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Panel on Economic Development
Meeting on 10 December 2013

Background brief on
2014-2018 Development Plans and 2014 Annual Tariff Reviews
of the two power companies

Purpose

This paper sets out the background of the 2014-2018 Development Plans and 2014 tariff reviews of the two power companies and summarizes members' previous major concerns raised on these issues.

Regulation of electricity supply in Hong Kong

2. Electricity supply in Hong Kong is regulated through the Scheme of Control agreements (SCAs) signed between the Government and individual power companies, namely, The Hongkong Electric Company Ltd. ("HEC")[1] which supplies electricity to customers on the Hong Kong Island, Ap Lei Chau and Lamma Island; and CLP Power Hong Kong Ltd. and Castle Peak Power Company Ltd. ("CAPCO")[2] (referred to collectively as "CLP" hereafter) which jointly supply electricity to customers in Kowloon and the New Territories including Lantau, Cheung Chau and some outlying islands. The two SCAs set out the rights and obligations of the power companies and provide a framework for the Government to monitor the power companies' financial affairs and technical performance.

3. The existing SCAs were entered into between the Government and individual power companies on 7 January 2008 for a term of 10 years. The Government has completed its mid-term review of the existing SCAs and

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1 HEC is a subsidiary of Power Assets Holdings Limited.

2 CLP Power Hong Kong Ltd. is a subsidiary of the CLP Holdings Limited. CAPCO is a joint venture electricity generating company established between CLP Power (40%) and ExxonMobil Energy Limited (60%).

briefed members of the outcome of the review on 25 November 2013 with details in LC paper no. CB(1)344/13-14(06).

The Five-year Development Plans of the power companies

4. The Government last approved the five-year development plans of CLP and HEC on 23 September 2008 and 16 December 2008 respectively. According to CLP's development plan which lasts from 1 October 2008 to 31 December 2013, the capital project expenditure will amount to $39.9 billion and the projected average annual increase in the Basic Tariff for the period is below the forecast inflation of Government's Medium-Range Forecast. Under the approved development plan, CLP should –

(a) retrofit the four coal-fired generating units at the Castle Peak Power Station (Units B1 to B4) with Flue Gas Desulphurization plant and Selective Catalytic Reduction plant for reducing emissions;

(b) carry out post-commissioning projects for replacement of worn-out or aged equipments and improvement work for the plants at Black Point and Castle Peak; and

(c) exclude the proposed Liquefied Natural Gas terminal project following the signing of the Memorandum of Understanding between the National Energy Administration and the HKSAR Government on Supply of Natural Gas and Electricity to Hong Kong on 28 August 2008.

5. For HEC's development plan lasting from 1 January 2009 to 31 December 2013, the capital project expenditure will amount to $12.3 billion. The plan projects on average a decrease in the Basic Tariff per annum during the period. In the approved development plan, the Administration agreed that HEC would –

(a) retrofit the three coal-fired generating units L2, L4 and L5 at Lamma Power Station with Flue Gas Desulphurization plant and the units L4 and L5 with Low NOx Burner for reducing emissions; and

(b) carry out refurbishment projects for aged equipments and improvement work for the plants at Lamma Power Station.

6. The Administration also agreed that the two companies should undertake projects including construction of new substations, additional circuits, improved control equipment, or reinforcement of existing system. Furthermore, projects relating to customer and corporate services, which include metering system development, service centre improvements and information system development would also be carried out under the development programme.

The tariff adjustment mechanism

7. Electricity tariff is made up of two parts, namely, the Basic Tariff and the fuel clause charge. To ensure that tariff adjustment is reasonable, the Administration would play a gate-keeping role to control cost relating to the Basic Tariff by way of ensuring that any necessary developments and service improvements of the power companies would proceed within the scope of their five-year development plans approved by the Government, and by vetting in the context of the annual tariff review individual expenditure items, including capital investment, of the two companies to screen out items that are excessive, premature or unnecessary. As to the fuel clause charge, the Administration would urge the two power companies to, as far as practicable, use the Fuel Clause Recovery Account[3] and the Tariff Stabilization Fund[4] as buffers to mitigate the cost impact of any switch from old fuel contracts to new contracts, and any significant fuel price fluctuations in the international market. It would also examine whether any special income of the two companies can be used to offset cost increase.

<u>Tariff adjustments since 2004</u>

8. The Government conducts tariff reviews with the two power companies annually and the average net tariffs charged by HEC and CLP since 2004 are set out below –

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3 The Fuel Clause Recovery Account is operated on a rolling basis. It is an account maintained by the two power companies through which the difference between the standard fuel cost (as reflected in the Basic Tariff) and the actual fuel cost is captured and passed on to consumers by way of rebates or charges.

4 A Tariff Stabilization Fund ("TSF") was maintained for the retention of net revenue in excess of the agreed return for the power companies. The cap on TSF balance was reduced to 8% of annual local sales from 12.5% under the previous SCAs and as a result of the 2013 SCA mid-term review, the cap has been further reduced to 5%. The purpose of TSF is to accumulate the excess of net revenues of the power companies over the permitted return, so as to provide funding, where necessary, to ameliorate the impacts of tariff increases on consumers.

Year	HEC (cents/kWh)	CLP (cents/kWh)
2004	103.3	87.2
2005	110.0 (+6.5%)	87.3
2006	117.4 (+6.7%)	87.1
2007	120.2 (+2.4%)	87.2
2008	127.4 (+6.0%)	91.1 [a] (+4.5%)
2009	119.9 (-5.9%)	88.4 [b] (-3%)/89.2 [b]
2010	119.9	91.5 (+2.6%)
2011	123.3 (+2.8%)	94.1 (+2.8%)
2012	131.1 (+6.3%)	98.7 (+4.9%)
2013	134.9 (+2.9%)	104.5 (+5.9%)

Note: [a] from January to September 2008
[b] from October 2008 to December 2009 during which the Rate Reduction Reserve rebate of 0.8 cents/kWh ceased from 6 May 2009 with the depletion of the Rate Reduction Reserve.

Views previously expressed by the Panel on Economic Development

9. Electricity tariff has all along been a matter of contention and members of the Panel on Economic Development ("the Panel") have expressed views and concerns over a range of issues at the annual briefings on tariff reviews prior to 2013, including the following –

(a) disappointment at decisions of HEC and CLP to raise tariff despite the companies' substantial earnings;

(b) HEC's customers were paying tariff at a much higher rate than those of CLP;

(c) suggestion of setting up a tariff determination mechanism;

(d) introduction of electricity suppliers from the Mainland to enhance competition and lower the tariff;

(e) implementation of increased interconnection between the two power companies to minimize investment on new generating units;

(f) the Government should enhance monitoring of the power companies' investment on generation facilities, treatment of excessive generating capacity, and sales of surplus electricity to the Mainland;

(g) the Government should enhance transparency by urging the two power companies to disclose financial information related to the tariff reviews;

(h) separation of power generation and transmission to facilitate market entry;

(i) the power companies should exercise greater versatility in handling the coal procurement contracts in the interests of customers;

(j) the Government should monitor the timing of the adjustment of fuel clause charges made by the power companies;

(k) the need to strike a balance between commitment to environmental protection and cost control; and

(l) the power companies should use the reserve in TSF to offset the fuel cost increase, or opt not to achieve a maximum rate of return.

Concerns about the 2013 tariff review

10. Regarding the tariff adjustments of the two power companies in 2013, some members considered CLP's proposed higher-than-inflation adjustment unreasonable and they suggested that the Administration should put the increase of tariff rates on check. One member pointed out that, although HEC's proposed rate of adjustment was relatively small, its tariff base was higher than that of CLP. CLP justified its tariff increase by the higher cost of natural gas charged by the new supplier. HEC explained that its electricity tariff could not be as low as CLP because CLP had the advantage of a larger customer base and could tap into a cheaper and exclusive source of nuclear energy.

<u>Administration's gate-keeping role</u>

11. Members generally held the view that power companies should exercise a higher degree of corporate social responsibility rather than pursue the maximum permissible return under the SCAs. In this connection, a few

members queried if the Administration had diligently performed its gate-keeping function to dissuade power companies from keep increasing capital investment unnecessarily, which was a driving force of tariff increase. The Administration responded that it had managed to convince power companies to revise downward their tariff adjustment for 2013.

Tariff structure and energy saving

12. Some members suggested that the power companies should waive tariff increase for consumers who used less electricity than a previous period, as a reward for their energy-saving efforts. Incentives should also be given to property developers to adopt energy saving features or install renewable energy facilities in buildings. Another member suggested that a higher tariff rate should be imposed for customers of heavy electricity consumption.

13. CLP indicated that the current progressive tariff structure and the Energy Saving Rebate were introduced with the objective of energy-saving in mind; for 2013, no tariff increase had been proposed for customers who consumed a low level of electricity. The Administration and HEC explained that there was already a mechanism to encourage the use of renewable energy for buildings, and HEC had adopted the progressive tariff structure to encourage energy saving.

Excess generation capacity

14. Some other members queried whether power companies' expenditure on penalty for excess generation capacity would be counted as operating cost for the purpose of determining tariff. HEC had advised that any such penalty would be borne by the shareholders rather than being passed onto customers in the tariff. CLP indicated that its excess generation capacity had not triggered any penalty.

15. The contribution of power companies' reserved capacity to tariff increases was a key concern among members. CLP assured members that certain amount of reserve capacity was needed to ensure a reliable supply of electricity and was consistent with international practice.

Emission control and fuel costs

16. In response to members' queries how the power companies' compliance with the new emission caps to be implemented in 2015 would affect electricity tariff, the power companies had indicated that the meeting of new emission caps would depend on a higher proportion of natural gas in electricity generation. The price differentials of natural gas vis-à-vis other fuels would be reflected in the tariffs.

17. Members were aware of how fuel cost escalation would affect electricity tariffs, and had expressed views about how the impact of fuel cost fluctuation might be abated. One member observed that there was wide discrepancy in the average increase in fuel cost of the two power companies. Another member queried whether power companies could hedge on fuel prices, and enquired the arrangements to be made by the power companies on the tariff adjustment for a year when the expenditure on fuel cost in the previous year had been over-estimated. One member queried specifically whether CLP should increase the use of nuclear power to keep the electricity tariff low.

18. The power companies explained that their fuel cost differentials were due to the different prices of their respective natural gas suppliers. CLP had indicated that it would not consider hedging fuel prices to avoid incurring additional hedging costs; any difference between the estimated and the actual fuel costs in a particular year would be reflected in the Fuel Clause Recovery Account. As regards the proposed increase in the proportion of nuclear energy in electricity production, the Administration advised that discussion with the power companies on the issue had been held in abeyance following the Fukushima nuclear incident. However, the issue would likely be revived in 2013 in the context of the discussion with power companies and stakeholders on fuel mix for electricity generation.

Impact of natural gas prices

19. As natural gas constitutes a high proportion of the fuel mix in electricity production, the tariff rates would be sensitive to price fluctuation of natural gas. Members had enquired about the estimated tariff increase for 2014, the supply of natural gas in the coming years and the likely impact on electricity tariff. CLP and the Administration indicated that the impact of the highly volatile fuel prices on electricity tariff was difficult to estimate. After all, changes in electricity tariff would depend on factors other than the prices of natural gas, including the amount of electricity consumption, investments in electricity facilities, etc.

20. At the Panel meeting held on 11 December 2012, members passed a motion urging the Administration to press CLP to suppress the level of tariff adjustment for 2013 by every possible means, including adjusting the balances of Fuel Clause Recovery Account and Tariff Stabilization Fund.

Latest developments

21. It was reported on 20 November 2013 that CLP Power Hong Kong Limited and the state-owned China Southern Power Grid (CSG) would jointly acquire ExxonMobil's stake in CAPCO. Some analyses have suggested that

under the new CLP-CSG partnership, CLP Power Hong Kong Limited would have more flexibility in the mix of fuel and imported power. However some academics were concerned that over-reliance on imported power from the Mainland might weaken the Administration bargaining power in stabilizing tariff fluctuation in future. One Legislative Council Member was reported to have commented that CLP Power Hong Kong Limited would become a major shareholder in CAPCO and would have more control in determining the level of electricity tariff.

22. The Administration and the two power companies will brief the Panel on power companies' Development Plans for 2014-2018 and the tariff review for 2014 at the meeting on 10 December 2013.

References

23. A list of the relevant papers is as follows:

Background brief on annual tariff reviews with the two power companies
http://www.legco.gov.hk/yr12-13/english/panels/edev/papers/edev1211cb1-260-10-e.pdf

CLP Power Hong Kong Limited Castle Peak Power Company Limited 2008 Development Plan
http://www.legco.gov.hk/yr08-09/english/panels/edev/papers/edev1124-enbcr1457608pt6-e.pdf

The Hongkong Electric Company Limited 2009 to 2013 Development Plan
http://www.legco.gov.hk/yr08-09/english/panels/edev/papers/edev1216-enbcr2457608pt4-e.pdf

Minutes of meeting of the Panel on Economic Development held on Tuesday, 11 December 2012
http://www.legco.gov.hk/yr12-13/english/panels/edev/minutes/edev20121211.pdf

Minutes of meeting of the Panel on Economic Development held on Tuesday, 8 January 2013
http://www.legco.gov.hk/yr12-13/english/panels/edev/minutes/edev20130108.pdf

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