



March 2006

CLP's Response to Government's Consultation Paper
on Future Development of the Electricity Market in
Hong Kong – Stage II Consultation

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Black Point Power Station: built by private sector investment to provide clean power to our community for a quarter of a century and beyond

The Government's Consultation Paper proposals significantly increase regulatory risk, disincentivise environmental investments and reduce shareholder value to a level which is unsustainable to attract long-term investment

The excellence of our electricity supply system – supply reliability, reasonable tariffs and strong environmental performance – has not happened by chance. It demonstrates the strengths of a stable, long-term and fair regulatory regime that has steadily evolved over 40 years.

The Consultation Paper contains a number of elements with which we agree, for instance the Government's policy objectives of reliable, safe and efficient energy supplies at reasonable prices while minimising environmental impact. We note that Government recognises the value of a cost of service regime which can support the investments necessary to achieve its objectives, and that they propose this regime should continue to be regulated via a bilateral contract. This is a system which has served Hong Kong very well in the past.

However, we feel on balance that the Consultation Paper is a significant missed opportunity. Many of the proposals contain flaws which, if not corrected, will jeopardise the reliability of our electricity supply system.

In particular, we highlight the following four areas:

Environmental disincentives

- Unclear energy policy on issues such as fuel mix
- Environmental improvement investments on coal units are disincentivised with a lower rate of return, inconsistent with the objective to reduce emissions
- Emissions targets can be set unilaterally by Government without reference to practicality
- Overall return further reduced if future uncertain emissions targets are not met

Unclear plans to migrate to a competitive market

- New players being welcomed, without any clear plan of how to transition to an open market, risking disorder in the market

Duration of the regime too short

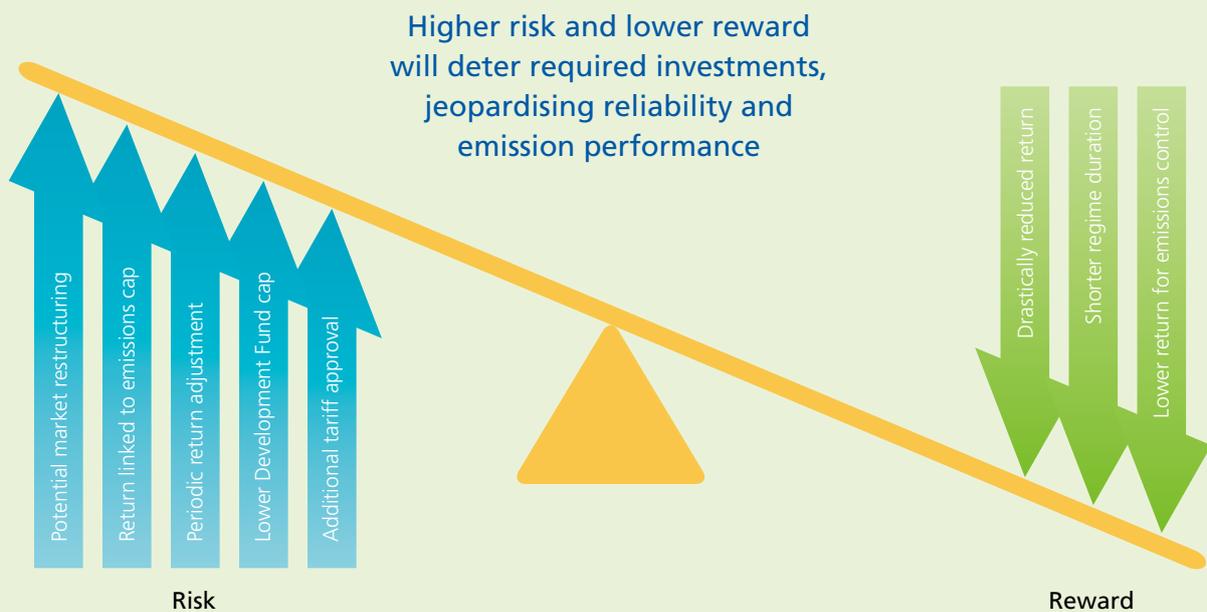
- The Government proposes to reduce the duration of the regime to 10 years, with an option to extend for 5 years
- This fails to recognise the long-term nature of the electricity industry, where asset lives are in the order of 30 years or more

Inadequate incentives to encourage appropriate investment, while risk profile will be increased substantially

- Government proposes to drastically lower the return to between 7% to 11%. We estimate this will cut shareholder value by around 30% to 50%
- The environmental disincentives, unclear plans for transition to a future competitive market, and shorter duration will result in a material increase in risk, discouraging necessary investment and compromising reliability

Hong Kong is CLP's home. We cannot ignore the deficiencies in the present proposals or agree to them as they stand. Our aim is to make sure that the new regime strikes an appropriate balance for all stakeholders and that Government's policy objectives can be met. We will work actively with Government to address our concerns, but without modifications and providing for more flexibility on these key issues, we do not believe that the proposals will be appropriate for future long term development of Hong Kong's electricity sector.

Business Risk and Reward is Out of Balance



Excellent Service at Value for Money Tariffs

CLP's customers enjoy world class reliability, moderate tariffs and excellent customer services. Our supply reliability is amongst the world's best at 99.99%. Our customers experience very low power interruption time of 6 minutes per year, a performance that is better than cities such as:

- **New York** : 11.8 minutes
- **Paris** : 12.8 minutes
- **London** : 40 minutes
- **Sydney** : 42 minutes

At the same time, our tariffs are lower than almost all major metropolitan cities. Many people have the perception that competitive markets deliver lower tariffs, but this is not the

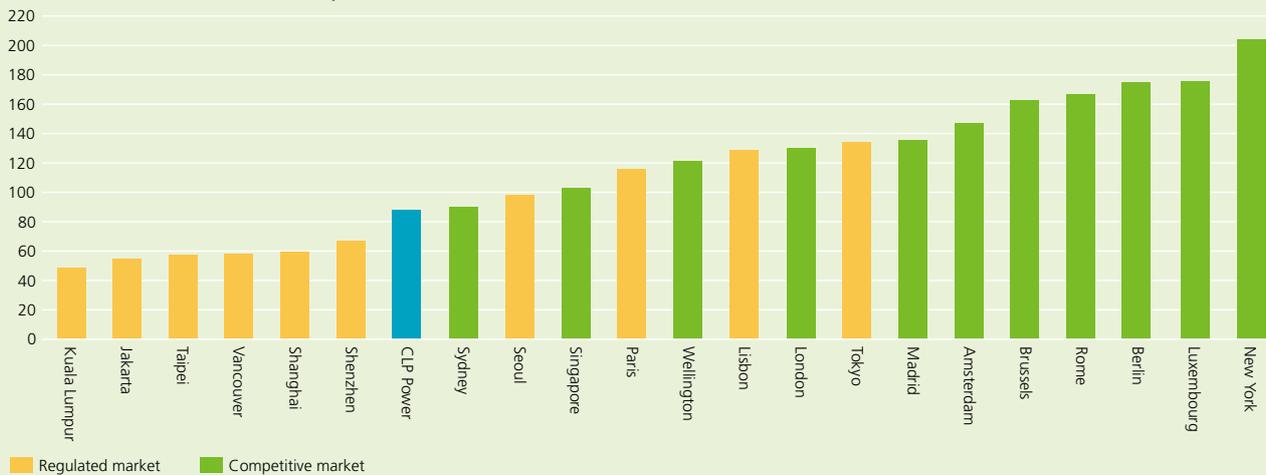
case. As illustrated in the chart below, CLP's residential tariff is lower than all the competitive markets we surveyed.

Reasonable and affordable tariffs

- Significantly lower than comparable cities such as New York, London and Tokyo
- Account for only 1.3% to 2.7% of monthly household expenditure in Hong Kong
- Tariff frozen for 8 years with six rebates totalling HK\$3 billion
- Reduced by 32% in real terms over 20 years

Tariff Comparison Worldwide

Residential Tariff, HK cents/kWh (as of 1 January 2006)



Remarks: Comparison based on annual domestic consumption of 3,300kWh. Tariff and exchange rate as at 1 January 2006

CLP's Commercial and Industrial Tariffs are Comparable to Guangzhou, Shenzhen & Macau

2006 Tariff, HK cents/kWh



Given Guangzhou and Shenzhen's poor supply reliability and environmental performance, our electricity tariff is good value for money

If we compare CLP's tariffs to those in Hong Kong's neighbouring cities, Macau's tariffs are the highest, by between 20% to 55%. With regard to Guangzhou and Shenzhen, while their residential tariffs are lower than CLP's (largely due to government subsidies) their commercial and industrial tariffs are comparable to ours. Taking into account CLP's higher supply reliability and better environmental record, CLP's customers are enjoying excellent services at value for money tariffs.

► Policy Objective

We support Government's policy objectives of having the public enjoy reliable, safe and efficient energy supplies at reasonable prices while minimising environmental impact. However, they are not an energy policy; rather they are the outcomes that a well thought out energy policy needs to deliver.

► Hong Kong Does Not Have a Clear Energy Policy

Hong Kong depends 100% on imported energy to meet its needs. Energy supply security is therefore a crucial issue for Hong Kong. Secure energy supplies are achieved when Governments set down clear policies to define:

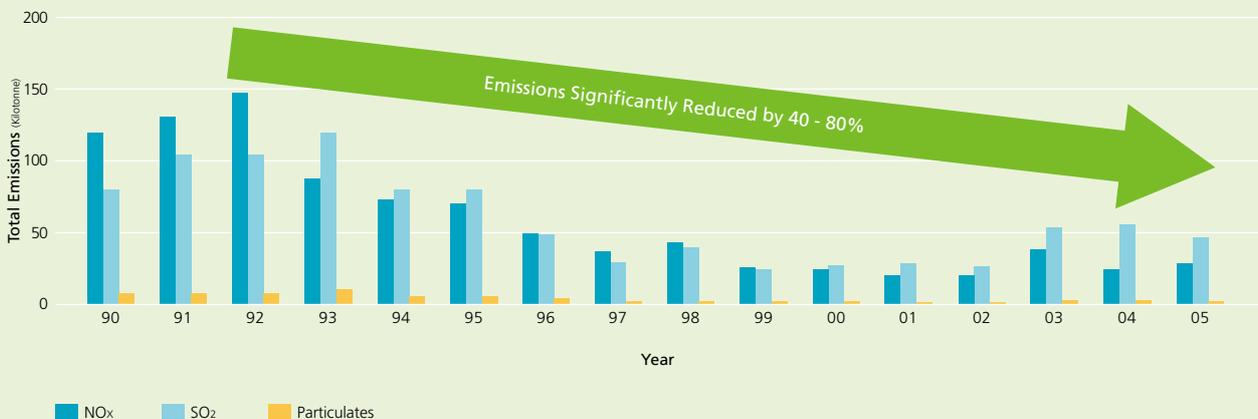
- the choice of fuels to be used
- the diversity of fuel types and fuel sources to be maintained
- the infrastructure necessary to support fuel supply

Why does CLP say that energy and environmental policies are unclear? Currently, our fuel mix consists of roughly one-third coal, one-third nuclear and one-third natural gas. We are uncertain about what fuel mix Government wants CLP to pursue in future, which presents us with a number of challenges going forward.

CLP is very proud of our environmental performance. In the early 1990s, even though the public's concern over air quality was not as serious as it is now, we took the initiative to bring clean fuels into Hong Kong. With Government's endorsement, CLP invested in natural gas and nuclear generation, and took major steps to minimise the emissions from our coal-fired power stations. These efforts enabled CLP to cut emissions by between 40% and 80% since 1990 despite a 70% increase in local electricity sales.

Our discussions with Government in recent years has left us with a very confused picture as to what fuel mix Government would like CLP to pursue over the next decade. In particular, there seems to be a view that the power companies are solely to blame for poor air quality in Hong Kong. Although CLP is working unflinchingly to minimise emissions caused by our power generating activities, various data including satellite photos suggest that poor air quality is a regional problem. It will therefore require the concerted efforts of industry and governments across borders to solve. We contest the appropriateness of Government proposing severe punitive measures associated with the coal units even though they were built and have been maintained to standards previously approved by the Government, and even though there are strong supply security reasons for retaining coal in Hong Kong's energy mix.

CLP's Emissions Reduced Significantly Between 1990 and 2005



Despite an increase of 70% in local electricity sales since 1990, CLP's total emissions in Hong Kong in 2005 were much lower than those in 1990. The recent increase in emissions is both because of the increased sales, as well as the need to use more coal for power generation in view of depleting supplies of natural gas

The Future Electricity Market

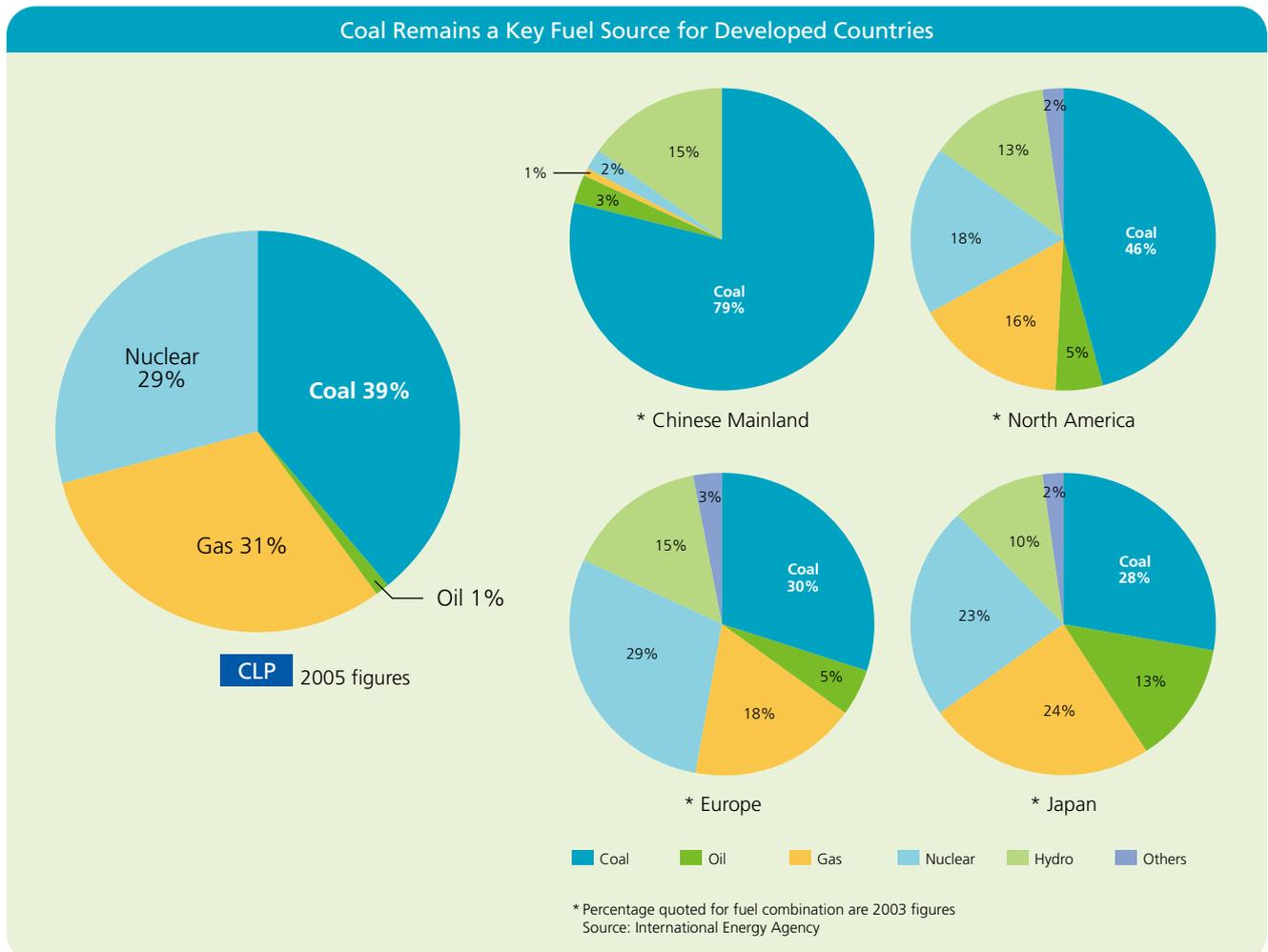
Why does CLP want to maintain coal as one of the fuel sources?

Fuel supply security is a key consideration for any power supply system. Most developed countries maintain a significant amount of coal generation in the energy mix because of its global availability and reliable technology. Coal is capable of being a clean fuel if modern technology is employed to reduce emissions. In fact CLP approached Government in mid-2003 to propose retrofitting emissions control equipment into our coal plant to further reduce emissions from our coal units. Government approved our formal proposal in July 2005 and CLP is on track to implement this multi-billion-dollar project.

However Government is now proposing this emissions control investment will attract the lowest return in their

stated range. If emissions control investment delivers the policy objective of lowering emissions, then why discourage that by offering a lower rate of return?

Government unilaterally decided the 2010 emissions reduction targets in 2002 without consultation or due regard for technical and operational constraints, and has announced its intention to tighten emissions caps further in the future. Based on our previous experience, such caps could be set independently by Government and to a point where normal operation of the coal units could result in breaching such caps. CLP would face the prospect of either cutting off supply or having shareholders pay hefty financial penalties in the form of a lower permitted return for all investments made by the company. This proposal is illogical and unfair. This is not a theoretical concern; one of the many contributing problems during the California "rolling-blackout"



crisis in 2000 and 2001 was that, although California-based generation was available to supply customers, it was not allowed to generate because emissions caps had already been reached.

Government is also unclear with regard to the future role of coal in the longer term, introducing a high degree of uncertainty for shareholders with regard to the multi-billion-dollar investments required for the emissions control units. We as a society should agree on whether we want to retire or maintain the existing coal units. We should fully understand the trade-offs on fuel supply security and costs should coal be completely replaced. If we collectively agree that coal still has a role to play over the longer term, then incentives should be put in place to further improve the environmental performance of these generators. Furthermore, emissions caps should be set at practically achievable levels referenced to the normal operation of these coal units.

What challenges does CLP face regarding gas in the fuel mix?

CLP supports Government's calls to increase the use of natural gas for power generation. However, we have not seen such calls translated into action.

Our gas-fired power station at Black Point supplies about one-third of our total sales. The source of our current gas supply, via a pipeline from the Yacheng field off Hainan island in China, will likely be depleted by early next decade. There are no other gas reserves nearby that could replace Yacheng. Therefore, the most economical approach is to import liquefied natural gas ("LNG") on ships from other areas of the world. A terminal must be constructed in Hong Kong to receive the LNG. This would involve a jetty and storage tanks. CLP advised Government in 2003 that an LNG receiving terminal would be necessary around the turn of the decade to ensure the continuous reliable supply of electricity. Furthermore, once LNG can be imported into Hong Kong it will provide CLP with more flexibility, enabling an increase in the usage of natural gas, lowering the percentage of coal generation in the fuel mix with ensuing environmental benefits. CLP has since identified two possible sites in Hong Kong, and the required environmental impact assessment studies are now nearing completion. Policy endorsement from Government is needed to progress an LNG terminal in

Hong Kong. This requirement raises a key missing element in the Consultation Paper. Many initiatives enabling improved efficiency or reduced emissions depend critically on close co-operation between Government and CLP. Success depends not just on technical competence and efficiency by CLP, but on the backing received from Government policymakers in providing clear policy guidance on the use of gas for electricity generation in Hong Kong post-2008, and in expediting approval of agreed investment initiatives.

This essential requirement is well illustrated by the urgent need for infrastructure to import LNG. The terminal has a four year construction lead-time, and gas suppliers also require a similar time frame to develop their gas field, build a liquefaction plant and order LNG ships. The LNG project is critical in our efforts to work towards achieving the Hong Kong Government's 2010 emissions reduction targets. More importantly, because our current gas supply is depleting, reliability of electricity supply could be jeopardised early next decade if a site for an LNG terminal is not available by year end. Moreover, international competition for LNG fuel supplies is very intense – the longer we wait for Government to make a decision, the harder it becomes to secure competitive long-term fuel contracts, which are necessary for the LNG industry. Suppliers would typically require CLP to enter into 20 year commitments worth tens of billions of dollars before they proceed with developing the gas field. If CLP is to be able to commit to these contracts then clear regulation is needed. Future regulatory arrangements must acknowledge the joint responsibility of CLP and Government to work together to ensure optimal development.

Renewable energy

There has been growing interest in the use of renewable energy in Hong Kong. CLP is in favour of using renewable energy where possible and practical – indeed we have invested in renewable projects outside of Hong Kong, for instance in several hydro plants in Guangdong province, and in wind farms in Australia. In Hong Kong, we are progressing with a wind turbine pilot demonstration project, tentatively scheduled for construction next year. We are also collaborating with a UK wind farm developer to evaluate the feasibility of offshore wind potential in Hong Kong. The CLP Group as a whole has set a target to develop generating capacity from renewable energy sources such that by 2010

The Future Electricity Market

this will represent approximately 5% of our 2010 total generating capacity.

We believe that, for the foreseeable future, the opportunities for development of large scale hydro, wind and solar power within Hong Kong will remain limited because of geographical constraints.

If desired by the community, we will work with Government to facilitate and develop renewable projects in Hong Kong, but the costs need to be clear and borne by all power consumers. Investors in renewable projects will also need comfort over cost recovery and appropriate investment return as and when Hong Kong moves to an open market, recognising that these projects generally cannot compete on a cost basis with other types of generation.

Why is CLP concerned by Government's proposals on environmental penalties?

Government's proposed penalties and lower return for emissions reduction investments were due in part to their desire not to pass on environmental improvement costs to consumers. CLP has always acknowledged that our obligation is to meet society's priorities as efficiently and cost effectively as possible, within the constraints of existing power generation technology. We believe it is unfair and

inappropriate to punish an energy provider for present energy generation arrangements when these have been fully endorsed by Government, make best use of technologies available at the time of investment, and give community-endorsed priority to reliability and cost-effectiveness. If today it is the community's primary priority to reduce emissions, then it is necessary for the Government and the community to acknowledge – and assume responsibility for – the cost of this priority. Once policy is set, then CLP is committed to achieving policy objectives as cost effectively as possible. To single out a power generator to carry the cost burden of this community choice is neither fair nor reasonable.

Summary of energy and environmental issues

CLP has met and intends to continue to meet our community's expectations in both electricity supply reliability and environmental performance. We urgently need clear policy direction for Hong Kong's long term fuel mix, and consistent standards for emissions that recognise the role of each of the fuel elements and practical technical constraints. We strongly emphasise the need for early approval of the LNG project to maintain electricity supply reliability, and clear policy guidance regarding the role of coal and renewable energy for the longer term.



CLP has invested in renewable energy projects such as this wind farm in Australia

► Unclear Plans to Migrate to a Competitive Market

Developments in the electricity industry

Over the past 15 years several regions overseas have restructured their electricity supply industries. The effects of these changes have varied. Whilst in some countries efficiency gains have been made, concerns about investment incentives have emerged. Moreover, in some markets, high profile failures such as blackouts and in at least one case, California, the complete collapse of the market have led to policymakers rethinking their objectives, and often introducing further change to cope with problems that emerged.

One clear conclusion is that there is no single model for change and no one model that is seen as generally superior to all others. Each system is unique, and changes must take proper account of local circumstances. There are also significant risks involved; where local circumstances are not properly reflected or where short term considerations dominate, for example in California, reform can lead to chaos. Changing the way that we control our electricity industry is not a risk-free process.

Conditions for a regional competitive power market do not yet exist

The Government believes that current power shortages in Guangdong mean that South China is not ready to be a part of a wider market involving Hong Kong. We agree with this assessment. We also believe that, at an appropriate time, it would be sensible to consider an integrated regional market involving Hong Kong and Guangdong. To do so involves resolving a number of complicated issues. A regional market is contingent upon an orderly development towards a level playing field, upon which the systems between Hong Kong and Guangdong can become compatible technically, commercially, legally and environmentally. Furthermore, a common, clear and fair regulatory structure must be developed jointly to support the market going forward. Given the significant gaps between the two systems in all of these areas, we believe it will be some time before an integrated regional market would be in Hong Kong's interest.

Examples of issues to be addressed if market opening is pursued

- Accountability – who will be responsible for overall power requirement planning to ensure that the lights do not go out in Hong Kong?
- Technical standards – Hong Kong's supply reliability could be at risk if we integrate fully with another system with lower reliability standards
- Environmental standards – Hong Kong's generation will lose out to potentially more polluting plant in Guangdong, increasing total emissions in the region, unless common environmental standards are applicable to all market participants

Risks of introducing new players on an ad hoc basis with no clear vision for the future

Government's unclear policy in introducing new players could result in neither a regulated nor a competitive market. If market opening is to work, and if the post 2008 regime is to move towards it at whatever pace is appropriate, it is necessary for the Government to state its vision for the future. Ad hoc arrangements involving new retail players before a wholesale competitive market is developed are likely to result in inefficient use of resources, create unfairness between customers, blur the line of accountability and compromise supply reliability. Some of the elements of disorderly transition are already apparent in proposals that encroach into areas that CLP has served for many years. It is important for the Government to have a clear vision as to the pace and scale of market development and to develop a consistent framework within which to judge all such proposals from interested parties.

Similarly on the issue of grid access, Government is proposing in effect broad access to our privately-owned network, and suggests that it will intervene to resolve access disputes. Such an approach runs the risk of being a backdoor market opening, with all of the disorderly and unplanned consequences which that entails.

► Proposed Regulatory Arrangements

Prerequisites should Hong Kong decide to transition to a competitive market

As a first step, Hong Kong needs to be satisfied that Guangdong's system can maintain stability in terms of supply / demand balance and that any surplus is not short-lived. Hong Kong could be at risk if we rely on cross border supply while Guangdong's system remains volatile. An appropriate time scale for preparing the transition from a regulatory to a competitive framework needs to be developed carefully, recognising the complexity involved in harmonising the systems from a technical, environmental, legal, commercial and regulatory standpoint. Experience internationally shows that transition arrangements need to be made, including provisions for stranded cost.

Safety Regulation

The Government proposes to continue the present arrangements for regulation of safety matters, as they are presently working well. We support these proposals.

Economic Regulation

Bilateral agreements

The Government proposes that a bilateral contract between Government and the companies should continue for the post 2008 regime. We support this, as the arrangements have stood the test of time and work well.

Duration of the agreement

We do not agree with the Government's proposal of a 10 year arrangement with an option to extend. It is important to recognise that the long lifespan of assets and fuel purchase commitments represent substantial risks to shareholders in the electricity supply industry. The duration of any regime should balance the risks assumed by investors against the need for society to determine from time to time an appropriate regime to govern such investments.

The costs of power industry assets are often significant, with lead times of up to 10 years and operational lives in the order of 30 years or more. International gas suppliers typically

demand long term fuel purchase commitments of 20 years or more, involving tens of billions of dollars. This liability alone could bankrupt CLP if we undertook such a commitment without clarity as to our future customer base.

In the past, we accepted that such timescales were too long for contract terms to last without change; the 15 year regime duration adopted currently was a sensible compromise based on the assumption that the SoC regime would not be abruptly abandoned at the end of its term. We now face a new situation, with Government stating clearly its intention to transition to an open market 10 years later. Under these circumstances, even a 15 year regime duration would represent a high risk for investors.

It is important to distinguish between the duration of a new agreement and any subsequent transition towards a more open market. In order to ensure incentives exist for continued investment, it is normal international practice to have transitional arrangements agreed with incumbent utilities before market opening. The transitional arrangements would respect investments, stranded costs and long term fuel supply and power purchase commitments made by the incumbent. Only then can we determine the risks expected to be borne by our shareholders. The Government's Paper does not consider this. Furthermore, Government should work with the companies to coordinate, plan and address numerous system, technical, operational, and environmental issues.

Return

Rate base

The Government considers that the present arrangement based upon fixed assets is the appropriate basis for determining return. We agree with this view.

Performance

Within such a regime, we are prepared to discuss how additional incentives and penalties for performance could be introduced, providing that this does not undermine the elements of the regime. If we are to consider linking incentives with performance, it is important that appropriate principles are incorporated in such a scheme, such as:

- giving appropriate incentives as well as potential penalties to encourage sustained and / or improved performance excellence
- setting objective targets which are measurable
- setting targets for performance in areas whose results can be controlled by the companies

Permitted rate of return

The permitted rate of return is another issue where we disagree with the Government's present proposal. As we have already said, power industry investments are typically large and long-term, so the risks involved in these investments are very high. Investment risk can only be assumed based on a reasonable and clear return. We do not consider that the range of return level published in the second Consultation Paper recognises these issues. We have serious concerns whether it can adequately compensate investors for the risks that we are expected to assume. It is important to note that these risks are increased significantly by the proposals in the Paper, for example unreasonable environmental regulations, uncertainties introduced by a shorter agreement and unclear plans to migrate to a

competitive market. Whilst proposing a severe and damaging reduction in return, the Government also wants to increase the risks that the power companies face in several areas. There is a straightforward relationship between risk and return that is being ignored.

Although our level of return has been criticised, it is important to note that the current return earned by the company is in line with other large companies in Hong Kong. Most importantly, as we illustrated earlier, CLP's electricity tariffs are very competitive relative to other major cities with similar reliability and environmental performance.

The Government has also proposed that the level of return is revisited every 5 years. We need much more clarity about this proposal. Depending on the details, we are concerned that it might undermine the duration of a new agreement. A 15 year deal with fundamental changes every 5 years is little different to a succession of 5 year deals. Given such uncertainty, the risk level and thus the return requirement by investors will be increased. The approach will also create a considerable additional administrative burden for both Government and the companies.

Performance of CLP Share Price vs Hang Seng Index, (Oct 1993 – Feb 2006)



Over the period since the last SoC was implemented, investments made in CLP's shares and in the Hang Seng Index would have generated comparable total returns (i.e. with dividends reinvested)

Varying return for different types of assets

The Government proposes to vary the return level on different types of investment. Varying returns for different types of asset is only sensible if there is some appropriate basis for it. At present we see little rationale for proposing different returns. We are not aware of any integrated asset-based regimes (similar to our regime) in other countries that have varying returns for different types of asset. We therefore do not agree with Government's proposal in this regard. We have explained earlier our concerns about the proposed lower rate of return for emissions control equipment. It is important to understand that varying returns will inevitably lead to distorted investment decisions, which may not be in the best overall interests of society.

Tariff setting process

CLP's ability to provide Hong Kong with competitive and affordable tariffs is based on a tariff setting process that is objective, fair and robust. Under the current Scheme of Control, approximately every 5 years we submit a financial plan to Government which details the investment required and the tariff impact over the period. The Government, in conjunction with technical consultants, scrutinises these plans before approval is granted. Every year thereafter the Government again reviews our proposed tariffs for the following year, and has the ability to change them if certain prescribed limits are exceeded. We believe that these processes work well and should be continued.

In its Consultation Paper, the Government proposes that it should have approval rights over the annual tariff, and the

paper mentions a number of criteria that would govern such an approval. It is important that any approval process should be consistent with the principles of the overall regulatory regime. For example an approval that determined whether or not the proposed increases were consistent with that regime would be acceptable, but we would have grave concerns if some wider, arbitrary approval is envisaged. The tariff setting mechanism must be clear and objective to allow the industry to develop on a sustainable basis. The collapse of California's electricity market earlier this decade was in large part due to political meddling in setting electricity tariffs. We understand that the public has a legitimate interest in tariff levels and the tariff-setting process, and we are prepared to discuss with the Government ways in which the process could be made more transparent. We are open to suggestions here, providing that reasonable safeguards over commercial confidentiality are met.

Other tariff-related issues

The Government's Paper discusses several other tariff issues with which we agree:

- it is inappropriate to link tariffs to CPI since only a small portion of our costs are related to CPI
- the continuation of the present arrangements in relation to fuel costs is appropriate
- reconstituting the Development Fund as a Tariff Stabilisation Fund is possible but it should be noted that Government's proposal to limit further its size would make stabilisation increasingly difficult

The Way Forward

While we do not underestimate the challenges faced in agreeing to a future arrangement that both meets community needs and provides the prospect of a commercially viable business, we are confident that there are ways of dealing with the above concerns while still addressing the fundamental issues of importance to Hong Kong. We stand ready to work in good faith with the Government to resolve our concerns. The framework for resolution should include:

- an agreement with a duration and a risk / return profile that allows sustainable development of the power industry
- an energy and environmental policy that is developed from a clear assessment of the balance between supply reliability, cost and environmental impact
- clarity over the principles of an orderly transition, in line with international precedent, to a more open market structure, should Hong Kong decide to proceed in that direction, and rules over new entry to ensure that costs to consumers as a whole are not increased as a result

Hong Kong is a world-class city. It has, and deserves, a world-class electricity system. CLP, operating under a fair and sensible regulatory regime, has proven over many decades that it can meet our community's needs. To build on that success for the future, it is essential that a forward-looking, stable and straightforward regulatory regime is developed within the above framework. This will allow us to continue to provide our community with a first-class electricity supply, whether measured in terms of tariff, reliability, customer service or environmental performance. In our response we have discussed how we intend to rise to the challenges of delivering such a vision which confronts not just CLP, but the whole of society.



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