



三十會 香港上環永樂街 60-66 號昌泰商業大廈 304 室

The 30SGroup, Room 304, 60-66 Wing Lok Street, Sheung Wan, Hong Kong.  
telephone: 9135 6410; fax: 2529 2100  
website: www.30SGroup.org  
e-mail: communications@30SGroup.org.hk

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To: Hon Jeffrey LAM Kin-fung, GBS, JP  
Chairman, Panel on Economic Development  
The legislative Council  
The Hong Kong Special Administrative Region

c/o Clerk to Panel on Economic Development  
Legislative Council Secretariat  
Legislative Council Complex  
1 Legislative Council Road  
Central, Hong Kong  
E-mail: miylee@legco.gov.hk

**Re: Written Submission on The Scheme of Control Agreements (SCAs)  
Mid-Term Review  
- Panel on Economic Development Meeting on 25th February 2013**

Dear Hon. Mr. Lam,

Thank you for your Panel's invitation to The 30SGroup to submit our views as well as attending the Panel on Economic Development meeting on 25th February 2013, regarding the interim review of the Scheme of Control Agreements (SCAs) with the two power companies.

Under the SCAs, both parties have the rights within 2013 to request modifications of any parts of the SCAs, but mutual agreements are required for any changes. We are pleased to present our views and suggestions with a focus on near term issues on interim review, and we will present our views and suggestions on long term structural issues on post-2018 power industry changes as and when the Government initiates the next round of consultation later this year.

**1. Fuel Cost Pass Through**

**(a) Fuel Procurement: Transparency and Benchmarking**

As a regulated utility, fuel cost is considered an uncontrollable input cost and the risk of fluctuation should be passed onto end users. Despite its legitimate rationale, CLP faced tremendous public pressure when it has guided a 40% increase in power tariff

between 2011 to 2015 due to increase in gas utilization and increase in gas import cost.

Power companies need to improve on its fuel cost disclosure and demonstrate they had already used best effort to control fuel cost. Benchmarking of actual gas/coal procurement cost with regional peers is required. In addition, opening tendering on fuel procurement with certain public engagement can also be considered.

### **(b) Single LNG Source and Potential Gas Pipeline Linkage**

At the moment, CLP purchases natural gas from Yacheng gas field through a dedicated underseas gas pipeline. As the gas field depletes, CLP will switch its major gas source to W2E gas through PetroChina gas pipeline, with potential future gas supply from South China Seas gas fields and LNG import from PetroChina Shenzhen LNG terminal. HKE purchases all its LNG through CNOOC's Dapeng LNG terminal, and transport gas to HK through dedicated underseas pipeline.

The existing infrastructure allows limited choices for the two companies to procure LNG and natural gas. An additional gas pipeline to link the two gas delivery systems (Shenzhen to CLP and Shenzhen to HKE), potentially invested by HK/Guangdong government, can create a common carrier system and can promote competition, energy security and may lead to lower gas import cost for Hong Kong.

### **(c) Natural Gas Fund vs. Direct Subsidy to Household**

We note some public voices for the government to set up a Natural Gas Fund to subsidize this gas cost increase pressure. On the other hand, the Government has been providing electricity bill subsidy to residential households in previous years. The current program started from July 2012, with every household receives a credit of HK\$150/month for one year and involves HK\$4.5bn government expenditure in the 2012-13 Government Budget.

Depending on the objective of the government, we believe the current direct subsidy to household account would be a more direct approach to lower household electricity bill increase pressure. We note two drawbacks of Natural Gas Fund, including 1) subsidizing the non-residential sector, and 2) resulting lower per unit electricity charge, which may not promote energy savings.

## **2. Fixed Asset Depreciation Schedule**

Power companies earn Permitted Returns on Net Fixed Asset balance. Back in 2003 interim review, we note the Government and CLP agreed to extend the depreciation periods for certain CLP assets, resulted in HK\$650m savings for customers in 2004-2008. We note there remain considerable difference between depreciation lives of different fixed assets between the two power companies (see table below) under current SCAs.

With **stranded cost** discussion being included in the current SCAs, and considering CLP would witness considerable power tariff increase pressure related to its increase in gas utilization and increase in gas import cost, we believe further extension of

CLP's assets to be in line with HKE can relieve power tariff pressure for end users of CLP.

(Years of depreciation)	CLP	HKE
Cable tunnels	100	100
Buildings	35-50	60
Ash lagoon	35	60
Gas pipeline	25	60
Overhead lines	45-50	60
Cables	55-60	60
Transmission and distribution equipment	25-50	60
Generating plant and machinery	25	35
Gas turbines and gas turbine combined cycle	25	30
Mechanical meters	15	30
Wind turbines	N/A	20
Electronic meters	15	15
Furniture and fixture	10	10
Computers	5	10
Commercial vehicles and marine craft	5	6
Office equipment	10	5

### **3. Modification to Incentive/Penalty Mechanism**

#### **(a) Fixed Targets and Benefit Sharing with Customers**

In the current SCAs, we note there are introduction of certain efficiency/social objectives targets set, which translate into certain incentive/penalties on Permitted Return. We agree the principles behind the incentive/penalties structure, and we note the efficiency/social objective targets are set for the whole SCA period of 10 years.

We believe the 10 year time frame to be too long. We believe a mechanism to tighten these targets every 5 years can achieve the goals of 1) sharing efficiency benefit with end users and 2) encourage continuous efficiency improvement at power companies.

#### **(b) Operating Risk Sharing Mechanism**

In July 2012, Castle Peak A Power Station incurred an incident where a section of the coal conveyor belt detached and fell to the ground. Coal delivery was temporarily affected for 2 months. While power supply stability has been maintained during the period, we understand the switch into higher cost gas power generation and/or power purchase from Hongkong Electric may lead to potentially higher fuel cost for CLP end users.

The current SCAs do not provide any differentiation between management related incidents and unavoidable force majeure incidents. All the direct and indirect costs are born by power users. A committee between Government, power company and third party expert should be formed to assess the nature of the incident and related cost, and a fair cost allocation should be made between power company and end users.

### **(c) Energy Savings and Energy Audit**

Under SCAs, CLP and HKE would be reward an additional 0.01% in addition to its 9.99% Permitted Rate of Return upon achieving 12GWh and 3GWh energy savings through energy saving technologies installed by respective customers. The 12GWh and 3GWh represent less than 0.04% and 0.03% of total power sales in CLP and HKE, respectively. In addition, the two power companies earned additional return when energy audit program are delivered to 150 and 50 customers, respectively, and we note these 200 customers only form a very small part of CLP and HKE's total non-residential customers. At the moment, the two power companies provided a total loan amount of HK\$37.5m per annum to non-Government customers to implement energy savings initiatives identified in the energy audit programs.

Between 2009-2011, both [CLP and HKE need to check] had been able to earn this additional 0.01% return. The threshold level of 15GWh and 200 customers should be reviewed to encourage further energy savings. We also need to assess whether the HK\$37.5m loan amount [low interest?] can provide sufficient financial incentives for customers to implement energy savings.

### **(d) Peak Shaving**

Current energy savings program focuses on electricity consumption reduction. Reserve margin in HK in 2011 was 37.2% which is considered high, and average local power plant utilization rate was low at only 34-61%. Time-of-Use power tariff structure can be introduced in Hong Kong to encourage peak shaving and to shift power demand from peak to non-peak hours.

### **(e) Excess Generating Capacity**

Under the SCAs, excess power generation units could be deducted from the calculation Permitted Return (exclusion from fixed asset calculation), if the additional power unit failed to pass both the Excess Capacity Threshold test and Reserve Capacity test.

We believe a similar excess threshold test can also be applied into major transmission and distribution asset.

## **4. Wind Farm Development in Hong Kong**

Nuclear power imports from China is considered as part of Hong Kong's climate action plan. While HK has proposed to build two offshore wind farms (in offshore Sai Kung and close to Lamma Island), we believe the related financial resources can be better utilized with onshore wind farms in Guangdong.

The proposed two wind farms of 300MW in Hong Kong would carry an investment cost of HK\$10bn, generating only 0.5-0.6bn kWh power per annum. We estimate that is equivalent to around 1,870 utilization hours per annum with capital cost of around HK\$33.3m/MW. According to Longyuan, the leading wind power operator in China, an offshore wind farm (for example in Guangdong) would generate around 2,500 hours, with capex of Rmb18m/MW (or HK\$21.6m/MW), or 35% lower than that of Hong Kong. Considering 20 years of usable life, we estimate that an offshore

wind farm in China would cost only 48% of one in HK, in terms of capital cost/generation over life. If we compare the cost of building an onshore wind farm in Guangdong, the cost in China would be 27% of that in HK. Electricity generated from these Guangdong wind farms need not to be transferred to Hong Kong, as reduction in emission in Guangdong would also benefit Hong Kong.

We believe certain financial arrangement could be decided to encourage the two power companies to invest in wind farms in Guangdong (instead of in HK), with certain investment protection under SCAs. The emission reduction achieved from HK-invested wind farms in Guangdong can also be considered under emission reduction contribution from HK under the PRD Regional Air Quality Management Plan.

The two proposed wind farms are both in wind testing stages. Decision of investment would likely be made within 2013.

#### Simple cost analysis of building wind farms in HK and China

	HK	China	China	China	China	China
	Offshore	Offshore	Offshore	Onshore	Onshore	Import
	HK\$m	Rmbm	HK\$m	Rmbm	HK\$m	HK\$
Cost	10,000	5,400	6,480	2,400	2,880	
Capacity	300	300	300	300	300	
Generation	560	750	750	600	600	
Capex/20 Years	500	270	324	120	144	
<b>Capex/ Generation</b>	<b>\$0.89</b>	<b>\$0.36</b>	<b>\$0.43</b>	<b>\$0.20</b>	<b>\$0.24</b>	<b>\$0.73</b>

Thank you again for this opportunity of inviting our views on this important public policy issue for Hong Kong. Mr. Simon Lee of our 30SGroup Environment and Energy Working Group will attend and present our viewpoints at the Panel meeting on February 25<sup>th</sup>.

If you need further information and have question on this submission, you are welcome to contact the undersigned at telephone 6033 9290 or via email: [chancheongkuen@gmail.com](mailto:chancheongkuen@gmail.com).

Your faithfully



Alex C.K. Chan  
 Convenor, Environment and Energy Working Group  
 The 30SGroup