

Press Release  
7 January 2008

## **HK Electric Signs New Scheme of Control Agreement**

HK Electric announced today that it has entered into a new Scheme of Control Agreement (SCA) with the government, effective for ten years with an option to extend for another five years, from 1 January 2009.

The Chairman of HK Electric, Mr. Canning Fok said the Company is pleased that negotiations have been concluded and an agreement reached. "This has not been an easy task given the complexity of the issues involved," he said.

The current SCA that governs the provision of electricity supply to Hong Kong Island and Lamma Island will expire in December this year. HK Electric has engaged in talks with the government over the last two years on the post 2008 regulatory framework.

Under the new SCA, HK Electric is entitled to a permitted return of 9.99% on average net fixed assets excluding those on renewable energy, which will have a rate of return of 11%.

The term of the SCA is set for ten years to end December 2018 with an option for the government to extend the agreement for another five years to end December 2023.

"We believe that under the current environment, the new agreement effectively balances the interests of our customers in reliable and quality electricity supply at reasonable prices while providing our shareholders with the benefit of the certainty and stability of a long term regulatory framework," said Mr. Fok after the signing ceremony.

"The agreement removes the uncertainties surrounding the electricity industry in Hong Kong over the last few years. Now with the negotiations behind us, we can focus on planning for the future so as to continue contributing to the economic development of Hong Kong through supply reliability and excellent customer service." Mr. Fok added.

The Managing Director of HK Electric, Mr. Tso Kai-sum, said the new agreement provides a more comprehensive regulatory framework. "It encourages higher service standards and improved environmental performance while also promoting the use of renewable energy," Mr. Tso explained.

Noting the government's intention to introduce incentives and penalties for meeting the government's emissions targets, Mr. Tso stressed that HK Electric would strive to meet the emissions caps in support of the government's clean air objective.

In addition, the Company's performance in respect of supply reliability, operational efficiency, customer services, energy conservation and the use of renewable energy will be measured. Financial incentives or penalties will apply for performance above or below target levels.

Mr. Tso noted the community's aspiration for lower tariffs, but stated that it is not possible to forecast the tariff level for 2009 at this stage given the volatility of fuel prices. "Our tariff is dependent on a number of factors. Other than the rate of return, electricity sales, fuel charges and operating costs will all have an impact," he said, adding that every effort will be made to enhance productivity while containing costs.

Going forward, Mr. Tso said he is confident that under the new SCA, Hong Kong will continue to enjoy a safe, efficient and reliable electricity supply at reasonable prices while improving on the environment. "HK Electric is committed to making this a reality," Mr. Tso added.

- END -

### **About Hongkong Electric Holdings Ltd.**

Hongkong Electric Holdings Ltd. (HEH) is the listed vehicle of the Hongkong Electric Group of companies which includes The Hongkong Electric Company, Limited (HEC), Hongkong Electric International Limited (HEI) and other subsidiaries. HEC is an electricity utility established in 1889 and its principal activity is to generate and supply electricity to Hong Kong Island and Lamma Island. HEI is the international investment arm of HEH, pursuing investment opportunities outside Hong Kong.

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**The Scheme of Control Agreement  
entered into by the  
Government of the Hong Kong  
Special Administrative Region  
and the following companies:**

**The Hongkong Electric Company, Limited  
and  
Hongkong Electric Holdings Limited**

## SCHEME OF CONTROL AGREEMENT

THIS AGREEMENT is executed as a Deed the 7th day of January Two Thousand and Eight.

BETWEEN:-

- (1) THE GOVERNMENT OF THE HONG KONG SPECIAL ADMINISTRATIVE REGION OF THE PEOPLE'S REPUBLIC OF CHINA ("the Government")
- (2) THE HONGKONG ELECTRIC COMPANY, LIMITED, a company incorporated and existing under the laws of Hong Kong ("HEC")
- (3) HONGKONG ELECTRIC HOLDINGS LIMITED, a company incorporated and existing under the laws of Hong Kong ("Holdings")

WHEREAS:-

- (A) The parties hereto are parties to a Scheme Of Control Agreement dated 15 July 1993 (as amended) which will expire on 31 December 2008 and pursuant to clause 11(3) thereof the parties have now agreed on the terms of the Scheme Of Control as contained herein which shall commence on 1 January 2009. Sch. 1(27)
- (B) HEC recognises its continuing obligation to contribute to the development of Hong Kong Special Administrative Region ("Hong Kong") by providing sufficient facilities to meet the demand for electricity over the Term of this Agreement, and in pursuit of this objective, will construct additional generation, transmission and distribution facilities for the sale of electricity to its consumers. HEC will conduct its business in compliance with applicable laws and regulations of Hong Kong and in a manner that is compatible with the environmental and economic needs of the community in Hong Kong. HEC will make continuing efforts to improve its environmental performance and to promote efficient use of energy. To this end, HEC recognises the Government's efforts in (i) reducing emissions in order to improve Sch. 1(31)

regional air quality and (ii) exploring alternative power generation sources, including renewable energy, to supplement conventional power generation from fossil fuels and promote public awareness and public participation. HEC will make continuing efforts to work closely with the Government in these endeavours.

Sch. 1(16)

- (C) The Government recognises that HEC and its shareholders are entitled to earn a return which is reasonable in relation to the risks involved and the capital invested in and retained in its business, and in return, the Government has to be assured that service to the consuming public continues to be adequate to meet demand, to be efficient and of high quality, and is provided at the lowest cost which is reasonable in the light of financial and other considerations.
- (D) The Government may introduce changes to the electricity supply regulatory framework after 31 December 2018, after consideration of market readiness and other relevant factors. The Government recognises that HEC has made and may make during the schemes of control long-term investments and contractual commitments to meet the demand for electricity.
- (E) Holdings is the holding company of HEC.
- (F) In recognition of the above, HEC, Holdings and the Government have jointly developed the procedures set out in this Agreement to govern the financial affairs of HEC and Holdings so far as they are Electricity-Related.

Sch. 1(10)

NOW IT IS HEREBY AGREED as follows:-

**1. DEFINITIONS AND INTERPRETATION**

- (1) In this Agreement except where the context otherwise requires the words and expressions set out in Schedule 1 and other parts of this Agreement shall have the respective meanings thereby assigned to them.
- (2) This Agreement shall include the Schedules hereto and references to the Schedules mean these Schedules.
- (3) References to clauses mean the clauses of the principal parts of this Agreement. References to Sections and paragraphs mean the Sections and paragraphs of the Schedules to this Agreement.

**2. APPLICATION OF THE SCHEME**

The parties hereto agree that this Agreement shall govern and apply to the financial affairs of HEC and other matters specified in this Agreement so far as they are Electricity-Related excluding those associated with or in relation to export sales of electricity in accordance with the separate arrangements between HEC and the Government, unless otherwise expressly stated.

**3. TARIFF ADJUSTMENTS**

- (1) (a) Projected levels of Basic Tariff Rate shall be determined by periodic Development Plan Reviews and shall be subject to the approval of the Executive Council. Development Plan Reviews shall be conducted in accordance with clause 6 and Section A of Schedule 3. Sch. 1(4) Sch. 1(12)
- (b) Implementation of adjustments to the Basic Tariff Rate shall be subject to the provisions of Sections B and C of Schedule 3. Annual Tariff Reviews shall be conducted in accordance with Section B of Schedule 3.

- (2) In accordance with the requirements specified in clause 3(1)(b), HEC may adjust tariffs through periodic changes to the Basic Tariff Rate. Such adjustments may take into account sub-paragraphs (a), (b) and (c) below and sub-clause (1).
  - (a) Benefits to consumers derived from economies of scale and improvement in efficiency.
  - (b) Repayment by HEC of loans in accordance with financing requirements which are reviewed and agreed to by the Government.
  - (c) Changes in HEC's Total Operating Costs including, inter alia, cost of labour, materials, supervision, Depreciation, provision for Asset Decommissioning Obligation, approved electricity purchase from other companies, promotion of energy efficiency and conservation, interest, foreign exchange differences and taxes but excluding changes in the cost of fuels which are covered in sub-clause (3).
 

Sch. 1(32)  
 Sch. 1(8)  
 Sch. 2(G)
- (3) HEC may adjust tariffs through the Fuel Clause Recovery Account from time to time to reflect changes in the cost of fuels consumed by HEC for the generation of electricity.
 

Sch. 1(15)
- (4) HEC shall adjust tariffs through rebates from the Tariff Stabilisation Fund and the Rate Reduction Reserve in accordance with clauses 5(3), 5(4) and paragraph (1)(a) of Section B of Schedule 3.
 

Sch. 1(30)  
 Sch. 1(23)

#### 4. **NET RETURN AND PERMITTED RETURN**

- (1) The Net Return accruing to the shareholders of HEC for any Year, in respect of its Electricity-Related operations, shall be an amount calculated by deducting from the Permitted Return as specified in clause 4(2), the items specified in clauses 4(3)(a) to (d), which are interest incurred by HEC, and subject further to the adjustments specified in clauses 4(3)(e) to (h), which are excess capacity-related or performance-related.
 

Sch. 1(20)  
 Sch. 1(33)  
 Sch. 1(22)

- (2) The Permitted Return of HEC for each Year in respect of its Electricity-Related operations shall be the sum of:-
- (a) 11% of the total value of its Average Renewables Net Fixed Assets for that Year; and Sch. 1(3), (26)
  - (b) 9.99% of the total value of its Average Net Fixed Assets other than those mentioned in (a) above for that Year. Sch. 1(2), (14), (19)
- (3) The deductions from or adjustments to the amount of Permitted Return in respect of a Year for the purpose of the calculation of the Net Return for that Year required by clause 4(1) shall be the following in respect of that Year:-
- (a) deduction of interest on Borrowed Capital, which has been capitalised or charged to Total Operating Costs (and if denominated in foreign currency calculated at the historical rates of exchange), provided that the amount so deducted in respect of each loan shall not exceed an amount corresponding to interest calculated at 8% per annum on the loan principal outstanding from time to time; Sch. 1(6)
  - (b) deduction of interest on Borrowed Capital swapped into another currency calculated at the swap exchange rate and swap interest rate, provided that the amount so deducted in respect of each swapped loan shall not exceed an amount corresponding to interest calculated at 8% per annum on the swapped loan principal outstanding from time to time;
  - (c) deduction of the amount representing the charge on the Tariff Stabilisation Fund to be calculated in accordance with clause 5(4);
  - (d) deduction of interest on the increase in consumers' deposits which represents the average of the opening and closing balances of consumers' deposits for that Year in excess of the balance as at 31 December 1998 up to a rate of 8% per annum;



- (e) deduction of Excess Capacity Adjustment; Sch. 1(11)
- (f) adjustment in the form of the Emissions Performance Incentive / Penalty Amount for that Year calculated in accordance with Schedule 4;
- (g) adjustment in the form of the Customer Performance Incentive / Penalty Amount for that Year calculated in accordance with Schedule 5; and
- (h) adjustment in the form of the Energy Efficiency and Renewables Incentive Amount for that Year calculated in accordance with Schedule 6.

## 5. **TARIFF STABILISATION FUND**

- (1) A Tariff Stabilisation Fund shall be maintained in the accounts of HEC.
- (2) If the Gross Tariff Revenues for any Year shall exceed or be less than the total for HEC for that Year of:- Sch. 1(17)
  - (a) the Total Operating Costs;
  - (b) the Permitted Return after the adjustment for interest on Borrowed Capital calculated in accordance with clauses 4(3)(a) and (b), interest on consumers' deposits calculated in accordance with clause 4(3)(d), the Excess Capacity Adjustment in accordance with clause 4(3)(e), and the performance adjustments in accordance with clauses 4(3)(f), (g) and (h); and
  - (c) the Scheme Of Control taxation charges as set out in Section F of Schedule 2,

such excess shall be added to or such deficiency shall be deducted from the Tariff Stabilisation Fund, provided always that in case of a deficiency, the said amount so transferred shall not exceed the balance of the Tariff Stabilisation Fund.

- (3) The main purpose of the Tariff Stabilisation Fund is to accumulate and provide funds to ameliorate tariff increases or facilitate tariff reduction where appropriate.
- (4) A Rate Reduction Reserve shall be maintained in the accounts of HEC. In each Year, a charge equal to the Rate Reduction Reserve Interest Rate times the average of the opening and closing balances of the Tariff Stabilisation Fund for that Year, shall be credited to the Rate Reduction Reserve. This Rate Reduction Reserve shall be reduced by rebates applied to the tariffs normally in the Year next following so as to effect tariff reductions or to minimise tariff increases. The balance of the Rate Reduction Reserve shall not exceed the total annual charges hereunder for the then current Year and the preceding three Years whether covered by the Term or not. Sch. 1(24)
- (5) The balances in the Tariff Stabilisation Fund and the Rate Reduction Reserve shall represent liabilities in the accounts of HEC and shall not accrue to the benefit of its shareholders save as provided for by the Scheme Of Control.
- (6) In the absence of any agreement to the contrary, HEC shall discharge its liabilities in respect of the balances in the Tariff Stabilisation Fund and the Rate Reduction Reserve after the expiry of this Agreement. Such agreement could include the handling and/or the continued maintenance of the balances in the Tariff Stabilisation Fund and/or the Rate Reduction Reserve after the expiry of this Agreement. In the absence of any agreement (whether under clause 7(5) or otherwise), the Government and HEC shall at least twelve months before the expiry of the Term institute specific discussions regarding the way HEC shall discharge these liabilities.

**6. DEVELOPMENT PLAN**

HEC shall submit to the Government in accordance with Section A of Schedule 3 Development Plans relating to the provision and future expansion of the electricity supply system of HEC. Each Development Plan shall be subject to review and approval by the Executive Council in accordance with the provisions set out in Schedule 3. Sch. 1(9)

**7. TERM**

- (1) This Agreement shall come into operation on 1 January 2009 and subject to sub-clauses (2) to (6) hereof shall continue in effect until 31 December 2018 ("Term"). The Scheme Of Control Agreement dated 15 July 1993 between the Government and HEC and Holdings as further revised on 6 May 1999 and 29 March 2004 shall cease to have effect from 1 January 2009 ("Old Agreement"). The 31 December 2008 closing balances of the Development Fund, Rate Reduction Reserve, and Fuel Clause Recovery Account maintained under the Old Agreement, if any, shall be transferred, respectively, to the Tariff Stabilisation Fund, Rate Reduction Reserve, and Fuel Clause Recovery Account as their 1 January 2009 opening balances. Such transfers shall discharge all obligations and liabilities of HEC under the Old Agreement in relation to the closing balances in these accounts as at 31 December 2008. The Auditing Review in respect of the period commencing from 1 January 2008 to 31 December 2008 shall remain to be conducted within 3 months after expiry of that period in accordance with Section D of Schedule 3 of this Agreement.
- (2) The Government may, but is not obliged to, at its own option extend the Term for a further period of five years after 31 December 2018 by giving written notice to HEC to that effect prior to 1 January 2016, in which case the Term shall be extended until 31 December 2023. Where the Term is extended pursuant to this clause 7(2), this Agreement shall continue in full force and effect on and subject to the same terms and conditions throughout the Term as extended (subject to any further changes as all

parties may agree in writing).

- (3) Before implementing any changes to the electricity supply regulatory framework, the Government will take into account all relevant factors including the availability of new reliable and environmentally sound supply sources, safety, reliability and efficiency, and compatibility with the environmental and economic needs of the community. In the period prior to 1 January 2016, the Government will discuss with HEC market readiness, potential future changes to the electricity supply regulatory framework and transition issues.
- (4) Each of HEC and the Government shall have the right during the Year ending 31 December 2013 and, if the Term is extended pursuant to sub-clause (2) above, during the Year ending 31 December 2018, to request modification of any part of this Agreement. Until a written agreement as to the requested modification is entered into by all parties hereto and comes into effect in accordance with its terms, the provisions as set out in this Agreement shall remain in full force and effect.
- (5) If the Government does not extend the Term pursuant to sub-clause (2) above, HEC shall for the period from 1 January 2019 to 31 December 2023, through reasonable arrangements determined by the Government after consultation with HEC, continue to earn from the market annually (prorated for a part of a year), after recovery of tax and Total Operating Costs, the return specified in clauses 4(2)(a) and (b), less the amounts referred to in clauses 4(3)(a) and (b) and, if applicable, clauses 4(3)(c) and (d) (or such other amounts as may have been mutually agreed in accordance with clause 7(4)). The Average Renewables Net Fixed Assets and the Average Net Fixed Assets (other than the Average Renewables Net Fixed Assets) to be taken into account for calculating the return shall only include assets that continue to be used in HEC's Electricity-Related activities, and shall not include assets acquired or invested after 31 December 2018 unless they have been reasonably and prudently purchased for use in HEC's Electricity-Related activities and only if the purchase of such assets has been approved by the Government. For the purpose of this

sub-clause, the meaning attributed to all terms in this Agreement that may relate to the determination of the return referred to in this sub-clause shall apply.

- (6) Provisions in this Agreement which are expressed to or by implication survive this Agreement shall continue in full force and effect notwithstanding the expiry of the Term.

## **8. STRANDED COSTS**

- (1) In the event that any of the parties considers that Stranded Costs may arise as a result of a Specified Market Change or a proposed Specified Market Change, HEC and the Government shall in good faith discuss, and HEC shall implement, such measures as are reasonably required by the Government to mitigate the amount of such Stranded Costs. Sch. 1(29)
- (2) HEC shall recover from the market Stranded Costs that cannot be mitigated by the measures referred to in sub-clause (1) ("Residual Stranded Costs"), in the amount and with the mechanism as determined and agreed under sub-clause (3) or, in the absence of such agreement, in the amount determined under clause 9.
- (3) No less than thirty-six months prior to the effective date of a Specified Market Change and in any event no later than 31 December 2020, the Government shall institute discussions with HEC for the purpose of:-
- (a) determining whether Stranded Costs are likely to arise from a Specified Market Change or a proposed Specified Market Change;
  - (b) agreeing on the amount of the Residual Stranded Costs, if any, that may arise or has arisen; and
  - (c) having regard to international practices, agreeing on the mechanism for the recovery from the market of the Residual Stranded Costs.

9. **ARBITRATION**

- (1) Any dispute, controversy or claim arising out of or relating to this Agreement, or the breach, termination or invalidity thereof, during or after the Term, including in relation to the determination of the amount of any Residual Stranded Costs under clause 8 but excluding any dispute, controversy or claim arising out of or relating to deductions or adjustments specified in clause 4(3), any adjustment to the Basic Tariff Rate or any reviews to be conducted pursuant to Schedule 3, shall be settled by arbitration in accordance with the UNCITRAL Arbitration Rules as at present in force.
  - (a) The appointing authority shall be Hong Kong International Arbitration Centre;
  - (b) the number of arbitrators shall be three;
  - (c) the place of arbitration shall be Hong Kong;
  - (d) the language to be used in the arbitral proceedings shall be English; and
  - (e) any arbitration pursuant to this clause shall be a domestic arbitration for the purposes of the Arbitration Ordinance (Cap. 341).
- (2) The arbitration proceedings are private and confidential between the parties and the arbitrators. No information relating to the arbitration shall be disclosed by any person without written consent of each and every party to the arbitration. Disclosures are permissible where disclosures:-
  - (a) are necessary for implementation or enforcement of any right or power under this Agreement or under the arbitration award;
  - (b) are required by the disclosing parties' auditors, legal or financial advisor or other professional advisor or consultant or for some other legitimate regulatory or business reason;
  - (c) are made to the Executive Council;

- (d) are required by any law, or by any order of the courts of Hong Kong or other judicial tribunal;
  - (e) are necessary for making of claims against any person or to defend a claim brought by any person;
  - (f) relate to information which is already in the public domain other than as a result of disclosure by the disclosing party; or
  - (g) are necessary with a view to the institution of, or otherwise for the purposes of, any criminal proceedings, or any investigation carried out under the laws of Hong Kong.
- (3) Notwithstanding sub-clause (2) above, and subject to the following provisions, the Government may disclose the outline of any dispute with HEC and the outcome of the arbitration to the Legislative Council upon its request. Before disclosures are made to the said Council, the Government shall inform HEC. HEC may, if considered necessary to protect the sensitive nature of certain information, request the Government to disclose such sensitive information to the said Council strictly on a confidential basis. If the Government considers that there are legitimate grounds to accede to HEC's request, the Government shall convey the request to the said Council for its consideration.

## **10. GOVERNING LAW**

This Agreement shall be governed by and interpreted in accordance with the laws of Hong Kong.

**11. NEWCO**

If at any time during the Term, a NewCo is formed, unless otherwise agreed by the Government, HEC and/or Holdings (as the case may be) shall immediately upon NewCo coming into existence procure that NewCo become a party to this Agreement subject to the same rights and obligations as HEC.

Sch. 1(21)



IN WITNESS whereof the parties hereto have hereunto set their hands and affixed their seals on the date first above written.

SIGNED SEALED AND DELIVERED by )  
Yau Tang Wah, Edward )  
Secretary for the Environment )  
for and on behalf of the Government )  
of the Hong Kong Special Administrative )  
Region in the presence of:- ) .....  
 )  
 )  
 )  
 )  
 )  
 )  
..... )

The Common Seal of The Hongkong )  
Electric Company, Limited was hereunto )  
affixed by authority of the directors )  
in the presence of:- )  
 ) .....  
 ) Canning Fok  
 ) Chairman  
 )  
 )  
 )  
 )  
 )  
 )  
 ) .....  
 ) Tso Kai Sum  
 ) Managing Director

The Common Seal of Hongkong Electric Holdings Limited was hereunto affixed by authority of the directors in the presence of:-

.....

)  
)  
)  
)  
) .....  
) Canning Fok  
) Chairman  
)  
)  
)  
)  
) .....  
) Tso Kai Sum  
) Managing Director

## **Schedule 1**

### **DEFINITIONS**

(1) “Affiliated Company”

means any parent, subsidiary, fellow subsidiary, associated company or joint venture (as defined in the Hong Kong Financial Reporting Standards issued by the Hong Kong Institute of Certified Public Accountants) of HEC or Holdings.

(2) “Average Net Fixed Assets” for any Year

means the average for that Year of the opening and closing balances of Net Fixed Assets.

(3) “Average Renewables Net Fixed Assets” for any Year

means the average for that Year of the opening and closing balances of Renewables Net Fixed Assets.

(4) “Basic Tariff Rate”

means, for any Year, the figure in cents per kWh obtained by dividing the total revenues of HEC from sales of electricity to consumers in Hong Kong excluding rebates and Fuel Cost Account Adjustment by the corresponding number of units sold.

Sch. 1(15)

(5) “Best Estimation Of Expenditure Required To Settle Asset Decommissioning Obligation”

means the estimated amount that HEC will reasonably pay to settle the obligation referred to in Section G of Schedule 2 at the end of each Year.

(6) “Borrowed Capital”

means commercial paper, suppliers’ credits, amounts payable on leasehold land purchased on instalment terms from the Government, loans, bank overdrafts, finance leases and other borrowings arranged for the financing of Fixed Assets.

(7) “Commissioning”

means the taking into service of a Fixed Asset upon its acceptance by HEC.

(8) “Depreciation”

means depreciation charged in accordance with Section B of Schedule 2.

(9) “Development Plan”

has the meaning given to it in clause 6.

(10) “Electricity-Related”

means directly or indirectly appertaining to the generation, transmission, distribution, sale of electricity, energy efficiency and conservation, or emissions reduction.

(11) “Excess Capacity Adjustment”

means the amount to be deducted from the Permitted Return as calculated in accordance with Section 2 of Schedule 7 on the Mechanism For Treatment Of Excess Generating Capacity.

(12) “Executive Council”

means the Executive Council of Hong Kong.

(13) “Fair Value Of A Fixed Asset Acquired Through Finance Lease”

means the price at which the asset could be acquired in arm's length transactions between unrelated parties through finance lease agreements.

(14) “Fixed Assets”

means HEC's Electricity-Related investments in land, buildings, plant, equipment, and capitalised refurbishment and improvement works and, subject to Section A of Schedule 2, includes assets in the course of construction, payments on account, goods in transit and capital stores.

(15) “Fuel Clause Recovery Account”

means the account maintained by HEC through which the difference between the standard cost of fuels as agreed between the Government and HEC and the actual cost of fuels to HEC (“Fuel Cost Account Adjustment”) is captured and passed on to the consumers by way of rebates or charges.

(16) “the Government”

means the Government of Hong Kong.

(17) “Gross Tariff Revenues” for any Year

means the total of the following:-

- (a) revenues of HEC from sales of electricity to consumers in Hong Kong in that Year including Fuel Cost Account Adjustment, but without taking into account rebates;
- (b) the amounts benefiting consumers in Hong Kong in that Year specified by and calculated in accordance with any agreement from time to time entered into between the Government and HEC in relation to sales of electricity outside Hong Kong;
- (c) Electricity-Related fees and other revenues derived from the use of HEC’s Fixed Assets; and
- (d) unclaimed deposits from electricity consumers.

(18) “Mechanism For Treatment Of Excess Generating Capacity”

means the mechanism for the treatment of excess generating capacity as set out in Schedule 7 to this Agreement or such other mechanism as may be agreed from time to time in writing by all parties.

(19) “Net Fixed Assets”

means cost of Fixed Assets less Depreciation calculated in accordance with Section B of Schedule 2.

(20) “Net Return”

means the amount specified in clause 4(1).

(21) “NewCo”

means any future companies, joint ventures or partnerships that may be formed by any of the parties to this Agreement (except the Government) alone or in conjunction with others so as to carry on the business of generation, transmission, distribution, or sale of electricity for satisfying the demand for electricity in Hong Kong.

(22) “Permitted Return”

means the amount specified in clause 4(2).

(23) “Rate Reduction Reserve”

means the account established pursuant to clause 5(4).

(24) “Rate Reduction Reserve Interest Rate” in respect of a Year

means the average of one-month Hong Kong Interbank Offered Rate (HIBOR) quoted by the Moneyline Telerate Service or other financial services providers on the first business day (other than Saturday) of each calendar month of that Year.

(25) “Renewable Energy System”

means an electricity generation system employing solar, wind, biomass, hydro, tidal, wave, geothermal, energy from waste (including landfill gas or sewage gas) or such other energy sources that are secure and inexhaustible (in the sense that there is no problem of reserve being depleted) as may be mutually agreed by HEC and the Government in the future.

(26) “Renewables Net Fixed Assets”

means Net Fixed Assets in so far as attributable to HEC’s renewable energy infrastructure investments within Hong Kong including those Renewable Energy Systems and dedicated transmission and distribution

assets that are used for connecting such Renewable Energy Systems to the main electricity grid.

Sch. 1(25)

(27) “Scheme Of Control”

means the electricity regulatory framework, procedures and policies set out in this Agreement for the period until the expiry of the Term pursuant to clause 7.

(28) “Specified Process Licence”

means a specified process licence issued under the Air Pollution Control Ordinance (Cap. 311) in respect of a power plant owned and operated by HEC.

(29) “Stranded Costs”

means costs incurred by HEC in relation to investments made or agreements entered into under the schemes of control in respect of its Electricity-Related activities (including, inter alia, costs of investments and of fuel and power purchase agreements, which have been approved by the Government):-

- (a) to the extent that they have not already been recovered and cannot in future be recovered in the market as a result of a change implemented by the Government to the electricity supply market structure causing material impact to HEC in respect of its Electricity-Related activities (“Specified Market Change”);
- (b) which may include a return on the aforementioned costs which is fair and reasonable taking into account all circumstances; and
- (c) net of the aggregate appreciation in value of all capital investments as a result of the Specified Market Change.

(30) “Tariff Stabilisation Fund”

means the fund established pursuant to clause 5.

(31) “Term”

has the meaning given to it in clause 7(1), as the same may be extended pursuant to clause 7(2).

(32) “Total Operating Costs” for any Year

means the aggregate of HEC’s Electricity-Related operating costs calculated in accordance with Schedule 2 in that Year, and inter alia includes the following in that Year:-

- (a) Depreciation;
- (b) interest payable on consumers’ deposits, loans and bank overdrafts (other than interest incurred on Borrowed Capital up to Commissioning) less interest receivable on bank deposits;
- (c) recurrent expenditure incurred in promoting energy efficiency and conservation;
- (d) expenditure incurred in reducing emissions of the pollutants controlled by Specified Process Licences;
- (e) cost of labour, materials and supervision;
- (f) approved electricity purchases from third parties within or outside Hong Kong;
- (g) the amount as specified in Section C(2) of Schedule 2 relating to Fixed Assets disposal;
- (h) fair value changes in financial instruments and foreign exchange differences as specified in Section D of Schedule 2; and
- (i) provision for Asset Decommissioning Obligation as specified in Section G of Schedule 2.

Sch. 1(28)

(33) “Year”

means the financial year of HEC ending 31st December.



## **Schedule 2**

### **ACCOUNTING POLICIES TO BE APPLIED IN THE INTERPRETATION OF THE AGREEMENT**

The accounting policies to be applied in the interpretation of this Agreement in general follow the prevailing generally accepted accounting principles in Hong Kong as applicable to HEC at the time this Agreement is made. Specific accounting policies which will be applied in the interpretation of this Agreement are set out hereunder. For items not specifically listed below, the generally accepted accounting principles prevailing in Hong Kong and applicable to HEC at the time this Agreement is made will be applied (these generally accepted accounting principles are referred to as "Relevant Principles").

#### **A. CAPITAL EXPENDITURE**

- (1) All capital expenditure will be incorporated in Fixed Assets accounts at the dates shown hereunder and in the case of assets purchased in foreign currencies will be brought into account at the exchange rates ruling at the time of the transaction, or at the foreign currency contract rates if foreign currency contracts are arranged for their payments:-

- |     |  |   |   |           |
|-----|--|---|---|-----------|
| (a) | Advance / progress payment(s)  | : | when payment(s) is / are actually made;                           |           |
| (b) | Work in progress   | : | when cost is incurred in accordance with the Relevant Principles; |           |
| (c) | Delivery of goods (other than covered by (a) above)                      | : | when title passes to HEC;   |           |
| (d) | Interest due in accordance with sub-paragraph (4)(a) of Section E hereof | : | when incurred up to Commissioning;                                | Sch. 1(7) |

- (e) Fair Value Of A Fixed Asset Acquired Through Finance Lease : at inception of the lease; Sch. 1(13)
- (f) Other charge(s) made in respect of Fixed Assets, e.g. salaries, wages and insurance premiums : when incurred.
- (2) Fixed Assets representing major construction projects not completed will be separately shown in the balance sheet concerned as “assets under construction”.
- (3) (a) Equipment not included under paragraph (2) but acquired for specific capital projects will, until installed, be classified as capital stores.
- (b) General stock items of a capital nature will be classified as capital stores.
- (c) The aggregate of the said capital stores will form part of the Fixed Assets for Scheme Of Control purposes and will be shown separately as “equipment awaiting installation” in the balance sheet concerned.
- (4) Expenditure on the refurbishment and/or improvement of Fixed Assets will be capitalised in accordance with the Relevant Principles.
- (5) Provision for Asset Decommissioning Obligation as set out in Section G will not be accounted for as capital expenditure.

## **B. DEPRECIATION**

- (1) Depreciation on Fixed Assets will be charged on a straight line basis in accordance with the schedule set out in paragraph (2).
- (2) (a) Fixed Assets commissioned before 1 January 2009

In respect of each such commissioned asset, the net book value as at 31 December 2008 will be written off uniformly over the remainder of the useful life as set out in sub-paragraph (2)(c).

(b) Fixed Assets commissioned on or after 1 January 2009

In respect of each such asset, the cost will be written off uniformly over the useful life as set out in sub-paragraph (2)(c), beginning on the first day of the month of Commissioning.

| (c) <u>Type of Asset</u>                                     | <u>Useful Life</u>              |
|--|---------------------------------|
| Land   | : Unexpired terms of the leases |
| Cable tunnels  | : 100 years                     |
| Buildings  | : 60 years                      |
| Ash lagoon   | : 60 years                      |
| Gas pipeline   | : 60 years                      |
| Overhead lines   | : 60 years                      |
| Cables   | : 60 years                      |
| Transmission and distribution equipment                      | : 60 years                      |
| Generating plant and machinery                               | : 35 years                      |
| Gas turbines and gas turbine combined cycle                  | : 30 years                      |
| Mechanical meters  | : 30 years                      |
| Wind turbines  | : 20 years                      |
| Electronic meters; microwave and optical fibre equipment and | : 15 years                      |

trunk radio system

Furniture and fixture; sundry : 10 years  
plant and equipment

Engineering and general : 10 years  
purpose computers

Commercial motor vehicles and : 6 years  
marine craft

Personal computers; office : 5 years  
equipment; workshop tools

Motor vehicles : 5 years

Refurbished or improved assets : Remaining  
original life plus  
any life  
extension.

- (3) The Fair Value Of A Fixed Asset Acquired Through Finance Lease, if no option to purchase, will be depreciated on a straight-line basis over the shorter of the lease term and its useful life as set out in paragraph (2).
- (4) For the determination of profits tax for the purposes of the Scheme Of Control, depreciation will be calculated in accordance with the Inland Revenue Ordinance (Cap. 112).

### C. **FIXED ASSETS DISPOSAL**

- (1) Fixed Assets ceased to be used for Electricity-Related activities under this Agreement shall be written off from the year end balance of Net Fixed Assets and treated as disposal of Fixed Assets as set out in paragraph (2).
- (2) When a Fixed Asset is sold or otherwise disposed of or when compensation is received from insurers in respect of damage to or loss of a Fixed Asset, then:-
  - (a) if the proceeds are no greater than original cost, the difference between the proceeds and net book value

will be deducted from or added to Total Operating Costs;

- (b) if the proceeds exceed original cost, such excess will be treated as capital profit and will not be deducted from Total Operating Costs. The difference between original cost and net book value will be deducted from Total Operating Costs.

**D. FINANCIAL INSTRUMENTS FAIR VALUE CHANGES AND FOREIGN EXCHANGE DIFFERENCES**

The fair value changes in financial instruments and foreign exchange differences will follow the Relevant Principles.

**E. INTEREST**

- (1) Interest payable on consumers' deposits, loans and bank overdrafts (other than interest as set out in sub-paragraph (4)(a)) will be charged to Total Operating Costs.
- (2) Interest receivable on bank deposits, including amounts not subject to taxation in Hong Kong, will be offset against Total Operating Costs.
- (3) The finance charges incurred in relation to the outstanding Fair Value Of A Fixed Asset Acquired Through Finance Lease will be treated as interest on Borrowed Capital.
- (4) Interest on Borrowed Capital will be:-
  - (a) incorporated in capital expenditure if incurred up to Commissioning;
  - (b) charged to Total Operating Costs if incurred after Commissioning.

**F. TAXATION**

For any Year, the Scheme Of Control taxation charge will be the total of:-

- (1) the total profits tax liability of HEC in respect of its Electricity-Related business as assessed by the Inland Revenue Department of Hong Kong in respect of that Year; and
- (2) an amount representing deferred taxation calculated by applying the prevailing rate of profits tax in respect of a corporation to the difference between Scheme Of Control Depreciation and Inland Revenue tax allowances for Fixed Assets for that Year.

Except as permitted under paragraph (2) above, all other provisions for deferred taxation required in the statutory accounts will not be charged as expense of the Scheme Of Control to ensure no double charging of tax to the consumers.

The deferred taxation liability account balance calculated in accordance to paragraph (2) above shall be maintained in the books of accounts of HEC for the settlement of future profits tax liability.

**G. ASSET DECOMMISSIONING OBLIGATION**

To the extent that HEC incurs an obligation for the costs of dismantling and removing Fixed Assets and restoring the sites on which they are located either when the assets are acquired or as a consequence of having used them during a particular period for Electricity-Related activities (“Asset Decommissioning Obligation”), the costs shall be treated in the following manner:-

- (1) The initial Best Estimation Of Expenditure Required To Settle Asset Decommissioning Obligation is to be accrued uniformly over the period being:- Sch. 1(5)
  - (a) the remainder of the useful life, as set out in subparagraph (2)(c) of Section B above, of the related Fixed Asset which was commissioned before 1

January 2009; or

- (b) the useful life, as set out in sub-paragraph (2)(c) of Section B above, of the related Fixed Asset which will be commissioned on or after 1 January 2009, beginning on the first day of the month of Commissioning of such Fixed Asset.
- (2) The periodic accrued charges will form part of the Total Operating Costs with a corresponding provision being recognised as deferred liabilities in the balance sheet.
- (3) At each Year end the Best Estimation Of Expenditure Required To Settle Asset Decommissioning Obligation shall be reviewed. Any required changes made to the provision for Asset Decommissioning Obligation, shall correspondingly form part of Total Operating Costs in the period of review.
- (4) The actual expenditure incurred for settling Asset Decommissioning Obligation shall be charged against the related provision in the Year in which settlement is effected. Any necessary adjustments on actual settlement of the Asset Decommissioning Obligation will be made to Total Operating Costs in the Year in which settlement is effected.

## **H. FINANCIAL STATEMENTS**

For each Year governed under the Scheme Of Control, HEC shall prepare and submit to the Government Scheme Of Control financial statements within three months after the end of its financial year showing the results and financial positions of HEC. These Scheme Of Control financial statements shall be audited by HEC's statutory Certified Public Accountants (Practising) registered under the Professional Accountants Ordinance (Cap. 50). The audit of the Scheme Of Control financial statements shall be performed to form an opinion as to whether the Scheme Of Control financial statements have been properly prepared, in all material respects, in accordance with the provisions of this Agreement and the audit report should be submitted by HEC to the Government.

**I. PUBLISHED ACCOUNTS**

The published annual report of Holdings shall include a Scheme Of Control statement showing the results of HEC for each Year under the Scheme Of Control.

**J. SUBSEQUENT CHANGES IN ACCOUNTING POLICIES**

If at any time during the Term, there are any changes in the generally accepted accounting principles prevailing in Hong Kong which may be applicable to the Scheme Of Control operation, the parties may, by mutual agreement, adopt any such new or revised accounting policies. Otherwise, the application of accounting policies as specified in this Agreement shall continue.



### **Schedule 3**

## **PROCEDURES FOR DEVELOPMENT PLAN REVIEW, TARIFF REVIEW AND AUDITING REVIEW**

### **A. DEVELOPMENT PLAN REVIEW**

(1) In order to establish agreement concerning HEC's levels of projected Basic Tariff Rate, a Development Plan Review will be conducted jointly by the Government and HEC ("Development Plan Review"):-

- (a) whenever Development Plans for major additions to HEC's electricity generation, transmission and distribution system ("System") have been finalised;
- (b) whenever Development Plans have been finalised for major variations to HEC's System and where such major variations would increase the projected Basic Tariff Rates significantly above those previously approved;
- (c) six months before the period covered by the previous Development Plan expires; and/or
- (d) when required in accordance with sub-paragraph (2)(c) of Section B,

following which the Development Plan shall be submitted to the Executive Council for approval. Unless otherwise agreed between the Government and HEC, the Development Plan shall cover, after the then current Year, a period of at least five successive Years or for the remaining term of this Agreement, whichever is shorter.

(2) For each Development Plan Review, HEC will make available:-

- (a) its revenue and capital budgets, as well as financial models covering the preceding and the current Years, and the period covered by the Development Plan; and

- (b) details of any major changes in HEC's insurance policies, procurement policies, procedures or practices for fuel, major equipment and services.
- (3) In each Development Plan Review, the following components of the Development Plan shall be examined:-
- (a) the pattern of demand and sales of electricity with breakdown of local sales and sales to third parties outside Hong Kong covering at least the next 10 years or up to the expiry of the Term whichever is the shorter;
  - (b) details of energy efficiency and conservation programmes and if relevant, proposals on alternative fuel and energy sources;
  - (c) all operating and capital expenditures, estimated in accordance with the most probable escalation values available, as well as appropriate tax items;
  - (d) breakdown of capital expenditure accompanied by a project control list, together with separate projected fixed assets movement for renewable energy generation, other generation, and transmission and distribution facilities;
  - (e) the amount and cost of electricity to be purchased from third parties within or outside Hong Kong;
  - (f) the amount of new capital, if any, to be raised as equity and shareholders' advances or by way of loan capital or loan from any Affiliated Company and the method of financing acquisition of Fixed Assets;
  - (g) the amount and terms of export credit arranged or to be arranged in respect of generation or other equipment or loans from Affiliated Companies or other long term debt, and the corresponding repayment figures covering both principal and interest;
- Sch. 1(1)

- (h) the amount of retained earnings to be reinvested by HEC;
- (i) projected Scheme Of Control balance sheets and movement of the Tariff Stabilisation Fund, Rate Reduction Reserve and Fuel Clause Recovery Account of HEC;
- (j) projection of performance against the performance indicators and incentive/penalty amounts calculated in accordance with Schedules 4, 5 and 6 of this Agreement;
- (k) projected annual Basic Tariff Rate adjustments, to be so calculated that they are spread fairly evenly over the whole period referred to in paragraph (2)(a);
- (l) the estimated Fuel Cost Account Adjustment and the projected fuel clause rebates or charges in each Year (without prejudice to HEC's right to make adjustments to offset changes in the cost of fuels consumed by HEC through the Fuel Clause Recovery Account);
- (m) for each Year in the period under review, the estimated excess of the Scheme Of Control net revenue over the Permitted Return, arising from the assumptions in sub-paragraphs (a) to (j) and following from the calculation in sub-paragraph (k) will represent the "budgeted Tariff Stabilisation Fund transfer". Such budgeted Tariff Stabilisation Fund transfers, which together with all other available funds, shall at all times be sufficient to meet HEC's full financial commitments;
- (n) the basis of allocating overheads between HEC and Affiliated Companies and the basis of determining the charges for transactions between HEC and Affiliated Companies; and
- (o) the Best Estimation Of Expenditure Required To Settle Asset Decommissioning Obligation.

- (4) On approval by the Executive Council, the Development Plan shall apply and remain in force until a subsequent Development Plan is approved by the Executive Council.
- (5) If a new Development Plan is not approved before the expiry of the period covered by the previous approved Development Plan, then after consultation with the Government, the Basic Tariff Rate to be charged following the expiry of the previous approved Development Plan may be adjusted if considered necessary by HEC on an interim basis provided that it shall not exceed the projected Basic Tariff Rate approved for the last Year of the previous approved Development Plan plus an increase of 5 percent.
- (6) HEC, as part of its continuing effort to increase transparency, will disclose to the Government for its information only the segregated annual cost data, which include capital and operating expenditures and Net Fixed Assets movement, pertaining to its generation and transmission and distribution systems covering the same period as the Development Plan. HEC will also make available to the public the projected Basic Tariff Rate profile approved by the Executive Council and as necessary the supporting information covered by the Development Plan.

**B. TARIFF REVIEW**

- (1) (a) In October of each Year a Tariff Review shall be conducted jointly by the Government and HEC. In the Tariff Review, the Government and HEC shall agree on any revision, if necessary, of major items of the latest approved Development Plan as detailed in paragraph (3) of Section A, in respect of the then current Year and next following Year. For each Year's Tariff Review, projections for the then current Year will take into account an upper limit on the projected year-end Tariff Stabilisation Fund balance, with one-off rebate or tariff adjustment applied in the Year next following to reduce any excess to or below the upper limit. The upper limit shall be 8% of the annual total revenues of HEC from sales of electricity to

consumers in Hong Kong including Fuel Cost Account Adjustment and excluding rebates and charges made during that Year.

(b) HEC will make available to the Government for the purpose of the Tariff Review its forecast on the following specific items in respect of the second Year following the then current Year (provided that such second Year is within the Term):-

- (a) local maximum demand and system maximum demand for electricity,
- (b) local electricity sales and electricity sales to third parties outside Hong Kong,
- (c) Basic Tariff Rate,
- (d) fuel clause charge or rebate,
- (e) Tariff Stabilisation Fund balance and Rate Reduction Reserve balance,
- (f) Fuel Clause Recovery Account balance,
- (g) Net Fixed Assets balance,
- (h) total operating and total capital expenditures,
- (i) Tariff Stabilisation Fund transfer,
- (j) amount and cost of fuels to be consumed, and
- (k) amount and cost of electricity to be purchased from third parties within or outside Hong Kong.

This forecast is made in addition to the 2-year rolling forecast as stipulated in paragraph (1)(a). The forecast is made in good faith and is provided to the Government for its information only.

- (2) As a result of the Tariff Review,
- (a) if the projected Basic Tariff Rate for the Year next following the then current Year (“proposed Basic Tariff Rate”) is not higher than 5 percent above the projected Basic Tariff Rate most recently approved for that Year by the Executive Council, then subject to paragraph (3) Basic Tariff Rate adjustment for that Year will be made in accordance with the revised figures pursuant to paragraph (1), no further Executive Council approval being necessary;
  - (b) if the proposed Basic Tariff Rate exceeds the limit set out in sub-paragraph (2)(a) but does not exceed the limit by more than 5 percent, subject to the Executive Council’s approval, the proposed Basic Tariff Rate may be implemented by HEC and no Development Plan Review will be necessary;
  - (c) if the proposed Basic Tariff Rate exceeds the limit stated in sub-paragraph 2(a) by more than 5 percent, a further Development Plan Review will be conducted as soon as possible.
- (3) In the event of the Government and HEC failing to agree on the revision referred to in paragraph (1) or of Executive Council’s approval being required in accordance with sub-paragraph (2)(b) or (2)(c), the Basic Tariff Rate as from 1 January next following may be adjusted if considered necessary by HEC on an interim basis provided that the limit stated in sub-paragraph (2)(a) will not be exceeded.
- (4) HEC, as part of its continuing effort to increase transparency, will make available to the public as necessary the supporting information to explain the tariff action taken.

**C. TARIFF ADJUSTMENTS**

At each Tariff Review the proposed Basic Tariff Rate determined according to the provisions of paragraph (2) or (3) of Section B above will be agreed for implementation on 1st January of the Year next following or on such later date as HEC may determine after consultation with the Government except that where a later date is determined the proposed Basic Tariff Rate will be adjusted so that the Net Return and Tariff Stabilisation Fund transfer for that Year will be the same as calculated at the Tariff Review.

**D. AUDITING REVIEW**

- (1) HEC will submit documents for annual Auditing Review to the Government not later than three months after the close of the financial year of HEC. An Auditing Review will be conducted jointly by the Government and HEC for the following purposes:-
  - (a) to compare the actual results of the preceding Year with the corresponding estimates contained in the latest approved Development Plan and revisions made in previous Tariff Reviews and Auditing Reviews;
  - (b) at the written request of any party hereto to review the major components of the latest approved Development Plan, as detailed in paragraph (3) of Section A, the said components will be reviewed for the then current and following Years covered by the latest approved Development Plan;
  - (c) to ascertain the reasons for variance in the Tariff Stabilisation Fund transfer in the preceding Year;
  - (d) to ascertain the reasons for any variances in the revenue and expenditure of the Scheme Of Control in the preceding Year;

- (e) if necessary to agree on any revision of major items under paragraph (3) of Section A in respect of the then current and the remaining Years covered by the latest approved Development Plan;
  - (f) to monitor the technical and environmental performance of HEC based on the agreed performance indicators and to review its energy efficiency and conservation programmes;
  - (g) to review the performance of HEC under Schedules 4, 5 and 6 of this Agreement, including its explanation and reasons for the performance reported, together with remedial action plans to improve its performance in these areas, where applicable;
  - (h) to review insurance, fuel, major equipment and services and procurement policies, procedures and practices;
  - (i) to review the principles or basis of any charges for any Electricity-Related transactions between HEC and any Affiliated Company and details of any planned major changes thereto; and
  - (j) to review any adjustment to the Best Estimation Of Expenditure Required To Settle Asset Decommissioning Obligation and corresponding changes made to the provisions for Asset Decommissioning Obligation.
- (2) HEC, as part of its continuing effort to increase transparency, will disclose to the Government for its information only the segregated annual cost data, which include capital and operating expenditures, and Net Fixed Assets movement pertaining to its generation, and transmission and distribution systems covering the same period as the Auditing Review.



## Schedule 4

### EMISSIONS PERFORMANCE LINKAGE MECHANISM

1. In accordance with clause 4(3) of this Agreement, the Net Return calculation requires an adjustment in the form of an “Emissions Performance Incentive / Penalty Amount” (which may be negative, positive, or zero). This amount shall be determined through an Emissions Performance Linkage Mechanism (“Mechanism”) which operates on the basis of HEC’s achievement of Total Permissible Emissions for an Applicable Year in respect of sulphur dioxide (“SO<sub>2</sub>”), nitrogen oxides (“NO<sub>x</sub>”), and respirable suspended particulates (“RSP”) (collectively the “Pollutants”), and in the manner set out in paragraph 3 below.
2. The Mechanism shall apply in respect of each full calendar year to which the Scheme Of Control applies (“Applicable Year”).
3. In respect of any Applicable Year to which the Mechanism applies, the Emissions Performance Incentive / Penalty Amount shall be the % specified in the second column of Table 1 below (under “% to be applied”) which corresponds with the actual emissions made by the power plants owned and operated by HEC (as set out in the first column of Table 1) in respect of that Applicable Year multiplied by the total value of HEC’s Average Net Fixed Assets minus Average Renewables Net Fixed Assets for that Applicable Year. The Emissions Performance Incentive / Penalty Amount shall be zero for any Year in respect of which the Mechanism does not apply.

**Table 1**

| <b>Emissions performance</b>   | <b>% to be applied</b> |
|--|------------------------|
| If the Total Permissible Emissions (as defined below) for one or more Pollutants (as defined below) is exceeded by 30% or more   | - 0.4%                 |
| If the Total Permissible Emissions for one or more Pollutants is exceeded by 10% or more but none of the Total Permissible Emissions of any Pollutant is exceeded by more than 30% | - 0.2%                 |

| <b>Emissions performance</b>   | <b>% to be applied</b> |
|--|------------------------|
| None of the Total Permissible Emissions of any Pollutant is exceeded by 10% or more but not every Total Permissible Emissions excluding Market Adjustment is outperformed by 10% or more | 0.0%                   |
| If the Total Permissible Emissions excluding Market Adjustment of all Pollutants are outperformed by 10% or more, but less than 30%  | 0.05%                  |
| If the Total Permissible Emissions excluding Market Adjustment of all Pollutants are outperformed by 30% or more   | 0.1%                   |

4. In this Schedule, in respect of any Applicable Year:
- (a) “Permissible Emissions” in relation to each of SO<sub>2</sub>, NO<sub>x</sub>, and RSP (each a “Pollutant”) means the aggregate of (i) the maximum amount of a Pollutant expressed in tonnes which any power plant owned and operated by HEC is permitted to emit as set out in a Specified Process Licence (“Initial Cap”), (ii) adjustment made by the Government pursuant to the Air Pollution Control Ordinance (Cap. 311) (“APCO”) (“Government Adjustment”) and (iii) emission allowances or emission credits obtained by HEC from third parties through emissions trading as contemplated in the Legislative Proposal referred to in paragraph 6 (“Market Adjustment”);
  - (b) “Total Permissible Emissions” in relation to a Pollutant means the aggregate of all Permissible Emissions for that Pollutant for all power plants owned and operated by HEC; and
  - (c) “Total Initial Cap” in relation to a Pollutant means the aggregate of all Initial Caps for that Pollutant for all power plants owned and operated by HEC.
5. The application of the Mechanism for any Applicable Year shall be subject to the following:

- (a) the Total Initial Cap for each Pollutant for that Applicable Year being achievable by HEC with efficient and reliable technologies or practicable means that can be reasonably made available;
  - (b) sufficient lead time having been allowed for planning, introducing, and implementing the technology or means for achieving compliance with the Total Initial Cap for each Pollutant for that Applicable Year;
  - (c) the Total Initial Cap for each Pollutant for that Applicable Year being fair and equitable as between electricity generation companies operating in Hong Kong;
  - (d) the Government having approved in a timely manner the projects and contracts required to achieve compliance with the Total Initial Cap for each Pollutant for that Applicable Year, and having allowed feasibility studies or other preparations required to implement those means of compliance; and
  - (e) the Government having made appropriate Government Adjustments to offset the impact of any emergency or unforeseeable event which is beyond the control of HEC in line with good international practices.
6. Notwithstanding the date on which the Agreement comes into effect, if from the date of this Agreement there is any repeal or amendment to the APCO (other than pursuant to the Government's proposal to amend the APCO to cap the emissions of the Pollutants and to facilitate the use of emissions trading as described in a Legislative Council Panel on Environmental Affairs Paper reference CB(1) 418/07-08(07) dated 17 December 2007 ("Legislative Proposal")) or any renewal of or change to any Specified Process Licence (other than to the amount of the Initial Cap or pursuant to the Legislative Proposal), which has a material effect on the Mechanism or HEC's emissions performance or compliance with the Total Permissible Emissions, the Mechanism shall not apply to that Applicable Year and any subsequent Applicable Years until HEC and the Government have reached agreement as to the amendments to this Schedule that are required to give continued effect to the Mechanism.
7. Nothing in this Agreement or the Mechanism shall prejudice or affect the APCO, any licence or other instrument granted or issued pursuant to APCO, or any amendment to APCO, the licence or the instrument.

## Schedule 5

### CUSTOMER PERFORMANCE INCENTIVES / PENALTIES

1. This Schedule sets out the financial incentives and penalties in respect of HEC's performance in supply reliability, operational efficiency and customer services (each of these three categories being a "Customer Performance Category").
2. In respect of any Year, the Incentive Adjustment for each Customer Performance Category shall be that specified in the "Incentive Adjustment" column of the table below which corresponds with HEC's performance, determined in accordance with paragraphs 3 to 9 below, relative to targets specified in the "Target" column for each of the Performance Indices in the "Performance Index" column of the table.

| <b>Customer Performance Category</b> | <b>Performance Index</b>                     | <b>Target</b>                                   | <b>Incentive Adjustment</b> |
|--------------------------------------|--|---|-----------------------------|
| Supply Reliability                   | Average Service Availability Index (ASAI)    | ASAI is greater than or equal to 99.992%        | + 0.01%                     |
|                                      |  | ASAI is less than 99.992% but more than 99.985% | 0%                          |
|                                      |  | ASAI is equal to or less than 99.985%           | - 0.01%                     |
| Operational Efficiency               | Connection & Supply Performance Index (CSPI) | CSPI is equal to 100%                           | + 0.01%                     |
|                                      |  | CSPI is less than 100% but more than 99.95%     | 0%                          |
|                                      |  | CSPI is equal to or less than 99.95%            | - 0.01%                     |
| Customer Services                    | Appointment Punctuality Index (API)          | API is equal to or greater than 98%             | + 0.01%                     |
|                                      |  | API is less than 98% but more than 96%          | 0%                          |
|                                      |  | API is equal to or less than 96%                | - 0.01%                     |

3. In respect of any Year, HEC's performance in relation to the Customer Performance Category of supply reliability shall be the measure of the Average Service Availability Index (ASAI) achieved by HEC in relation to that Year as determined in accordance with the following formula:-

$$ASAI_n = \left[ 1 - \frac{SAIDI_n}{HY_n} \right] \text{multiplied by } 100\%$$

Where:

$ASAI_n$  means the Average Service Availability Index for the Year  $n$ ;

$SAIDI_n$  means the System Average Interruption Duration Index for the Year  $n$ , expressed in hours, as determined in accordance with paragraph 4 below; and

$HY_n$  means the number of hours in the Year  $n$ .

4. The System Average Interruption Duration Index (SAIDI) for any Year shall be determined in accordance with the following formula:-

$$SAIDI_n = \frac{CID_n}{NCS_n}$$

Where:

$SAIDI_n$  means the System Average Interruption Duration Index for the Year  $n$ ;

$CID_n$  means the sum of customer supply interruption durations for the Year  $n$ , expressed in hours, determined in accordance with:-

- (i) the principles set out in paragraph 5; and
- (ii) to the extent not inconsistent with the aforesaid principles, IEEE 1366 Standard; and

$NCS_n$  means the total number of customers to whom electricity is supplied in the Year  $n$ , determined by calculating the average of the total number of customers of HEC in Hong Kong at the end of each calendar month falling within that Year.

5. In determining the sum of customer supply interruption durations for the purposes of paragraph 4, no account shall be taken of any interruption to the supply of electricity to a customer where:-
- (i) the duration of that interruption is less than one minute;
  - (ii) the interruption was at the request of the customer concerned or agreed by the customer concerned for any improvement work on equipment

owned and operated by HEC to supply this customer or caused by equipment owned or operated by any customer;

- (iii) the interruption occurred on a Major Event Day as defined by IEEE 1366-2003 standard. The interruptions on the Major Event Day(s) shall be analysed by HEC, and a report on these interruptions and the results of the analysis shall be submitted by HEC to the Government to gather the information for determining whether there is a Major Event Day according to the IEEE 1366-2003 standard; or
- (iv) any other planned interruption to facilitate improvement of HEC's transmission and distribution facilities which the Government approves as being, or having been, fair and reasonable.

6. In respect of any Year, HEC's performance in relation to the Customer Performance Category of operational efficiency shall be the measure of the Connection and Supply Performance Index ("CSPI") achieved by HEC in relation to that Year, as determined in accordance with the following formula:-

$$CSPI_n = \left[ 1 - \frac{SDCS_n}{TCSE_n} \right] \text{ multiplied by } 100\%$$

Where:

$CSPI_n$  means the Connect and Supply Performance Index achieved for the Year  $n$ ;

$SDCS_n$  is the total number of occasions in the Year  $n$  in which a Satisfactory Installation Inspection of premises was completed but connection to the network was not made, and hence a supply of electricity was not available, prior to midnight on that same day. For this purpose, no account should be taken of any occasion on which connection could not be made by virtue of:-

- (i) the request of, or withholding of access or any necessary consent by, the customer or potential customer that requested the connection and/or the owner or occupier of the premises concerned;
- (ii) severe weather conditions, including Typhoon No.8 and Black Rain Storm;
- (iii) industrial action by employees or contractors of HEC;
- (iv) the act or default of any person other than an officer, employee or agent of HEC; or
- (v) any other event(s) or circumstances beyond the control of HEC which the Government considers fair and reasonable; and

TCSE<sub>n</sub> is the total number of occasions in the Year *n* in which a Satisfactory Installation Inspection of premises was completed.

7. In respect of any Year, HEC's performance in relation to the Customer Performance Category of customer services shall be the measure of the Appointment Punctuality Index ("API") achieved by HEC in relation to that Year, as determined in accordance with the following formula:-

$$API_n = \left[ 1 - \frac{TKA_n}{TMA_n} \right] \text{ multiplied by } 100\%$$

Where:

API<sub>n</sub> means the Appointment Punctuality Index achieved for the Year *n*;

TKA<sub>n</sub> is the total number of occasions in the Year *n* on which the customer has made an appointment for HEC to carry out an Installation Inspection and where HEC has not arrived at the relevant premises prior to the end of the 1.5 hour time-slot for the appointment that was allotted to the customer or potential customer concerned, excluding for this purpose such of those appointments that were cancelled by the customer or potential customer concerned and any appointment which HEC was unable to keep by virtue of the occurrence of any of the events or circumstances referred to in paragraph 6 (ii), (iii), (iv), or (v) above; and

TMA<sub>n</sub> is the total number of appointments in the Year *n* confirmed with HEC to carry out an Installation Inspection.

8. For the purposes of this Schedule:-
- (a) an **Installation Inspection** is an inspection of fixed electrical installations located at premises that occurs following a request by a customer or potential customer of HEC for a supply to those premises (or a change to the loading of an existing supply) in circumstances where at the time of the request there is no existing connection to those premises (or no adequate existing connection, in the case of a change to the loading of an existing supply); and
  - (b) a **Satisfactory Installation Inspection** is an Installation Inspection where the outcome of that inspection is that HEC agrees to provide the supply so requested.
9. Modifications to the performance targets specified in the "Target" column of the table in paragraph 2 above shall be subject to agreement between HEC and the Government pursuant to clause 7(4) of this Agreement.

10. The Customer Performance Incentive / Penalty Amount shall be zero for any Year in relation to which HEC's ability to meet or exceed any target specified in the Target column of the table in paragraph 2 has been materially constrained by the failure of the Government to provide in a timely manner, or at all, approval or support for:-
- (a) capital projects to install new facilities or to retrofit existing facilities with appropriate technology, including granting of relevant sites, permits or licenses;
  - (b) feasibility studies or other work reasonably undertaken for the purpose of meeting any such targets; or
  - (c) other relevant activities reasonably undertaken by HEC that require support or approval of the Government.
11. In relation to any Year which is a full calendar year, the Customer Performance Incentive / Penalty Amount shall be the sum of:-
- (a) the Incentive Adjustment for the Customer Performance Category of supply reliability determined in accordance with paragraph 2;
  - (b) the Incentive Adjustment for the Customer Performance Category of operational efficiency determined in accordance with paragraph 2; and
  - (c) the Incentive Adjustment for the Customer Performance Category of customer services determined in accordance with paragraph 2,
- multiplied by the total value of HEC's Average Net Fixed Assets for that Year. The Customer Performance Incentive / Penalty Amount shall be zero for any Year which is a part calendar year.



## Schedule 6

### ENERGY EFFICIENCY, RENEWABLES AND INTERCONNECTION

#### ENERGY EFFICIENCY

1. Paragraphs 2, 3 and 4 of this Schedule set out the financial incentives in respect of performance of HEC in energy saving and energy audit (each of these two categories being an “Energy Efficiency Performance Category”).

#### *Summary of Incentives*

| <b>Energy Efficiency Performance Category</b> | <b>Incentive Factor</b>                               |
|---|---|
| Energy Saving                                 | 0.01% for paragraph 2(a) and<br>0% for paragraph 2(b) |
| Energy Audit                                  | 0.01% for paragraph 4(a) and<br>0% for paragraph 4(b) |

#### *Energy Saving Performance*

2. The Energy Saving Incentive Factor for any Year which is a full calendar year shall be:-
  - (a) 0.01% where the Energy Saving Performance in relation to that Year, expressed in GWh, is equal to or greater than 3GWh, or such other figure as may be agreed between HEC and the Government pursuant to clause 7(4) of the Agreement;
  - (b) in all other cases, zero.
3. The Energy Saving Performance for any Year which is a full calendar year shall be equal to the aggregate energy saving, expressed in GWh, attributable to energy-saving technologies assessed on an engineering design basis installed in that Year by customers of HEC. The aggregate energy saving shall be assessed by HEC pursuant to energy audits to be conducted by HEC under the Energy Audit Programme. For the purposes of this Schedule, the Energy Audit Programme is a programme operated by HEC pursuant to which the industrial and commercial customers are offered by HEC an audit of their energy requirements based on the Guidelines on Energy Audit issued by the Electrical and Mechanical Services Department of the Government.

### *Energy Audit Performance*

4. The Energy Audit Incentive Factor for any Year which is a full calendar year shall be:-
  - (a) 0.01% where the number of energy audits completed in the Year by HEC under the Energy Audit Programme is equal to or greater than 50, or such other figure as may be agreed between HEC and the Government pursuant to clause 7(4) of the Agreement;
  - (b) in all other cases, zero.

### *Other Initiatives*

5. A loan fund of HK\$12.5M per annum over a five-year period (amounting to no more than HK\$62.5M total at any time) shall be established by HEC to provide loans to non-Government customers of HEC to implement energy-saving initiatives identified in the energy audits under the Energy Audit Programme.
6. An education fund of HK\$2.5M per annum, included in Total Operating Costs, shall be established by HEC for energy efficiency and promotion activities, administered by HEC and involving stakeholder representation.
7. The procedures for administering the above funds shall be subject to the prior written agreement of the Government.

## **RENEWABLES**

### *Grid Connection for Embedded Renewables*

8. HEC shall offer standardised arrangements (such arrangements shall be subject to the prior written agreement of the Government) for back-up power supply for customers with embedded Renewable Energy Systems in Hong Kong. Customers with embedded Renewable Energy Systems are those who supply a portion of their electricity demand with Renewable Energy Systems at their own premises. Grid connection arrangements shall be made between the prospective grid user and HEC, on reasonable terms and subject to applicable technical and safety standards, including the technical and safety requirements stipulated in the latest Technical Guidelines on Grid Connection of Renewable Energy Power Systems issued by the Electrical and Mechanical Services Department of the Government.

9. Special cases, such as spill power (occasional surplus electricity from a customer of HEC with an embedded Renewable Energy System), shall be considered on a case-by-case basis on reasonable terms.
10. Where necessary and at the request of either the customers concerned or HEC, the Government will assist the parties in arriving at mutually agreed charges and arrangements for the cases both in paragraphs 8 and 9 above.

#### *Renewable Energy Incentive*

11. The Renewable Energy Incentive Factor for any Year which is a full calendar year is the figure shown in the right hand column of the table below which corresponds with the Renewable Energy Performance, expressed as a percentage, achieved by HEC in respect of that Year determined in accordance with paragraph 12.

| <b>Renewable Energy Performance</b>              | <b>Renewable Energy Incentive Factor</b> |
|--|--|
| 5% or above                                      | 0.05%                                    |
| Less than 5% and greater than or equal to 2%     | 0.03%                                    |
| Less than 2% and greater than or equal to 1.5%   | 0.02%                                    |
| Less than 1.5% and greater than or equal to 1.0% | 0.01%                                    |
| Less than 1.0%                                   | 0  |

12. The Renewable Energy Performance for any Year which is a full calendar year shall be the proportion of the volume of electricity generated (in kWh) by HEC's Renewable Energy Systems approved by the Government to the total volume of electricity generated (in kWh) by HEC in Hong Kong in that year, expressed as a percentage.

#### **INTERCONNECTION**

13. HEC will continue to cooperate with Government in the study of electricity grid interconnection for taking forward increased interconnection and harmonising planning criteria for the interconnected grid, with a view to enhancing the reliability and efficiency of the power system for the benefit of the customers of HEC.

## **ENERGY EFFICIENCY AND RENEWABLES INCENTIVE AMOUNT**

14. In relation to any Year which is a full calendar year, the Energy Efficiency and Renewables Incentive Amount shall be the sum of:-

- (a) the Energy Saving Incentive Factor for that Year determined in accordance with paragraphs 2 to 3;
- (b) the Energy Audit Incentive Factor for that Year determined in accordance with paragraph 4; and
- (c) the Renewable Energy Incentive Factor for that Year determined in accordance with paragraphs 11 to 12;

multiplied by the total value of HEC's Average Net Fixed Assets for that Year. The Energy Efficiency and Renewables Incentive Amount shall be zero for any Year which is not a full calendar year.

## **Schedule 7**

### **MECHANISM FOR TREATMENT OF EXCESS GENERATING CAPACITY**

#### **1. TEST FOR EXCESS GENERATING CAPACITY**

- (1) The test for excess generating capacity shall apply to each additional generating unit ("Additional Unit") to be installed. An Additional Unit includes the installation of a new generating unit or the addition of capacity to an existing generating unit, but excludes generating capacity of any Renewable Energy Systems, or any new gas combined-cycle generating units to be installed solely for the purpose of enabling HEC to meet emission requirements as stipulated in the Specified Process Licences.
- (2) Each Additional Unit shall be subject to an overall test comprising the Excess Capacity Threshold ("ECT") test and Reserve Capacity ("RC") test in the Year in which its Commissioning takes place. If the Additional Unit fails both the ECT and RC tests, it shall be subject to another overall test in each of the subsequent Years until it passes either the ECT or RC test. If the Additional Unit passes either the ECT or RC test in the Year its Commissioning takes place or any time thereafter, it will not be tested again in the subsequent Years.
- (3) The capacity of Renewable Energy Systems should be excluded as part of the overall installed capacity for the purpose of the overall test.
- (4) The ECT and RC tests are described below:-
  - (a) ECT Test
    - (i) The criterion to be used for the test is the ECT Loss of Load Probability (LOLP), further details of which are given in Section 4 below. The ECT LOLP is derived from the actual local maximum demand, with 4% allowance added, in the Year in which Commissioning of the Additional Unit takes place and the installed capacity at the time of maximum demand for that Year excluding the capacity of the Additional Unit.
    - (ii) The Additional Unit will pass the ECT test if the ECT LOLP of the Year in which Commissioning of the Additional Unit takes

place is found to be equal or above the target LOLP (20 hours/year at present) ("Target LOLP") adopted for planning the installation of the unit.

- (iii) The Additional Unit will fail the ECT test if the ECT LOLP is found to be below the Target LOLP. If it also fails the RC test, the Additional Unit will then be subject to a second overall test in the following, i.e., second Year. The ECT LOLP for the second test will be derived from taking 104% of the actual maximum demand of the second Year and the installed capacity at the time of maximum demand of the first Year excluding the capacity of the Additional Unit. The Additional Unit will fail the ECT test for the second time if the ECT LOLP for the second Year is also found to be below the Target LOLP. The same principle for the ECT test described above will be followed if the Additional Unit is subject to the overall test in subsequent Years.

(b) RC test

If the Additional Unit is commissioned when the reserve capacity available before such Commissioning exceeds the capacity of the largest unit (the number of units shall be subject to review and agreement of the Government and HEC in future) on HEC's system plus the hot standby reserve requirement, the Additional Unit fails the RC test.

- (5) If the Additional Unit fails both the ECT test and the RC test described above for two years in succession, an Excess Capacity Adjustment described in Section 2 will be deducted from the Permitted Return of the second Year and each of the following Years until (but excluding) the Year in which the Additional Unit shall pass either the ECT or the RC test.

## **2. DEDUCTION FROM THE PERMITTED RETURN**

- (1) Commencing from the second Year in which the Additional Unit fails both the ECT and RC tests, in principle, a portion of the cost of the Additional Unit will not be counted as fixed assets for the purpose of calculating the Permitted Return under clause 4(2) of the Agreement until (but excluding) the Year in which the Additional Unit passes either the ECT or RC test. For the avoidance of doubt, this means that though the

full cost of the Additional Unit will remain as cost of Fixed Assets, a portion of it will not attract a Net Return for the shareholders of HEC until it passes either the ECT or RC test.

- (2) The portion of the cost referred to in clause 2(1) is 50% of the overall mechanical and electrical (M&E) equipment costs<sup>1</sup> of the Additional Unit, that gives rise to excess generating capacity, plus the capitalised interest<sup>2</sup> attributable to the 50% of the M&E costs last incurred up to (but excluding) the day of Commissioning of the Additional Unit, less Depreciation accumulated to the end of the Year in which Excess Capacity Adjustment applies. This cost is herein referred to as “Excess Capacity Expenditure”.
- (3) For each Year in which the deduction from the Permitted Return applies, the Excess Capacity Adjustment (referred to in clause 4(3)(e) of the Agreement) shall be calculated as follows:-

Excess Capacity Adjustment for the Year  
= Permitted Return Adjustment, less  
Allowed Interest Charge on the Excess Capacity Expenditure

where

Permitted Return Adjustment  
= 9.99% x the average of the opening and closing balances of the  
Excess Capacity Expenditure

Allowed Interest Charge  
= Weighted average interest rate of the Borrowed Capital associated  
with the total M&E costs of the Additional Unit up to 8% per annum  
x the average of the opening and closing balances of the Excess  
Capacity Expenditure.

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<sup>1</sup> Mechanical and electrical equipment costs mean the cost of those mechanical and electrical components, including the cost of their erection on site, associated solely with the Additional Unit in question. It excludes the costs of site formation, civil engineering and construction works, plant and services that are common to more than one unit, project management costs and financing costs.

<sup>2</sup> The amount of capitalised interest will be the product of the average accumulation of the 50% of the M&E costs last incurred up to but excluding the day of Commissioning and the weighted average interest rate of the loans associated with the overall M&E costs of the Additional Unit times the number of days that represents the period in which the aforementioned 50% of the M&E costs were incurred, divided by 365.

- (4) Post-Commissioning interest, Depreciation and all other operating costs attributable to the Additional Unit will form part of the Total Operating Costs.
- (5) In the event that any other electricity supplier is permitted to supply electricity to customers in any area currently served by HEC, the Mechanism For Treatment Of Excess Generating Capacity set out in this Schedule and in clauses 4 and 5 of this Agreement shall cease to have effect and thereafter Excess Capacity Adjustment (if any) shall not be deducted from the Permitted Return.

### **3. DEFERRAL OPTION**

- (1) The actual installation date of each Additional Unit will be subject to load growth. Near the time for and before making a firm commitment on a contract for procurement of an Additional Unit to ensure that it will be commissioned at the original scheduled time to meet the expected growth in demand, HEC will assess the actual installation and commissioning schedule in the light of the latest forecast demand in consultation with the Government.
- (2) HEC may defer installation of the Additional Unit after they have entered into a firm commitment on a contract for procurement of the M&E equipment of the Additional Unit, only if they are able to demonstrate to the Government that the net present value (NPV) of the overall cost to consumers of the Additional Unit with such a deferral would be lower than the NPV, incorporating the Excess Capacity Adjustment, assuming the original installation schedule were not changed.
- (3) For the purpose of calculating the NPV, the cost components for calculating the NPVs include all items associated with the deferred installation of the Additional Unit and the return to shareholders. The discount rate to be used is equal to that adopted in the latest approved Development Plan.



4. **PARAMETERS AND ASSUMPTIONS TO BE USED UNDER THE MECHANISM**

(1) (a) The parameters to be used under the mechanism are as follows:-

ECT LOLP

= LOLP<sup>3</sup> as derived from 104% of the actual local maximum demand in the Year the ECT test applies and the installed capacity at the time of maximum demand of the Year in which Commissioning of the Additional Unit takes place, excluding the capacity of the Additional Unit.

Reserve Capacity

= The capacity of the largest unit (the number of units shall be subject to review and agreement of Government and HEC in future) on HEC's system plus the hot standby reserve requirement.

Excess Capacity Expenditure

= 50% of the overall mechanical and electrical (M&E) equipment costs of the Additional Unit, that gives rise to excess generating capacity, plus the capitalised interest attributable to the 50% of the M&E costs last incurred up to (but excluding) the day of Commissioning the Additional Unit, less Depreciation accumulated to the end of the Year in which Excess Capacity Adjustment applies.

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<sup>3</sup> LOLP is a measurement of how secure and reliable a generation system is. It measures, in terms of days or hours per year, the probability of the generation system not meeting the demand. LOLP of a year is the sum of the probabilities of every combination of generation unit being out of service which will result in operating capacity<sup>4</sup> being less than the maximum demand for a given hour or day in the year.

<sup>4</sup> Operating capacity is defined as the sum of capacity of all available units<sup>5</sup> minus sum of capacity of all available units which are under unplanned outage.

<sup>5</sup> Available unit is defined as the generating unit that has entered into service, has not yet been retired, and is not put out of service for scheduled maintenance.

- (1) (b) The financial assumptions to be used are as follows:-

Financing of the Excess Capacity Expenditure:

100% financed by Borrowed Capital

Discount rate

= Same as that adopted in the latest approved Development Plan.

Rate of Permitted Return: 9.99%

- (2) The technical assumptions to be used in the calculation of ECT LOLP under the Excess Capacity Threshold test are as follows:-

| Model   | Assumptions  |
|---|--|
| <ul style="list-style-type: none"> <li>LOLP computer model</li> </ul>   | Use single-area LOLP model in unit generation (UG) basis. The model should take into account the parameters listed below. The model to be used will be the one agreed by the Government and HEC during the Development Plan (DP) Review. |
| Parameters  |  |
| <ul style="list-style-type: none"> <li>Interconnection capacity between CLP Power-HEC</li> </ul>                    | The effect of interconnection between HEC & CLP Power is incorporated by adopting 20 hours per year as the planning criterion for HEC's isolated system.   |
| <ul style="list-style-type: none"> <li>HEC system</li> </ul>  |  |
| <ul style="list-style-type: none"> <li>o Maximum demand</li> </ul>  | o Use (100 + 4)% of the actual local maximum demand.   |
| <ul style="list-style-type: none"> <li>o Load pattern</li> </ul>  | o Use the assumptions for all 365 days of the Year in UG basis adopted to derive the generating unit installation programme for approved DP.   |
| <ul style="list-style-type: none"> <li>o Units in system</li> </ul>   | o Use the actual units in system excluding the Additional Units.   |
| <ul style="list-style-type: none"> <li>o Unit characteristics (i.e. rating and forced outage rate, etc.)</li> </ul> | o Use the assumptions adopted to derive the generation unit installation programme for approved DP.  |

|   |   |
|---|---|
| o Maintenance schedule of units                                   | o Ditto.  |
| • CLP Power System  |   |
| o Maximum demand  | o Use the assumptions adopted to derive the generating unit installation programme for approved DP. |
| o Load pattern  | o Ditto   |
| o Units in system   | o Ditto   |
| o Unit characteristics (i.e. rating and forced outage rate, etc.) | o Ditto   |
| o Maintenance schedule of units                                   | o Ditto   |

### (3) Reserve Capacity

Under the current system configuration of HEC, the required reserve capacity for the RC test is as follows:-

Capacity of the largest unit = 365MW

Hot standby reserve = 145MW

Reserve capacity = (365 + 145)MW

= 510MW