

# How do we manage risk?

## Risk Management

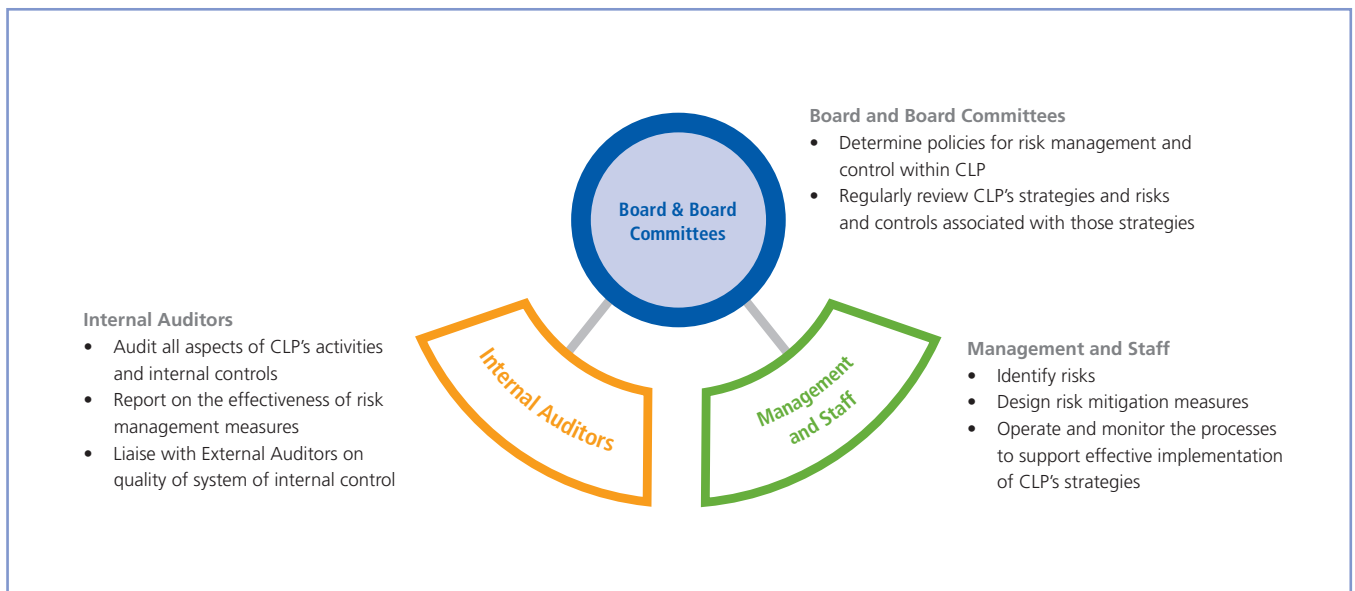
The purpose of risk management is to safeguard CLP's ability to meet its obligations to its stakeholders and to maintain their confidence that CLP can and will continue to meet those obligations in future.

## Stakeholders

The key stakeholders in the effective management of risk by CLP include:

<p><b>Communities</b> Support from the communities we serve, particularly in Hong Kong where we are the sole electricity supplier in our service area, depends on their trust in CLP's ability to deliver a first-class electricity supply in all respects.</p>	<p><b>Governments</b> Our activities are subject to economic and environmental regulation and vulnerable to the exercise of political and regulatory authority. We must earn the confidence of governments and regulators in CLP's expertise and our commitment to meet our legal obligations and operate in a responsible manner.</p>	<p><b>Shareholders and Lenders</b> We need firm support from capital providers, both shareholders and lenders, to support the large scale and long-term capital commitments which our business demands.</p>	<p><b>Suppliers</b> Our suppliers, particularly those under long-term fuel supply contracts which involve substantial payment running over decades, need assurance that CLP is a credible business partner, determined to respect its legal and contractual obligations.</p>
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Who is responsible for managing risk?



How do we analyse risk?

<p>Financial Risks Mitigation Measures</p>	<p>Market Risks Mitigation Measures</p>	<p>Business Risks Mitigation Measures</p>	<p>Social and Environmental Risks* Mitigation Measures*</p>
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\* These are discussed in the "Corporate Citizenship" and "Risk Management" sections of the 2006 Social and Environmental Report. <img alt="SER logo" data-bbox="768 924 797 936"/>

## Financial Risks

### Cash Flow and Liquidity

The electricity business is highly capital-intensive and returns are generated over a long term. CLP must guard 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 expected liquidity requirements and contingent liabilities (see chart on pages 30 and 31) 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 Ltd (trading as TRUenergy). This allows 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 total 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.

Although 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:

- 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 103 to 118 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 U.S. legislation commonly referred to as the Sarbanes-Oxley Act. Pursuant to that legislation, the Group is required to report annually on the effectiveness of its internal controls over financial reporting commencing the financial year ending 31 December 2006 to the U.S. Securities and Exchange Commission. 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 76) 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 around 70% of the Group's 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 25% of the current TRUenergy workforce (or around 6% of the Group's total 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 financial statements. 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 Risk

The Company, its subsidiaries and jointly controlled entities and associated companies enter into various forms of transactions including interest rate and foreign currency hedging, deposits, energy hedging and trading. Our overall objective is to safeguard the Company and its entities against potential loss arising from non-performance by the counterparty.

Prudent risk management policies include:

- All finance-related hedging transactions and deposits of the Company and its direct principal subsidiaries are made with counterparties with acceptable credit quality in conformance with Group Treasury policies. The credit quality is closely monitored over the life of the transaction. Therefore, the possibility of material loss arising in the event of non-performance by a counterparty is considered to be remote;
- Mark-to-market limits are assigned to each counterparty in order to limit credit risk concentrations relative to the underlying size and

credit strength of each counterparty. The Group also regularly monitors potential exposures to each financial institution counterparty utilising value-at-risk methodologies;

- All derivative transactions are entered into at the sole credit of the respective subsidiaries and affiliates. The counterparties have no recourse (cash collateral, guarantee or other forms of security) to the Company for potential change in the market value of derivatives; and
- TRUenergy's energy-related hedging and trading are carried out with approved institutions or counterparties that have acceptable credit standing at defined limits in accordance with its risk management policies.

Additional information is included in Note 4 to the Financial Statements.

## Interest Rate Risk

Whether investing or borrowing, interest rate movements create both risks and opportunities that need to be addressed. Our overall objective is to reduce interest rate volatility and to achieve higher levels of stability and predictability of earnings.

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 2006, the Group's fixed rate debt as a proportion of total debt was approximately 48% (see also Note 4 to the Financial Statements).

### 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 4 to the Financial Statements):

- 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. To achieve that, each project company develops its own hedging programme taking into consideration any indexing provision in project agreements, tariff reset mechanisms, lender requirements, tax and accounting implications;
- 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 statements 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 total debt to total capital ratio against 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. The objective is to reduce the potential adverse impact of foreign currency movement on electricity tariff in Hong Kong.

## Market Risks

### Mainland Power Tariffs

Tariffs in the China market are regulated and approved by the relevant authority. Increases in cost are not totally compensated by corresponding increases in tariff. Tariff levels for new plant are transparent, with "benchmark tariffs", for each regional province being applied to new generating plant.

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.

### Reliance on a Single Earnings Source

Reliance on Hong Kong's electricity business as a 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, moving the Group away from dependence only on earnings from its longstanding Hong Kong business. We have now established a meaningful presence in a number of countries, to the point that we are amongst the leading external investors in the electricity sectors of the Chinese mainland, Australia, India, Taiwan and Thailand. In 2006, 29.2% of Group earnings came from outside Hong Kong, compared to only 6.2% in 1996.

### Energy Trading Risk

Our Australian business is a vertically integrated business involved in power generation and retail electricity operating in the National Electricity Market, as well as gas infrastructure and gas sales. 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 and 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 counterparty 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 Board of CLP Australia Holdings Pty Ltd, meets on a regular basis to review the overall risk management policies and positions of TRUenergy.

### Increased Competition

Competition for our electricity businesses may come from gas suppliers in the domestic and commercial sectors and from loss of business to other electricity suppliers.

In the face of this risk, we:

- benchmark our customer service performance with world utilities and strive for improvements that will enhance our competitiveness in both service quality and cost;
- aim to strengthen customer relationships, better understanding and meeting their needs, whilst providing a highly reliable electricity supply at value for money prices;
- introduce new products and applications to customers and continue to demonstrate the value which CLP can add in their homes and businesses; and
- within Hong Kong, seek to ensure that, if the Hong Kong Government provides the opportunity for others to compete for our existing customers, it also provides the opportunity for CLP to compete for customers outside our traditional supply area.

## Business Risks

### Supply Reliability

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

Within Hong Kong, CLP continues to implement a five-year Re-HAZOP programme (hazard and operability study), a systematic risk profile evaluation and a range of plant improvement projects to ensure that supply reliability risks are under control. In 2006, 22 systems and key processes were reviewed in detail as part of this programme.

### Human Resources Capability

In common with developed economies in general, and utilities in particular, CLP faces the challenges associated with an ageing workforce and accelerating retirement rates. Unless these challenges are anticipated, and appropriate measures put in place, this would mean a risk of shortages in the skills required to meet operational needs, as well as in the talent pool needed to provide the future leadership and general management strength for our business.

At the same time, accelerating retirement will create more opportunities for internal promotion of our existing staff, which would be limited if headcount remained stable and voluntary turnover low.

In anticipation of the impact of workforce ageing, our Hong Kong business has implemented the following strategies that reflect international best practice in workforce planning:

- A rolling 5 year manpower planning framework was introduced in 2002 for hard-to-fill technical and operational positions, in order to project future demand accurately.
- Based on the demand forecast, trainees and apprentices are recruited each year to replenish supply and rejuvenate the organisation. These recruits are provided with structured training and development.
- A range of knowledge management initiatives have been implemented to elicit, document, and share critical knowledge that may be at risk when staff retire.
- We continue to invest in the training and development of our staff, to prepare them for the internal promotion opportunities that will arise as a result of retirements.

Recognising the progress that our Hong Kong business has made in managing this risk, in 2007 our best practices and experiences will be transferred to TRUenergy.

In addition to the specific measures taken to anticipate the impact of workforce ageing on our operations, CLP also:

- carries out a regular management development and succession planning review to ensure that we have adequate succession plans in place, and are identifying and developing a pool of high potential colleagues to maintain our management bench strength.
- takes advantage of our regional expansion to create more opportunities for personal and career development.

Due to the impact of projected retirements, recruitment activity is also projected to increase in future years. We recognise that some parts of our business operate in highly competitive recruitment markets, where it is an ongoing challenge to attract and retain staff. We have established processes to ensure that remuneration and benefits are competitive in each of the markets in which we compete, so that we are able to attract and retain the quality and quantity of talent needed to meet our business plans.

### Physical Damage and Liabilities

Management is responsible to shareholders for safeguarding 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's physical asset management disciplines aim to optimise the cost, performance and risk exposures, associated with availability, efficiency, quality, life expectancy and regulatory safety and environmental compliance.

A key tool is our Operations and Integrity Management System (OIMS), a framework for the structured, disciplined and proactive management of the risks to plant throughout the cycle from design to decommissioning. The framework includes 11 broad management principles and 64 more specific requirements. A process of Operations Integrity Assessment and Improvement assesses the degree to which the necessary requirements are met, in order to approve operations integrity and maintain accountability at all levels. These assessments are conducted by multi-disciplinary teams, including expertise from outside the unit under scrutiny.



## Availability of Generating Units

The main risk for private sector power producers is the need to maintain high availability of their generating units in order to earn planned revenue, whether under long-term power purchase agreements or in competitive generation markets.

We are an experienced power plant constructor and operator and our core industry skills form the basis for our management of this risk. With close monitoring of plant conditions, plans for the maintenance and overhaul works are developed to ensure that adequate capacity is available to meet system demands or power purchase agreement obligations at all times. We pay particular attention to:

- determining the root causes of all operational incidents that cause loss of availability and implementing effective 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 ageing plant.

## Counterparty Risk

A private sector power producer, such as CLP, often relies on a single, usually government-owned, contract counterparty for 100% of the revenues from any given generating plant. The risk is that this counterparty proves unable or unwilling to honour its payment obligations, leaving us with no alternative way to earn revenues from an immovable asset.

This is an inherent risk in our industry, particularly when operating in markets which may lack political, economic or regulatory stability. We mitigate this risk in a number of ways:

- Pre-investment country risk analysis;

- Caution in entering contracts on terms which may appear initially to be highly favourable – thereby attracting the danger of subsequent unilateral amendment by the counterparty or regulatory clawback;
- Risk-sharing with local partners;
- Use of international or multi-lateral financing sources as a form of political risk insurance;
- Aiming to be a low cost electricity producer; and
- Building long-term relationships with regulatory authorities and governments – including through operating in a responsible way, such as with respect to environmental performance.

## Technology Developments

Innovation in technology and its applications can provide opportunities for CLP to improve our operations and even to operate in new ways to provide new value to our customers. If we were to overlook key developments, we could be at risk of not meeting our obligations or of declining competitiveness.

CLP manages these risks and opportunities by:

- tracking key developments in the energy sector through our international network of energy sector businesses, equipment manufacturers, major energy users, and the academic and research communities;
- allocating both budget and staff resources to trials of new equipment and processes;
- facilitating transfer of new knowledge across the Group and throughout the organisation, both electronically and face-to-face;
- creating new business entities to pursue emerging opportunities, such as renewable energy; and
- maintaining a work environment that welcomes innovation.

## What would happen if Government refuse to renew the SoC in 2008?



**Mr. Ng Chau Shung**  
Shareholder

The SoC is an agreement which CLP entered into voluntarily with Government, recognising the importance to Government and Hong Kong people, of oversight of this essential public service.

The SoC comes to an end on 30 September 2008. As a responsible corporate citizen, CLP believes it is the right thing to reach an agreement on a renewed SoC, in order to confirm and safeguard the continuing balance of the interests of CLP and the public. However, if an agreement to renew the SoC cannot be reached with Government, this does not stop CLP's ability to continue to supply electricity to Kowloon and the New Territories.



**Andrew Brandler**  
Chief Executive Officer