LEGISLATIVE COUNCIL BRIEF

CLP POWER HONG KONG LIMITED
CASTLE PEAK POWER COMPANY LIMITED
GAS SUPPLY INFRASTRUCTRUE AND
GAS SUPPLY AGREEMENT

INTRODUCTION

To enable Castle Peak Power Company Limited (CAPCO) and CLP Power Hong Kong Limited (CLP Power) (collectively, CLP) to offtake natural gas from China's Second West-East Natural Gas Pipeline (WEPII) to Black Point Power Station (BPPS) for electricity generation to make up for the fast depleting gas source off Hainan Island, the Executive Council (ExCo) has ADVISED and the Chief Executive ORDERED, that –

(a) approval be given to CLP for its proposed investments to set up a new gas receiving station (GRS) at BPPS and to enhance its plant modification project at BPPS, thereby increasing the total capital projects expenditure over the 2008 Development Plan Period from $39.9 billion by about $1.7 billion to $41.6 billion; and

(b) that for the purposes of the current Scheme of Control Agreement made between, inter alia, the Government and CLP (SCA) and subject to certain conditions, the proposed gas supply agreement between CAPCO and PetroChina International Company Limited (PCI) (GSA) shall, upon its execution by the parties, be approved as a fuel purchase agreement within the definition of "Stranded Costs" in paragraph (32) of Schedule 1 to the SCA.

JUSTIFICATIONS

2. It is Government's energy policy to ensure reliable, safe and efficient energy supplies at reasonable prices whilst minimising the environmental impact caused by the production and use of energy. BPPS currently houses eight gas-fired power plants of CAPCO and has provided up to about 30% of CLP's local electricity supply in the past few years. Given the increased reliance on gas as a fuel for power generation in place of coal for better air quality and lower carbon emission, a reliable and adequate supply of gas is critical for meeting the above energy policy objectives.

Regional energy co-operation

3. By a Memorandum of Understanding on Energy Cooperation signed between the National Energy Administration of the Central People's Government (CPG) and the Government of the Hong Kong Special Administrative Region on 28 August 2008, both Governments agreed in principle, inter alia, to study the feasibility of supplying gas to Hong Kong via WEPII. Detailed arrangements, such as pricing and supply quantity, are to be worked out on commercial principles between relevant enterprises on both sides. In the visit to Hong Kong in August 2011, Vice Premier LI Keqiang also announced, as one of CPG's supporting measures for Hong Kong, to expedite the WEPII construction with a view to supplying gas to Hong Kong in the latter half of 2012.

Need for continuous gas supply

4. The Yacheng 13-1 field off Hainan Island, which has been the sole source of gas supply to BPPS, is approaching the end of its useful life with rapid decline. A new gas source will be required starting from early 2013 to ensure adequate supply for power generation at BPPS. The more challenging emission caps for 2015 onwards under the "Second Technical Memorandum for Allocation of Emission Allowances in Respect of Specified Licenses" pursuant to the Air Pollution Control Ordinance (Cap. 311) would also require a higher level of utilization of BPPS gas-firing capacity and additional gas supply.

New gas supply via WEPII

5. Natural gas via WEPII is the earliest alternative supply to make up for the shortfall in Yacheng 13-1 gas field, and can be made available to Hong Kong by end 2012. To facilitate gas supply from WEPII to CAPCO for generation of electricity for consumers in Hong Kong, the following major infrastructure projects and agreement would be required –

(a) a new GRS at BPPS;
(b) the BPPS modification project;
(c) the Hong Kong Branch Line (HKBL) connecting Dachan Island in the western part of Shenzhen to BPPS; and
(d) the GSA between CAPCO and PCI for the procurement of gas sourced from WEPII.

New GRS and BPPS modification projects

6. Taking into account the need to tie-in with the BPPS gas plant maintenance shutdown period for the modification project, as well as the estimated lead time for equipment fabrication and delivery, CLP proposed, and ExCo approved on 21 June 2011, to start the projects referred to in paragraph 5(a) and (b) above in July 2011 to meet the target WEPII gas commissioning date. Hence the approval for these two projects was sought ahead of conclusion of the GSA with PCI. Together the projects involve an estimated capital expenditure of $1,682 million in addition to the capital projects expenditure over the 2008 Development Plan Period[1].

7. The new GRS will condition the gas to the required pressure and temperature for use by all gas-fired plants at BPPS. It will include water bath heaters, pressure reduction skids, a gas mixing station and a new vent tower.

8. The purpose of the BPPS modification project is to cater for diverse gas supply sources with potential different gas quality ranges and operating scenarios, and a flexible and robust design is required for the BPPS units. The scope of the project includes the combustion hardware and control replacement work, the installation of additional gas conditioning equipment, the combustion dynamic monitoring system and gas transmission facilities at BPPS to facilitate the transition from Yacheng 13-1 gas to the new replacement gas supply.

Hong Kong Branch Line

9. The HKBL comprises a concrete coated steel pipeline of approximately 20km in length (of which 5km is laid within the Hong Kong waters) and 32 inches in diameter from Dachan Island in the western part of Shenzhen to BPPS, and the associated gas launching and end stations. It has a gas transportation design capacity of 6 billion cubic metres per annum. PetroChina Company Limited (PetroChina), owner of the WEPII project, and CLP have agreed to form a Sino-foreign equity joint venture (JV Company) (with PetroChina and a wholly owned subsidiary of CLP Power holding 60% and 40% equity interest respectively) to jointly develop, construct, own and operate the HKBL.

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[1] The 2008 Development Plan period covers the period from 1 October 2008 to 31 December 2013.

10. CLP Power's investment in the JV Company, through the subscription of equity interest by its wholly owned subsidiary, will not be counted as Fixed Asset[2] under the SCA and will not earn any Permitted Return under the SCA. There is therefore no need to seek the Government's approval for such investment. Electricity consumers will be required to pay a HKBL tariff, as a component of the WEPII gas price, for the use of the HKBL for transporting gas to Hong Kong.

Gas supply agreement with PCI

11. CAPCO proposes to enter into a 20-year GSA with PCI, which allows it to offtake piped-gas from Turkmenistan in Central Asia to BPPS in Hong Kong via the WEPII and associated infrastructures.

12. The contract price payable by CAPCO to PCI under the GSA will be set using a clear and transparent mechanism, based on a price formula reflecting the cost of the commodity and the transportation elements, as well as other prevailing fees and taxes. The price of WEPII gas for Hong Kong primarily consists of -

(a) a commodity element, reflecting cost of gas imported from Central Asia to China, generally in line with the market prices of certain oil products;

(b) a transportation element, reflecting cost of pipeline transportation charged by pipeline owners for taking gas from the border in Xinjiang to Hong Kong; and

(c) applicable taxes and duties and other administration costs.

13. Our independent energy consultant is of the view that the price formula is in line with the Mainland's gas price regimes and the cost elements are reasonable. In view of the very long distance of gas delivery that might lead to significant operations and maintenance costs of the pipeline and related facilities, the relatively higher Asian fuel prices due to importation and transportation factors, the security of supply and the high and growing demand in the Mainland, the consultant concludes that the projected price level

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2 "Fixed Assets" is defined in the SCA to mean CLP's Electricity-Related investments in land, buildings, plant, equipment, and capitalized refurbishment and improvement works and, subject to Section A of Schedule 2 to the SCA, includes assets in the course of construction, payments on account, goods in transit and capital stores.

according to the GSA is within reasonable range. Reference has also been made to the average liquefied natural gas (LNG) price in Japan as published in the World Bank's website[3], which is yet to cover the cost of necessary infrastructure, including mainly LNG terminals and local transportation pipeline facilities. The price of Yacheng 13-1 gas is far below the current market price as the contract was concluded some 20 years ago.

14. To enhance certainty of the price formula and better protect the interest of ultimate electricity users in Hong Kong, we have determined that the approval in paragraph 1(b) above should be subject to certain conditions to stipulate that for price components which are to be determined by CAPCO and PCI or may be varied subject to their mutual agreement, or which are charged by the JV Company in which CLP Power has a stake, CAPCO should provide justifications to the Government and seek Government's prior consent for any increase in the value of relevant components.

Stranded cost implications

15. As the Government has the discretion not to renew the SCA after its expiry on 30 September 2018 and introduce changes to the electricity regulatory framework starting 1 October 2018, CAPCO's obligation to purchase gas from PCI under the 20-year GSA, which will continue after 1 October 2018, may potentially give rise to Stranded Costs.

16. Stranded Costs, under the SCA, means costs incurred by the power companies in relation to investments made or agreements entered into in respect of their Electricity-Related activities, which become stranded as a result of a change in the electricity supply market structure introduced by the Government and have not been recovered and cannot in future be recovered in the market. If the Stranded Costs cannot be mitigated by the power companies implementing mitigation measures reasonably required by Government, the power companies may recover from the market such amount of residual Stranded Costs as determined in accordance with the SCA. With ExCo's approval on 18 December 2012 and subject to the conditions attached thereto, the proposed GSA would, upon its execution by the parties, be a fuel purchase agreement approved by the Government for the purpose of the definition of Stranded Costs under the SCA. This only means that costs incurred by CAPCO under the GSA **<u>may</u>** potentially qualify as Stranded Costs. Whether

[3] The World Bank publishes average prices of Natural gas (Europe), Natural gas (US) and Natural gas LNG (Japan) in its website. In view of the divided gas market in the three distinct regions, the Natural gas LNG (Japan) price is the most appropriate indicator for the Asia market.

or not such costs will actually become Stranded Costs depends on whether there has been a change in the electricity supply market structure; and even if there has been such a change, whether such costs have not already been recovered or mitigated and cannot in future be recovered in the market as a result of such change. It is therefore not appropriate at this stage to give confirmation that the GSA will definitely give rise to Stranded Costs.

Tariff implications

17. Based on information available, CLP's additional investment in the new GRS and the BPPS modification project should increase Basic Tariff by about 0.9¢/kWh in 2013. In addition, based on CLP's estimated level of WEPII gas price in the range of US$18-20/mmbtu in the 2013 Tariff Review and the current price differential between WEPII and Yacheng gas, the Fuel Clause Charge should increase by about 7¢/kWh in 2013, or about 20¢/kWh over the 2012 tariff level in a full year with offtake of the entire annual contract quantity of WEPII gas.

18. The actual Net Tariff implications, however, would depend on a number of factors in tariff reviews to be conducted every year under the SCA, including projected sales, capital investments, operating expenditure, average fuel costs, balances in Tariff Stabilisation Fund and Fuel Clause Recovery Account, etc. For 2013, CLP announced on 11 December 2012 a Net Tariff increase of 5.8¢/kWh (or 5.9% over 2012), comprising mainly of an increase in Fuel Clause Charge by 4.6¢/kWh with no change in Basic Tariff.

OTHER OPTIONS

19. If there is no gas offtake from WEPII in 2013, CLP would have to identify alternative sources of clean, low carbon fuel in time to replace gas to meet the demand for electricity supply and the statutory emission caps promulgated under the Air Pollution Control Ordinance (Cap 311). Currently, industrial distillate oil (IDO) is used as a back-up fuel. However, if used as a primary fuel, IDO would likely push up total fuel cost even further, and may not be able to meet the same environmental objective as the use of WEPII gas. Although we may explore the feasibility of increasing electricity import from the Mainland in the long run, the new gas source from WEPII is indispensable to support adequate and reliable gas supply for local generation.

OTHER IMPLICATIONS

Environmental Implications

20. CAPCO will be able to obtain natural gas supply for electricity generation after depletion of its existing gas source. With the continuous availability of natural gas, CAPCO could stay within the emission caps promulgated under the "Second Technical Memorandum for Allocation of Emission Allowances in Respect of Specified Licenses" pursuant to the Air Pollution Control Ordinance (Cap. 311) beginning from 2015, which would result in improvements to the local air quality and reduction in carbon emission.

Sustainability Implications

21. A sustainability assessment shows that the WEPII gas supply should contribute positively to the economic development of Hong Kong by ensuring that reliable, safe and efficient electricity supply will continue to be delivered to consumers at reasonable costs.

PUBLICITY

22. We have briefed the Energy Advisory Committee, and will brief the relevant panel of the Legislative Council.

ENQUIRIES

23. Any enquiry on this brief should be addressed to Ms Vyora Yau, Principal Assistant Secretary for the Environment (Financial Monitoring), at 3509 8638.

Environment Bureau
21 December 2012

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