for instance, through supply reliability, reasonable tariffs and high quality of customer service. This demonstrates the merits of the current regulatory regime and reinforces our reputation as a responsible and trusted public service provider;
- engagement with our stakeholders, so that they have a realistic and informed appreciation of our performance under the existing regulatory regime and the risks and implications of alternative regulatory structures; and
- proactive participation in the management of Pearl River Delta air quality issues, such as by actively pursuing the development of long-term gas supply to our generating plants in Hong Kong, introducing ultra low sulphur coal for power generation and developing plans for installation of flue-gas reduction equipment to reduce emissions from our coal-fired power stations. We also liaise closely with the Hong Kong Government regarding the development of emission caps for the power generation sector as well as the development of renewable energy in Hong Kong.

Increased Competition

Competition for our electricity business may come in a number of forms:

- Competition from gas suppliers in the domestic and commercial sectors, which may become more intense with the introduction of natural gas as a new feedstock for gas production; and
- Loss of business to electricity competitors, whether domestic or from Guangdong.

In the face of such risks, we:

- aim to provide a reliable supply of electricity and quality customer services at a reasonable cost which ensures that our customers would choose CLP, even if alternative energy suppliers were or were to become available;
- make considerable efforts to introduce new products and applications to customers and continue to promote the efficient use of electricity; and
- will seek to ensure that the Hong Kong Government provides the opportunity for CLP Power to compete for customers outside our traditional supply area if others are encouraged to compete within it.

Mainland Power Tariffs

A key risk in the China market is the need to agree tariffs with the relevant authorities for each new generating plant as it is commissioned and then for tariff levels to be reviewed and approved by them on a regular basis.

This tariff risk can be addressed through:

- careful pre-investment analysis to ensure that the cost of generation from the proposed asset (whether greenfield or existing) will be competitive in the market to which electricity will be supplied. This also involves consideration of the supply/demand balance in that market, so as to provide assurance that the plant will actually be despatched to an extent and at prices which will be economically viable;
- demonstrating the capability to build projects in the Mainland at domestic cost levels, which are significantly lower than international levels;
- the ability to operate projects at international cost levels, which are lower than domestic levels; and
- establishing and maintaining a good relationship with the tariff approval authorities, based on a reputation for responsible and efficient plant operation.

Energy Trading Risk

Our Australian business is a vertically integrated business involved in power generation, gas infrastructure and retail electricity and gas sales operating in the National Energy Market. Because of its vertically integrated business structure, a majority of TRUenergy's cash flows are internally hedged as a result of the combination of balance in its generation and retail portfolio along with its diversified generation mix (merit order, fuel type, multiple units).

In addition to its physical market position, TRUenergy does participate in energy trading in the Over the Counter (OTC) bilateral and exchange-traded markets. While the majority of energy trading is in support of marketing TRUenergy's unhedged generation capacity and gas positions, this activity does create exposures which must be actively monitored and managed.

TRUenergy addresses these risks in the following ways:

- A comprehensive risk management policy framework is in place which establishes the delegation of authorities for trading activities, the types of products that are allowed and counter-party credit limits. The policy also defines the appropriate value-at-risk and stress test limits on the overall energy market exposures;
- Trading execution ("Front Office"), risk management ("Middle Office") and settlement ("Back Office") responsibilities are all segregated into different departments, providing a separation of duties that provides appropriate checks and balances;
- On a daily basis, the risk management office monitors the underlying energy trading positions using a suite of systems in place for pricing, forecasting and valuation. The risk management office provides regular reports to TRUenergy management; and
- A comprehensive governance process is in place to provide management oversight of trading activities. In particular, a Risk Management Committee, representing the TRUenergy Board, meets on a regular basis to review the overall risk management policies and positions of TRUenergy.

Uncertain China Sales from Hong Kong

Whilst in the short term electricity sales to Guangdong are expected to continue due to the shortage of generation capacity, in the medium term, the supply/demand imbalance situation may ease and Guangdong may no longer require electricity imported from CLP Power.

To mitigate the risk of an earlier than expected decline in China sales, we:

- provide reliable power to those customers and strive to maintain an excellent working relationship with them; and
- are exploring the possibility of a longer-term supply agreement with Guangdong with an appropriate pricing strategy.

Operational Risks

Supply Reliability

A major risk for an electricity supplier, and one to which the community would rightly be extremely sensitive, comes through the possibility of prolonged shutdown of generating plant due to critical plant systems breakdown or high unplanned outages and abnormal voltage deviations.

Amongst the many steps taken by CLP in Hong Kong in response to these risks are:

- Hazard and Operability (HAZOP) and Re-HAZOP studies of plant systems; for example, in 2005 more than 15 plant systems or key processes were assessed in detail;
- Backup systems for critical process control;
- Continued identification and implementation of supply reliability and quality improvement projects such as:
 - Super typhoon assessment on our power generation systems. This assessment concluded that our generating facilities were generally well protected against storm forces, although some transmission and distribution facilities will need some strengthening, which we are putting in hand; and
 - Close monitoring of the rapid load growth and potential impact of increasing West-to-East power transfer to Guangdong due to the strong economic growth in Southern China. System enhancement measures such as commissioning of a power stabiliser on CLP's new generator have been implemented to reduce the system stability performance risks; and
- Contingency planning to protect our staff and operations against the outbreak of avian flu (or other pandemic phenomenon).

Availability of Generating Units

The main risk for private sector power producers is a need to achieve high availability of their generating units in order to earn the planned revenue, whether this be under long-term power purchase agreements with state-owned generators (as in Thailand and Taiwan) or in competitive generation markets such as Australia.

We are an experienced power plant constructor and operator. Our core industry skills form the basis for our management of this risk. With close monitoring of plant conditions and the deployment of fit-for-purpose information technology, coherent plans for the necessary maintenance and overhaul works are developed to ensure that adequate capacities are available to meet system demands at all times. We pay particular attention to:

- Determining the root causes of all operational incidents that cause loss of availability and implementing targeted remedial measures;
- Applying our experience and knowledge across the Group's complete generating portfolio; and
- Assessing long-term capital expenditure needs to maintain the performance of aging plant.

Information Technology

All aspects of our business, right through from power generation to customer billing, are heavily dependent on the quality and reliability of our IT infrastructure. In addition to the risk of system failure, new threats to IT security are constantly emerging in the IT and internet community.

CLP manages these risks by:

- maintaining a strong and experienced in-house IT capability;
- avoiding the introduction of new IT systems which have not yet been fully tried, tested and proven;
- proactive implementation of security measures to safeguard CLP's information assets;
- regular testing of Disaster Recovery Plans; and
- proactive management and monitoring of IT systems availability through sophisticated software tools.

Physical Damage and Liabilities

Management is responsible to shareholders for the effective stewardship of the Group's physical assets. These are at risk of physical damage if there are any shortcomings in the way in which they are designed, constructed, operated and maintained.

CLP uses its Operations Integrity Management System (OIMS) as a framework for the disciplined and proactive management of such risk. The framework includes 11 broad management principles (for example, that inherent safety can be enhanced by using sound standards, procedures and management systems for facility design, construction and start-up activities) and 60 requirements (for example, that a quality control and inspection system must be in place to ensure that facilities meet design specifications and that construction is in accordance with the applicable standards).

OIMS includes a process of Operations Integrity Assessment and Improvement to assess the degree to which requirements are met, to improve operations integrity and maintain accountability. These assessments are conducted by multi-disciplinary teams including expertise from outside the immediate unit.

The OIMS framework was first applied by CLP to its facilities in Hong Kong and forms part of the disciplines applied at our assets elsewhere to manage risk to personnel, facilities, the public and the environment.

Human Resources Capability

In common with other utilities, CLP faces the risks associated with an aging workforce and accelerating retirement. Recruitment difficulties may lead to shortages in technical skills to meet operational needs, as well as in our pool of talent to provide the future leadership and general management strength for our business.

In response to these risks, CLP is

- introducing long-term manpower planning for engineering skills in Hong Kong;
- monitoring, at Board and senior management level, our management development and succession planning processes and the progress made in developing colleagues with high potential;
- using the scope of our complete portfolio to develop staff more effectively than by any one single asset;
- actively managing the movement and development of technical and professional staff;
- establishing knowledge management platforms to facilitate the sharing of technical and managerial skills;
- recruiting trainees and apprentices and providing them with structured training and development programmes; and
- operating its own new Training School in Hong Kong to give trainees real-life experience in the installation, operation and maintenance of the power systems in a training environment.

Technology Developments

Technology development can present both risks and opportunities for us.

CLP tracks new technology developments which help build the knowledge that we will need to use in the future. In 2005, the focus was on fuel cells and coal gasification. We identified the solid oxide fuel cell as a technology that shows promise for cost-effective operations in a utility setting. We will be pursuing this further as this technology moves from prototypes and custom designs to large scale production. We are also looking for opportunities to participate in the development and demonstration of clean coal technology, such as the integrated gasified combined cycle.

Looking ahead, CLP perceives two major change drivers in our service areas – competitive pressure and environmental concerns (including climate change). In addition to building knowledge for us to manage these issues, CLP will:

- expand our global perspective on emerging technologies;
- grow the practice and means of knowledge sharing;
- demonstrate a culture of innovation and learning in critical areas; and
- build and maintain productive relationships with the academic and research communities.

Environmental Regulations

Our power generation and distribution operations in Hong Kong, the Chinese mainland and Asia-Pacific region are subject to local laws and regulations relating to environmental performance and safety.

We mitigate these risks by:

- close monitoring of the environmental aspects of our business at all levels of the Group – from front-line staff to the Board;
- analysing and addressing environmental issues at all stages of our activities – from pre-investment due diligence through ongoing operations to decommissioning;
- aiming for continuous improvement in environmental performance across the range of our assets, including those in which we have less than a majority stake;
- investigation and, where feasible, adoption of technology and renewable energy opportunities to improve environmental performance; and
- willingness to make the additional investment required to enhance environmental performance, recognising that this will be to the long-term benefit of our asset.


Climate Change

Our operations may be affected by laws and regulations (and resulting mitigation measures) required to address issues relating to greenhouse gas emissions from power generation – as part of growing international concern about global climate change.

To mitigate this risk we have developed a Group Climate Strategy Framework, which will operate at two levels.

Firstly, at the jurisdiction level (national and/or state) where CLP operates – primary risk management. For example, we will assess current and expected regulations in each jurisdiction as part of our annual business cycle.

Secondly, at the Group-wide level where we will seek to balance risks and opportunities in the overall Group investment and operating portfolio and to address reputational risk and the concerns of investor groups.

A fuller explanation of this Group Climate Strategy Framework is set out in our Social and Environmental Report on page 10. 



Q: *Mr. David Clark* Director, Head of Utilities Research, Asia, Deutsche Bank AG, Hong Kong Branch (left)

Is there a significant risk that shareholders could bear the brunt of pollution charges in Hong Kong?



A: *Betty Yuen* Group Director – Managing Director Hong Kong (right)

No – because such an outcome would be wrong and wholly unjustifiable. There has been recent discussion, including in Government circles, about 'polluter pays', a phrase which has been taken to mean that investors should somehow shoulder all or part of the cost of investing in emissions reduction equipment at our Castle Peak coal-fired power station. When the investment was made in the 80s to build that facility, Government, on behalf of society, carefully scrutinised and approved the installation of generating equipment which was state of the art at that time.

If Government now decides, years later, that investments should be made to modernise that equipment, using new technology to reduce emissions further, then this can be done. However, these investments must be considered as forming part of the costs to our society of providing it with an electricity supply of the quality it demands, including enhanced environmental performance. This is a straightforward point – to take another example, if you bought a car equipped with a catalytic converter (or retrofitted one to your old car) you would not expect it to be provided free by the car manufacturer.