File Ref : ENB CR 2/4576/08 Pt. 4

LEGISLATIVE COUNCIL BRIEF

THE HONGKONG ELECTRIC COMPANY LIMITED 2009 TO 2013 DEVELOPMENT PLAN

INTRODUCTION

At the meeting of the Executive Council on 16 December 2008, the Council ADVISED and the Chief Executive ORDERED that the 2009-2013 Development Plan (DP) proposed by the Hongkong Electric Company Limited (HEC) which includes the following features should be approved –

(a) capital projects amounting to $12.3 billion during the DP period, i.e. 1 January 2009 to 31 December 2013;

(b) reduction of Basic Tariff and Net Tariff by 19.2% and 5.9% respectively on 1 January 2009; and

(c) projected on average a decrease in Basic Tariff per annum during the DP period.

JUSTIFICATIONS

2. HEC's prevailing Financial Plan[1] for January 2004 to December 2008 under the existing Scheme of Control Agreement (SCA) will expire on 31 December 2008. Pursuant to the new SCA, HEC submitted its 2009-2013 DP covering the period 1 January 2009 to 31 December 2013 in June 2008, which details, inter alia, HEC's electricity demand forecast, proposed capital projects and projected Basic Tariff for each year up to December 2013.

3. With the assistance of an independent energy consultant, Nexant Inc. (Nexant), we have reviewed the financial, technical and environmental aspects of the DP, with a view to accepting only those capital expenditure proposals which are absolutely necessary to ensure that the public will enjoy reliable and safe electricity supply at reasonable costs. After protracted discussions, HEC submitted its revised 2009-2013 DP in December 2008, the key features of which are summarized in the following paragraphs.

---

1 The Development Plan in the new SCA is called the Financial Plan under the current SCA.

KEY FEATURES AND ASSESSMENT

I. Load and Sales Forecast

4. We have reviewed HEC's load and sales forecasts as they would affect the need for new generating capacity to ensure reliable electricity supply and tariff projections. HEC projects local sales to grow at an average annual rate of 1.1% for 2009-2013. Nexant considers the projection reasonable.

II. Capital Projects

5. In the original DP submitted in June 2008, HEC proposed capital expenditure (CAPEX) of $17.4 billion over the DP period, which was 46% above the CAPEX of $11.9 billion under the current Financial Plan. We considered this excessive. In conjunction with Nexant, we have critically reviewed the need, timing and proposed budget of the capital projects proposed by HEC.

Proposed Gas-fired Generating Unit L10

6. HEC has originally proposed to install a new gas-fired generation unit (L10). We have carefully reviewed the justifications put forth by HEC and consider that the project is not justified as –

(a) L10 will not be needed before 2017 to meet HEC's load requirement. Deferring the construction of L10 beyond 2013 will not impact on the reliability of HEC's power supply; and

(b) HEC will be able to meet the 2010 emission caps without L10. The need and timing for L10 should be reviewed after the post 2010 emission caps have been determined under the Air Pollution Control Ordinance.

7. The Government has announced a plan in the 2008 Policy Address to explore the possibility of increasing the proportion of natural gas in the fuel mix for local electricity generation. The proposal will be taken forward in the context of the ongoing review on Air Quality Objectives for which a public consultation will be launched in 2009. Should a new fuel mix target be set by the Government which will entail the construction of new gas generation facilities by HEC, the company will be invited to submit a revised DP for approval by the Government.

Proposed Off-shore Wind Farm Project

8. HEC's original DP includes an off-shore wind farm. The project will help reduce reliance on fossil fuels and contribute to the improvement of the air quality in Hong Kong. However, the project is still at a very preliminary stage and its feasibility is still subject to further detailed studies, including Environmental Impact Assessment. We believe that this project should be excluded from the DP but the company may propose a revision to the approved DP when the feasibility studies are completed.

9. After lengthy discussion, HEC eventually agreed to drop L10 and wind farm project and reduce its proposed CAPEX by 29% to $12.3 billion, which will be in real terms lower than the CAPEX of $11.9 billion under the current Financial Plan taking into account inflation.

(A) Generation System

10. In the revised 2009-2013 DP, HEC has proposed to -

(a) retrofit the three coal-fired generating units L2, L4 and L5 at Lamma Power Station with Flue Gas Desulphurization (FGD) 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.

11. To improve regional air quality, the Government and Guangdong reached a consensus to reduce, on a best endeavours basis, the emission of four major air pollutants in the region by 2010. To meet the emission reduction targets, the Environmental Protection Department has imposed emission caps on HEC upon the renewal of its Specified Process Licences. Nexant considers the scope and cost of the proposed emission reduction projects acceptable. Nexant also considers that the refurbishment and improvement projects are necessary and justified for ensuring operational reliability and the proposed budgets reasonable.

(B) Transmission and Distribution Systems

12. Projects include the construction of new substations, additional circuits, improvement and reinforcement of existing system to ensure that adequate transmission and distribution facilities are in place to meet new demand, maintain reliability of supply and safety of HEC's systems. We share Nexant's view that the capital expenditure on these projects are justified and reasonable. We will monitor the projects through the annual review in the light of actual demand build-up.

(C) Customer and Corporate Services Development

13. Projects relating to customer and corporate services include information system development, metering system development, replacement of motor vehicles and building renovation. We share Nexant's views that the capital expenditure on these projects are justified and reasonable.

III. Financial Aspects of the DP

14. The Government announced at the time of signing the new SCAs with the power companies on 7 January 2008 that the lowering of their permitted rate of return from the existing 13.5%-15% to 9.99% should bring a double-digit reduction in Basic Tariffs (not including fuel cost adjustments).

15. The current average Basic Tariff of 116.9 cents/kWh will be reduced by **19.2%** or **22.4 cents/kWh** to 94.5 cents/kWh between 1 January 2009 and 31 December 2009. This is not only in line with Government estimate of a double-digit Basic Tariff reduction under the new SCA but also narrows the difference in Basic Tariff between HEC and CLP[2] from 33% to 22%. However, the reduction in Basic Tariff will be partly offset by an increase of 14.9 cents/kWh in Fuel Clause Charge (FCC) i.e. from the existing level of 10.5 cents/kWh to the revised level of 25.4 cents/kWh to cover the rising fuel cost. The average Net Tariff will hence be reduced from 127.4 cents/kWh to 119.9 cents/kWh, representing a reduction of **7.5 cents/kWh** or **5.9%** from its current level. Details are set out in the table below -

2 CLP Power Hong Kong Limited (CLP Power) and Castle Peak Power Company Limited (CAPCO) are referred collectively as "CLP".

(Cents/kWh)

	Basic Tariff	Decrease (%)	Fuel Clause Charge	Net Tariff	Decrease (%)
2008 Tariff	116.9	-	10.5	127.4	-
2009 Tariff	94.5	-22.4 (-19.2%)	25.4	119.9	-7.5 (-5.9%)

16. Under the SCA, HEC has the right to pass on to the consumers by way of FCC from time to time the difference between the projected cost of fuels and the actual cost of fuels incurred by HEC. During the 2008 Tariff Review carried out by the end of last year, HEC projected that the average coal price in 2008 would be about US$86/ton. With this coal price projection, HEC's FCC from 1 January 2008 was set at 10.5 cents/kWh. However, with the continuing increase in coal price in 2008, the FCC level was not sufficient to cover the actual fuel cost incurred by HEC. As a result, the Fuel Clause Account is expected to accumulate a deficit balance of about $1 billion by the end of 2008.

17. As for 2009, HEC forecasts an average coal price of US$137/ton. To avoid accumulating even larger deficit balance in its Fuel Clause Account, HEC has proposed to increase the FCC by 14.9 cents/kWh as mentioned in paragraph 15 above. HEC has nevertheless been persuaded to continue to carry the deficit of about $1 billion in its Fuel Clause Account to end of 2009 which will only be gradually cleared in the remaining years in the DP period.

18. HEC has projected on average a decrease in Basic Tariff and Net Tariff per annum during January 2009 to December 2013 as compared with current levels. The Basic Tariff for January to December 2009 is approved as part of this DP and will be implemented when the new SCA becomes effective on 1 January 2009. The tariff rates for 2010-2013 are only projections. The actual tariffs to be charged to consumers each year will be determined in the preceding year, following discussions between Government and HEC during the annual Tariff Review, taking into account any variations in the components of the DP.

Tariff Stabilization Fund

19. Under the new SCA, Tariff Stabilization Fund (TSF)[3] serves to accumulate and provide funds to ameliorate tariff increases or facilitate tariff reduction where appropriate.

3 The Tariff Stabilization Fund in the new SCA is called the Development Fund under the current SCA.

20. In our negotiation with HEC, we have persuaded HEC to draw down its TSF from $172 million in end 2008 to about $80 million by end 2009 and keep it at around the same level in the ensuing years of the DP period. This is consistent with the basis adopted for CLP, i.e. 2-day projected local sales revenue in 2009. This projected balance is also well below the TSF cap of 8% of local sales revenue allowed in the new SCA.

IMPLICATIONS OF THE PROPOSAL

Environmental Implications

21. With the commissioning of its first natural gas-fired combined cycle gas turbine unit L9 in 2006 and the completion of conversion of the GT57 unit into gas-firing capability, HEC will consume more natural gas for generation starting 2010. The retrofit of the FGD plants and/or Low NOx Burners for the coal-fired units are scheduled for completion in phases in 2009 and 2010. The project is practical and cost-effective for HEC to meet the intended emission caps for 2010. Together with the increased use of natural gas for generation, the retrofit is instrumental for Hong Kong to meeting its air quality objectives. It would also help alleviate the visibility, smog as well as acid rain problems plaguing the Pearl River Delta region.

Sustainability Implications

22. A sustainability assessment of HEC's 2009-2013 DP shows that HEC's proposal should contribute positively to the sustainable development of Hong Kong by ensuring that reliable, safe and efficient electricity supply will continue to be delivered to consumers at reasonable costs.

PUBLICITY

23. A press release announcing the Executive Council's decision will be issued.

ENQUIRIES

24. Any enquiry on this brief should be addressed to Mr Frankie Lam, Principal Assistant Secretary for the Environment (Financial Monitoring), at 2594 6742.

Environment Bureau
16 December 2008