

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

HK Electric Investments Limited

SCHEME OF CONTROL AGREEMENT

THIS AGREEMENT is executed as a Deed the 25th day of April Two Thousand Seventeen.

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 香港電燈有限公司, a company incorporated and existing under the laws of Hong Kong (“**HEC**”)
- (3) HK ELECTRIC INVESTMENTS LIMITED 港燈電力投資有限公司, a company incorporated and existing under the laws of the Cayman Islands and registered as a non-Hong Kong company under the former Companies Ordinance (Chapter 32 of the laws of Hong Kong), the predecessor ordinance to the Companies Ordinance (Chapter 622 of the laws of Hong Kong) (“**HKEIL**”)

WHEREAS:-

- (A) The parties hereto are parties to a Scheme of Control Agreement dated 7th January 2008 (as amended) which will expire on 31st December 2018. The parties have agreed on the terms of the Scheme Of Control as contained in this Agreement which shall commence on 1st January 2019.
- (B) HEC recognises its continuing obligation to contribute to the development of Hong Kong Special Administrative Region (“**Hong Kong**”) by providing, operating and maintaining sufficient Electricity-Related facilities and supplying electricity to meet the demand for electricity over the Term of this Agreement, and in pursuit of this objective, with the approval of the Government, 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) combating climate change and achieving carbon emissions reduction targets and (ii) reducing emissions in order to improve regional air quality. On the former, among other initiatives, the Government is committed to promoting the use of cleaner energy sources, energy efficiency and conservation, the further development of renewable energy to

supplement conventional power generation as well as public awareness and public participation. HEC will make continuing efforts to work closely with the Government in these endeavours.

- (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 in, inter alia, supply reliability, operational efficiency and customer services, and consistent with this objective, 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 31st December 2033, 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) HKEIL is the holding company of HEC.
- (F) In recognition of the above, HEC, HKEIL and the Government have jointly developed the procedures set out in this Agreement to govern the financial affairs of HEC and HKEIL so far as they are Electricity-Related in Hong Kong.

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 the manner in which it is responsible for providing, operating and maintaining its facilities and managing the supply of electricity and other matters specified in this Agreement so far as they are Electricity-Related in Hong Kong excluding those associated with or in relation to export sales of electricity in accordance with the separate arrangements between the Government and HEC, 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.
 - (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.
 - (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 third parties (excluding any electricity to be purchased as part of fuel costs as agreed between the Government and HEC), promotion and implementation of energy efficiency and conservation, demand response, promotion of the development of renewable energy, interest, foreign exchange differences and taxes but excluding changes in the cost of fuels which are covered in sub-clause (3).
- (3) HEC may adjust tariffs through the Fuel Clause Recovery Account from time to time, including on a basis more frequent than annually, to reflect changes in the cost of fuels consumed by HEC for the generation of electricity.
- (4) HEC shall adjust tariffs through rebates from the Tariff Stabilisation Fund in accordance with clause 5(3) and paragraph (1)(a) of Section B of Schedule 3.

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 (g) (and where that Year is the last year of a 5-year Period, in clauses 4(3)(e) to (h)), which are excess capacity-related or performance-related, and also adjustment specified in clause 4(3)(i) which is an amount representing the contribution by HEC to the HEC Community Energy Saving Fund.
- (2) The Permitted Return of HEC for each Year in respect of its Electricity-Related operations shall be 8% of the total value of its Average Net Fixed Assets for that Year.
- (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 7% per annum on the loan principal outstanding from time to time;
- (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 7% 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 31st December 1998 up to a rate of 7% per annum;
- (e) deduction of Excess Capacity Adjustment;
- (f) adjustment in the form of the Customer Performance Incentive / Penalty Amount for that Year calculated in accordance with Schedule 4;
- (g) adjustment in the form of the Energy Efficiency, Demand Response and Renewables Incentive Amount for that Year calculated in accordance with paragraph 23 of Schedule 5 plus the RE Certificate Sales Incentive Amount in Schedule 5 for that Year; any upward adjustment under this clause attributable to the three amounts calculated in accordance with paragraphs 23(a) to (c) of Schedule 5 (if any) shall be known as "**Energy Efficiency Incentive Amount**";
- (h) where that Year is the last year of a 5-year Period, adjustment in the form of the Five-Year Energy Saving Incentive Amount and Five-Year Renewable Energy Connections Incentive Amount

calculated in accordance with paragraph 25 of Schedule 5; and

- (i) deduction of an amount equal to 65% of the Energy Efficiency Incentive Amount in respect of that Year (if any). The deduction shall be for funding the contribution to the HEC Community Energy Saving Fund by HEC in accordance with paragraphs 7.1 to 7.5 of Schedule 5. Such deduction shall be made in respect of each Year during the period from 1st January 2019 to 31st December 2033 provided that there is an Energy Efficiency Incentive Amount in respect of that Year.

5. TARIFF STABILISATION FUND

- (1) A Tariff Stabilisation Fund shall be maintained in the accounts of HEC.
- (2) If the Gross Tariff Revenues of HEC for any Year shall exceed or be less than the total for HEC for that Year of:-
 - (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) and (g)(and where that Year is the last year of a 5-year Period, the performance adjustments in accordance with clauses 4(3)(f) to (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. HEC shall transfer the balance of the Rate Reduction Reserve as at the end of each Year to the Tariff Stabilisation Fund within one month after the end of that Year except that in relation to the balance as at the end of the last Year of the Term, the balance shall be dealt with in accordance with clause 5(6).

- (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 this Agreement.
- (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, 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.

7. TERM

- (1) This Agreement shall come into operation on 1st January 2019 and subject to sub-clauses (2) to (4) hereof shall continue in effect until 31st December 2033 (“**Term**”). The Scheme of Control Agreement dated 7th January 2008 between the Government and HEC and HKEIL as further revised on 2nd July 2014 and 19th December 2014 (“**Old Agreement**”) shall, save for antecedent rights and obligations of any party, cease to have effect from 1st January 2019. The 31st December 2018 closing balances of the Tariff Stabilisation 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 1st January 2019 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 31st December 2018. The Auditing Review in respect of the period commencing from 1st January 2018 to 31st December 2018 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) 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. Prior to 1st January 2031, the Government will discuss with HEC market readiness, potential future changes to the electricity supply regulatory framework and transition issues.
- (3) Each of the Government and HEC shall have the right during the Year ending 31st December 2023 and during the Year ending 31st December 2028, 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.
- (4) 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, the Government and HEC 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.
- (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 31st December 2030, 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 and subject to the following:
 - (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;
 - (e) sections 3, 4, 5, 6 and 7 of Schedule 2 to the Arbitration Ordinance (Cap. 609) shall apply to any arbitration commenced pursuant to this clause; and
 - (f) the governing law of this arbitration clause shall be the laws of Hong Kong.
- (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. CONTRACTS (RIGHTS OF THIRD PARTIES) ORDINANCE

Nothing in this Agreement confers, or purports to confer, on any third party any benefit or any right to enforce any term of this Agreement pursuant to the Contracts (Rights of Third Parties) Ordinance (Cap. 623).

11. GOVERNING LAW

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

12. NEWCO

If at any time during the Term, a NewCo is to carry on any Electricity-Related activities for satisfying the demand for electricity in Hong Kong as delegated, assigned, authorised or otherwise prompted by HEC, HKEIL and/or any of their respective Affiliated Companies, unless otherwise agreed by the Government, HEC and/or HKEIL (as the case may be) shall, as soon as NewCo becomes so engaged, procure that NewCo become a party to this Agreement subject to the same rights and obligations as HEC and HKEIL or such other rights and obligations as may be mutually agreed among the then parties to this Agreement.

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)
as a deed by Wong Kam Sing)
Secretary for the Environment)
for and on behalf of the Government)
of the Hong Kong Special Administrative)
Region in the presence of a witness:-)
))
) Wong Kam Sing)
))
))
))
.....)
Vincent Liu)

Executed and delivered)
as a deed and the Common Seal of)
The Hongkong Electric Company, Limited)
香港電燈有限公司)
was affixed in the presence of)
Fok Kin Ning, Canning, Chairman and))
Wan Chi Tin, Managing Director) Fok Kin Ning, Canning)
in the presence of a witness:-) Chairman)
))
))
))
))
))
.....)
Alex Ng) Wan Chi Tin)
) Managing Director)
))

Executed and delivered)
as a deed and the Common Seal of)
HK Electric Investments Limited)
港燈電力投資有限公司)
was affixed in the presence of)
Fok Kin Ning, Canning, Chairman and)
Wan Chi Tin, Chief Executive Officer) Fok Kin Ning, Canning
and Executive Director) Chairman
in the presence of a witness:-)
)
)
)
)
)
)
.....)
Alex Ng)
)
) Wan Chi Tin
) Chief Executive Officer and
) Executive Director

Schedule 1

DEFINITIONS

- (1) “5-year Period”

means any one of the consecutive five-year-periods during the period from 1st January 2019 to 31st December 2033, i.e. 1st January 2019 to 31st December 2023; 1st January 2024 to 31st December 2028; and 1st January 2029 to 31st December 2033.

- (2) “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 HKEIL.

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

means the average for that Year of the opening and closing balances of 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 number of units sold for the Year.

- (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, demand response, energy efficiency and conservation, emissions reduction or promotion and development of renewable energy.
- (11) “Excess Capacity Adjustment”
means the amount to be deducted from the Permitted Return as calculated in accordance with Section 2 of Schedule 6 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 the Hong Kong Special Administrative Region.

(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 the agreement or agreements 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 6 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 company, joint venture or partnership (other than the parties to this Agreement) alone or in conjunction with others that carries on Electricity-Related activities 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 the Government and HEC in the future.

(26) “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.

(27) “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.

(28) “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, or by a requirement by a court or a settlement of proceedings, 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.
- (29) “Tariff Stabilisation Fund”
- means the fund established pursuant to clause 5.
- (30) “Term”
- has the meaning given to it in clause 7(1).
- (31) “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 and implementing demand response, energy efficiency and conservation; and in promoting the development of renewable energy;
 - (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.

(32) “Year”

means the financial year of HEC ending 31st December.

Schedule 2

ACCOUNTING POLICIES TO BE APPLIED IN THE INTERPRETATION OF THIS 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 subparagraph (4)(a) of Section E hereof : when incurred up to Commissioning;
 - (e) Fair Value Of A Fixed Asset Acquired Through Finance Lease : at inception of the lease;
 - (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 the purposes of this Agreement 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.
- (6) Capital expenditure, arising from pre-project studies and assessments in relation to a proposed capital project, incurred shall be placed in a suspense account and will not be accounted for as Fixed Assets until the project is approved by the Government for implementation.

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 1st January 2009

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

- (2)
 - (b) Fixed Assets commissioned on or after 1st 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 trunk radio system	: 15 years
Furniture and fixture; sundry plant and equipment	: 10 years
Engineering and general purpose computers	: 10 years
Commercial motor vehicles and marine craft	: 6 years
Personal computers; office equipment; workshop tools	: 5 years
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 this Agreement, 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, 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.
- (3) When compensation is received from insurers in respect of damage to or loss of a Fixed Asset in a Year, all amount of such compensation shall be deducted from the Total Operating Costs for the Year in which the compensation payment is received.

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:-
 - (a) the remainder of the useful life, as set out in sub-paragraph (2)(c) of Section B above, of the related Fixed Asset which was commissioned before 1st 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 1st 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 HKEIL 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 demand response, 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 approved electricity to be purchased from third parties (excluding any electricity to be purchased as part of fuel costs as agreed between the Government and HEC) within or outside Hong Kong;
- (f) the amount of new capital, if any, including retained earnings to be re-invested 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;
- (h) projected Scheme Of Control balance sheets and movement of the Tariff Stabilisation Fund, Rate Reduction Reserve and Fuel Clause Recovery Account of HEC;
- (i) projection of performance against the performance indicators and incentive/penalty amounts calculated in accordance with Schedules 4 and 5 of this Agreement;
- (j) 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);
- (k) 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);

- (l) 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 (i) and following from the calculation in sub-paragraph (j) 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;
 - (m) 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
 - (n) the Best Estimation Of Expenditure Required To Settle Asset Decommissioning Obligation.
- (4) In each Development Plan Review, the Government will take into account the environmental targets set by the Government from time to time.
 - (5) 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.
 - (6) 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.
 - (7) 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. Without prejudice to HEC's aforementioned obligation, the scope and presentation of the disclosure to the Government shall be mutually agreed between the Government and

HEC when a Development Plan Review is conducted jointly by the Government and HEC. 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 5% 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) year-end Tariff Stabilisation Fund balance and Rate Reduction Reserve balance;
 - (f) year-end Fuel Clause Recovery Account balance;
 - (g) closing 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, including any costs of FiT to be incurred less the proceeds from the sale of RE Certificates pursuant to paragraph 14 of Schedule 5; and
- (k) amount and cost of approved electricity to be purchased from third parties (excluding any electricity to be purchased as part of fuel costs as agreed between the Government and HEC) 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 1st 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 adjustment following the completion of each Tariff Review. The content, scope and presentation of such disclosure to the public shall be mutually agreed between the Government and HEC prior to each disclosure.

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 and 5 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. Without prejudice to HEC's aforementioned obligation, the scope and presentation of the disclosure to the Government shall be mutually agreed between the Government and HEC when an Auditing Review is conducted jointly by the Government and HEC. Each Year, HEC will also compile an electronic information booklet for disclosure to the public. The content and disclosure timing of such booklet, including appropriate segregate cost data, shall be mutually agreed between the Government and HEC.

Schedule 4

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, customer services and supply restoration (each of these four 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 10 below, relative to targets specified in the “Target” column for each of the Performance Indices in the “Performance Index” column of the table.

Customer Performance Category	Performance Index	Target	Incentive Adjustment
Supply Reliability	Average Service Availability Index (ASAI)	ASAI is greater than or equal to 99.9960%	+0.015%
		ASAI is less than 99.9960% but greater than or equal to 99.9950%	+0.01%
		ASAI is less than 99.9950% but greater than 99.9930%	0%
		ASAI is equal to or less than 99.9930% but greater than 99.9920%	-0.01%
		ASAI is equal to or less than 99.9920%	-0.015%
Operational Efficiency	Connection & Supply Performance Index (CSPI)	CSPI is equal to 100%	+0.01%
		CSPI is less than 100% but greater than 99.98%	0%
		CSPI is equal to or less than 99.98%	-0.01%

Customer Services	Appointment Punctuality Index (API)	API is greater than or equal to 99.8%	+0.01%
		API is less than 99.8% but greater than or equal to 99.7%	+0.005%
		API is less than 99.7% but greater than 98.0%	0%
		API is equal to or less than 98.0% but greater than 97.9%	-0.005%
		API is equal to or less than 97.9%	-0.01%
Supply Restoration	Average Grid Supply Restoration Time (Average GSRT)	Average GSRT is 65 minutes or less	+0.015%
		Average GSRT is more than 65 minutes but equal to or less than 70 minutes	+0.01%
		Average GSRT is more than 70 minutes but equal to or less than 80 minutes	0%
		Average GSRT is more than 80 minutes but equal to or less than 85 minutes	-0.01%
		Average GSRT is more than 85 minutes	-0.015%

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 1366-2012 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 1366-2012 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 1366-2012 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 Connection 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_n 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_n means the Appointment Punctuality Index achieved for the Year n;
- TKA_n 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_n 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. In respect of any Year, HEC's performance in relation to the Customer Performance Category of supply restoration shall be the measure of the average Grid Supply Restoration Time ("**Average GSRT**") achieved by HEC in that Year, as determined in accordance with the following formula:-

$$(a) \text{ Average GSRT}_n = \frac{\text{The sum of GSRT of each Grid Supply Fault Outage in the Year } n}{\text{The total number of Grid Supply Fault Outages in the Year } n}$$

Where :

GSRT means the length of time, expressed in minutes, between the Interruption Occurrence Time and the Restoration Time of each Grid Supply Fault Outage;

Grid Supply Fault Outage means a fault outage which results in the service interruption to the HEC grid supply of electricity to a customer;

Interruption Occurrence Time means the earlier of (A) the time when HEC detects the interruption; and (B) the time when

the interruption is reported to HEC; and

Restoration Time

means the time when the supply to the last customer affected by the fault outage:

- (i) is restored with a source provided by HEC; or
- (ii) is ready for restoration but the connection cannot be made by virtue of the request of, or the withholding of access or any necessary consent or support by, the affected customers; or
- (iii) for remote locations with prior agreement between the customers and HEC on supply restoration arrangement, is restored as per such agreement.

(b) In determining whether a grid supply fault outage has occurred for the purpose of the above formula in sub-paragraph (a), no account shall be taken of any interruption to the grid 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; or
- (iii) the interruption occurred on a Major Event Day as defined by IEEE 1366-2012 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 1366-2012 standard.
- (iv) HEC was unable to restore the interrupted grid supply by virtue of the occurrence of any other event(s) or circumstance(s) beyond the control of HEC which is (are) agreed between the Government and HEC.

10. Modifications to the performance targets specified in the “Target” column of the table in paragraph 2 above shall be subject to agreement between the Government and HEC pursuant to clause 7(3) of this Agreement.

11. 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.

12. 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;
- (c) the Incentive Adjustment for the Customer Performance Category of customer services determined in accordance with paragraph 2; and
- (d) the Incentive Adjustment for the Customer Performance Category of supply restoration 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 5

ENERGY EFFICIENCY, DEMAND RESPONSE, RENEWABLES, INTERCONNECTION AND GRID ACCESS STUDY

ENERGY EFFICIENCY

1. Paragraphs 2, 3, 4, 5 and 6 of this Schedule set out the financial incentives in respect of performance of HEC in energy saving from audit, energy audit, the New Smart Power Fund and Five-Year Energy Saving (each of these four categories being an “**Energy Efficiency Performance Category**”).

Summary of Incentives

Energy Efficiency Performance Category	Incentive Factor
Energy Saving from Audit	Up to 0.1% provided under paragraph 2
Energy Audit	Up to 0.04% provided under paragraph 4
New Smart Power Fund	Up to 0.02% provided under paragraphs 5.4(a) and 5.4(b); and Up to 0.1% provided under paragraphs 5.4(c) and 5.4(d)
Five-Year Energy Saving	Up to 0.1% provided under paragraph 6.1

Energy Saving from Audit Performance

2. The Energy Saving from Audit Incentive Factor for any Year which is a full calendar year shall be:-
 - (a) 0.1% where the Energy Saving from Audit performance in relation to that Year, expressed in GWh, is equal to or greater than 12GWh, or such other figure as may be agreed between the Government and HEC pursuant to clause 7(3) of this Agreement; or
 - (b) if the performance is lower than 12GWh in the Year, or such other figure as may be agreed between the Government and HEC pursuant to clause 7(3) of this Agreement, the incentive factor will be a pro-rata

amount based on the proportion of the actual target amount which is achieved.

3. The Energy Saving from Audit 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, which are 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, or by other third party registered energy assessors under the Buildings Energy Efficiency Ordinance (Cap. 610) where the energy saving projects are directly facilitated by HEC. 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 code of practice and technical guidelines relating to 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) 0.04% where the number of energy audits completed in the Year by HEC under the Energy Audit Programme is equal to or greater than 200, or such other figure as may be agreed between the Government and HEC pursuant to clause 7(3) of this Agreement; or
 - (b) if the number of energy audits completed in the Year is lower than 200, or such other figure as may be agreed between the Government and HEC pursuant to clause 7(3) of this Agreement, the incentive factor will be a pro-rata amount based on the proportion of the actual target amount achieved.

New Smart Power Fund Performance

- 5.1 From 1st January 2019, a New Smart Power Fund shall be established by HEC to support the carrying out of retrofitting or retro-commissioning, implementation of building-based smart/IT technologies, or any other improvement measures as agreed between the Government and HEC to enhance the energy efficiency performance of building services installations for communal use in both commercial and non-commercial buildings as may be agreed between the Government and HEC. Without prejudice to the generality of the foregoing, the objective of the New Smart Power Fund may be reviewed by the Government and HEC from time to time, and the use of the New Smart Power Fund shall be agreed between the Government

- and HEC from time to time.
- 5.2 For any Year, HEC shall contribute an amount, which is to be agreed with the Government from time to time, to the New Smart Power Fund, and such amount shall be part of Total Operating Costs.
- 5.3 The New Smart Power Fund shall be maintained and administered by HEC from the time of its establishment as specified in paragraph 5.1 until 31st December 2033. Whilst administering the New Smart Power Fund, HEC shall ensure that the costs incurred in the administration of the fund shall be kept to a minimum, and such administration costs shall be part of Total Operating Costs during the Term.
- 5.4 The New Smart Power Fund Incentive Factor for any Year which is a full calendar year shall be the sum of:-
- (a) up to 0.02% where the number of buildings with confirmed projects which have commenced (including but not limited to cases where tender is awarded or works have commenced) under the New Smart Power Fund in that Year is equal to or greater than 100, or such other figure as may be agreed between the Government and HEC pursuant to clause 7(3) of this Agreement; or
 - (b) if the number of such buildings is lower than 100 in that Year, or such other figure as may be agreed between the Government and HEC pursuant to clause 7(3) of this Agreement, the incentive factor will be a pro-rata amount based on the proportion of the actual target amount achieved; and
 - (c) up to 0.1% where the New Smart Power Fund energy saving performance in relation to that Year, expressed in GWh, is equal to or greater than 12GWh, or such other figure as may be agreed between the Government and HEC pursuant to clause 7(3) of this Agreement; or
 - (d) if the performance is lower than 12GWh in that Year, or such other figure as may be agreed between the Government and HEC pursuant to clause 7(3) of this Agreement, the incentive factor will be a pro-rata amount based on the proportion of the actual target amount achieved.
- 5.5 The New Smart Power Fund energy saving for any Year shall be equal to the aggregate energy saving, expressed in GWh, attributable to (A) energy-saving technologies, assessed on an engineering design basis, installed in that Year from projects approved under the New Smart Power Fund; and (B) projected savings from completed projects approved under the New Smart Power Fund for the retro-commissioning of buildings,

assessed based on the Technical Guidelines on Retro-Commissioning issued by the Electrical and Mechanical Services Department of the Government.

Five-Year Energy Saving Incentive Performance

6.1 The Five-Year Energy Saving Incentive Factor, for each 5-year Period, shall be:

- (a) 0.06% where the Five-Year Energy Saving performance, achieved by HEC in respect of the 5-year Period is less than 5% but greater than or equal to 4%; or
- (b) 0.1% where the Five-Year Energy Saving performance in respect of the 5-year Period is greater than or equal to 5%.

6.2 The Five-Year Energy Saving performance in respect of any 5-year Period shall be the total volume of electricity saved on a continuing benefit basis (in GWh) for each year of that 5-year Period and will be calculated in accordance with the following formula:-

- (a) Energy Saving from Audit performance referred to under paragraphs 2 and 3 of Schedule 5; plus
- (b) the New Smart Power Fund energy saving performance referred to under paragraphs 5.1 to 5.5 of Schedule 5; plus
- (c) energy saved from programmes supported by HEC Community Energy Saving Fund referred to under paragraph 7.1 of Schedule 5;

divided by

the average volume of annual local electricity sales (in GWh) of HEC in that 5-year Period; and

multiplied by 100%.

6.3 For the avoidance of doubt, the total volume of electricity saved on a continuing benefit basis (in GWh) for the purpose of calculating the Five-Year Energy Saving performance shall be reset to zero upon the beginning of each 5-year Period.

HEC Community Energy Saving Fund

7.1 No later than 1st January 2019, a HEC Community Energy Saving Fund shall be established with initial funding provided by the net closing balance as at 31st December 2018 of the Energy Efficiency Fund maintained under

the Old Agreement. The HEC Community Energy Saving Fund shall be further funded by HEC (in the manner specified in paragraph 7.2 below) to promote energy efficiency and conservation, such as accelerating end-use energy efficiency through programmes designed to help residential, industrial and commercial customers, and also disadvantaged customers/groups to replace or upgrade end-use appliances to more energy-efficient electrical models. Funds may also be provided to support other programmes such as green building initiatives; those to support the use of renewable energy to replace conventional supplies; and those to support disadvantaged groups, as agreed between the Government and HEC. The programmes under this HEC Community Energy Saving Fund together with their methods of assessing the energy saving achieved thereunder and the corresponding fund allocation shall be agreed between the Government and HEC.

- 7.2 HEC shall make a non-refundable contribution to the HEC Community Energy Saving Fund each year (a “**CESF Contribution**”) of an amount equal to sixty-five percent (65%) of the total incentive amount awarded from (i) the Energy Saving from Audit performance, (ii) the Energy Audit performance, and (iii) the New Smart Power Fund performance (collectively the “**Energy Efficiency Incentive Amount**”). To the extent that there is no Energy Efficiency Incentive Amount in respect of any Year, HEC shall have no obligation to make any CESF Contribution in respect of that Year.
- 7.3 HEC shall, no later than one month after the Government’s confirmation of the amount of the Energy Efficiency Incentive Amount in respect of a Year, make a CESF Contribution (if any) to the HEC Community Energy Saving Fund. The CESF Contribution (if any) to be made during the Year ending 31st December 2033 shall be further discussed and agreed between the Government and HEC provided that such CESF Contribution shall not be retained by HEC. Such discussion should be initiated no later than 1st January 2033.
- 7.4 CESF Contributions to the HEC Community Energy Saving Fund shall not have any impact on tariffs. Without prejudice to the generality of the foregoing, HEC shall not include any CESF Contribution as Total Operating Costs.
- 7.5 The HEC Community Energy Saving Fund shall be maintained and administered by HEC from the time of its establishment as specified in paragraph 7.1 to 31st December 2033. Whilst administering the HEC Community Energy Saving Fund, HEC shall ensure that the costs incurred in the administration of the fund shall be kept to a minimum. Such administration costs shall be part of Total Operating Costs during the Term. The treatment of any available balance in the HEC Community Energy Saving Fund after 31st December 2033 shall be further discussed and agreed

between the Government and HEC provided that such balance will not be refunded to HEC. Such discussion should be initiated no later than 1st January 2033.

Energy Saving Loan Fund

- 8.1 A loan fund (“**Energy Saving Loan Fund**”) over the period from 1st January 2019 to 31st December 2033 (“**Loan Fund Period**”) shall be established by HEC to provide loans to non-Government customers of HEC (“**Borrowers**”) to implement energy-saving initiatives identified in the energy audits under the Energy Audit Programme or the New Smart Power Fund. In respect of each year of the Loan Fund Period which is a full calendar year, HEC shall make available HK\$12.5 million in terms of principal amount to be advanced under the Energy Saving Loan Fund to the Borrowers for the aforesaid purposes. The total principal amount to be made available during the Loan Fund Period shall not exceed HK\$62.5 million at any time.
- 8.2 The Energy Saving Loan Fund maintained under the Old Agreement shall terminate on 31st December 2018 and the total outstanding principal amount, together with all related obligations and liabilities outstanding as at 31st December 2018, shall be transferred to form part of the new Energy Saving Loan Fund.
- 8.3 During the Loan Fund Period, HEC may arrange banks as the lender to extend commercial loans under the Energy Saving Loan Fund to Borrowers in lieu of making the funds available themselves. HEC shall reimburse Borrowers for interest accruing on such loans and paid to banks. Such reimbursements shall be treated as Total Operating Costs whilst this Agreement continues.
- 8.4 The Government and HEC shall at least 12 months before 31st December 2033 institute specific discussions which may include recovery of amounts, losses and/or expenditure incurred or to be incurred by HEC in connection with the operation and administration of the Energy Saving Loan Fund after 31st December 2033 including (a) all amounts which may be reimbursed by HEC after 31st December 2033 to Borrowers for their interest payments as mentioned in paragraph 8.3 above; (b) if HEC takes up the lender role to advance loans to Borrowers, any bad debts arising after 31st December 2033 representing the un-repaid principal amounts of the loans advanced by HEC to the Borrowers during the Loan Fund Period; and (c) administrative and legal costs incurred by HEC after 31st December 2033 in relation to the general administration of the Energy Saving Loan Fund (to the extent necessary to discharge HEC’s obligations to reimburse interest under paragraph 8.3 above) and in the recovery and enforcement of the loans under the Energy Saving Loan Fund advanced by HEC as lender during the Loan Fund Period.

Education Fund

- 8.5 An education fund of HK\$5 million per annum, which shall be part of Total Operating Costs, shall be established by HEC for energy efficiency and promotion activities, administered by HEC and involving stakeholder representation.
- 8.6 The procedures for administering the New Smart Power Fund, HEC Community Energy Saving Fund, Energy Saving Loan Fund and the Education Fund shall be subject to the prior written agreement of the Government.

DEMAND RESPONSE

Demand Response Incentive

9. The Demand Response 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 Demand Response Reduction Performance in the left hand column. The Demand Response Reduction Performance achieved by HEC in each Year shall be determined in accordance with paragraphs 9 and 10.

Demand Response Reduction Performance	Demand Response Incentive Factor
Equal to or greater than 30MW	+0.025%
Equal to or greater than 25MW but less than 30MW	+0.02%
Equal to or greater than 20MW but less than 25MW	+0.015%
Equal to or greater than 15MW but less than 20MW	+0.01%
Equal to or greater than 10MW but less than 15MW	+0.005%
Less than 10MW	0%

10. The Demand Response Reduction Performance for any Year shall be a measure of the difference between (i) the maximum demand in the Year deemed to have occurred if no Demand Response Reduction events were initiated and (ii) the actual maximum demand in the Year with Demand Response Reduction events initiated, expressed in megawatts (MW), in that Year, where:

- (a) the demand reduction delivered by a Demand Response Reduction event shall be the sum of the demand reductions realised by the participating customers and recorded by the automatic demand response (ADR) programme or the bilateral demand response (BDR) programme during the relevant period; and
- (b) the demand reduction realised by each participating customer shall be the difference, where positive, between (A) the normalised baseline of the average demand of the customer (in the same time period) of the three highest demand days in the ten preceding non-event days prior to the day of such event; and (B) the actual customer demand during the relevant time period.

RENEWABLES

Renewable Energy Development

- 11.1 HEC will, in consultation with the Government, establish appropriate mechanisms such as feed-in tariffs (“**FiT**”) for the promotion and development of renewable energy in Hong Kong taking into account of the environmental benefits, cost, tariff impact, timing, reliability and power quality characteristics of the energy produced.
- 11.2 Pursuant to paragraph 11.1 above, the detailed arrangements of the FiT scheme will be agreed between the Government and HEC from time to time (“**FiT Scheme**”).
- 11.3 The costs of FiT less the proceeds from the sale of RE Certificates referred to in paragraph 14 below during any given Year will form part of the cost of fuels of HEC for that Year under this Agreement.
- 11.4 The Government and HEC will from time to time review the FiT Scheme and other renewable energy development mechanisms for the time being in force and their impact on HEC and customers of HEC.

FiT Scheme

- 12. Subject to the terms of the FiT Scheme, HEC will, during the Term purchase electricity produced by any of its customers with an embedded Renewable Energy System (hereinafter referred to as “**RE System Participating in the FiT Scheme**”) that is connected to HEC’s grid and has a generating capacity of up to 1 MW. A customer with an embedded Renewable Energy System that has a generating capacity exceeding 1MW may also be considered for the above purchase and payment of FiT by HEC on a case by case basis, as agreed by the Government and HEC, taking into account of safety and

technical standards, as well as the impact on HEC and other customers of the HEC.

13. Subject to the terms of the FiT Scheme, FiT will be payable by HEC during the Term in respect of each unit of electricity generated by an RE System Participating in the FiT Scheme. Any unit of electricity consumed on site of an RE System Participating in the FiT Scheme (whether generated by an embedded Renewable Energy System or supplied from the HEC's grid) will be charged by HEC at its prevailing tariff rate.

RE Certificates

14. HEC will introduce arrangements for the sale of renewable energy certificates ("**RE Certificates**") designed to allow customers to purchase the RE Certificates which represent locally generated renewable energy purchased or generated by HEC. The detailed arrangements of the RE Certificate scheme will be agreed between the Government and HEC from time to time.

Grid Connection for Embedded Renewables

- 15.1 HEC will offer standardised grid connection arrangements in Hong Kong, including provision of backup power supply, for small embedded Renewable Energy Systems on reasonable terms. A "small embedded Renewable Energy System" is one with a maximum generating capacity of 200kW or less (or as otherwise agreed between the Government and HEC).
- 15.2 A customer of HEC with an embedded Renewable Energy System with a maximum generating capacity of over 200kW may be allowed grid connection on reasonable terms on a case by case basis taking into account the embedded Renewable Energy System's safety and technical standards, as well as any impact such grid connection may have on HEC's electricity system and on other customers of HEC.
- 15.3 All grid connection arrangements shall be 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.

Renewable Energy Incentive

16. 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 17.

Renewable Energy Performance	Renewable Energy Incentive Factor
5% or above	+0.05%
Less than 5% and greater than or equal to 2%	+0.025%
Less than 2% and greater than or equal to 0.75%	+0.02%
Less than 0.75% and greater than or equal to 0.05%	+0.015%
Less than 0.05% and greater than or equal to 0.025%	+0.01%
Less than 0.025%	0%

17. The Renewable Energy Performance for any Year which is a full calendar year shall be the proportion of the total volume of electricity generated (in kWh) by Renewable Energy Systems in the areas served by HEC, excluding those directly owned by the Government, compared to the total volume of electricity generated (in kWh) by HEC in Hong Kong in that Year, expressed as a percentage.

Renewable Energy Connections Incentive

18. The Renewable Energy Connections 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 Connections Performance, achieved by HEC in respect of that Year determined in accordance with paragraph 19.

	Renewable Energy Connections Performance	Renewable Energy Connections Incentive Factor
Number of new Renewable Energy Systems connected	Equal to or more than 20 new connections and less than 40 new connections; or	+0.00125%
	Equal to or more than 40 new connections	+0.0025%

Number of new Renewable Energy Systems that generate electricity regularly	Equal to or more than 40 new connections which generate electricity on a regular basis	+0.0025%
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19. The Renewable Energy Connections Performance for any Year shall be a measure of both:
- (a) the number of new Renewable Energy Systems connected to HEC’s grid in that Year; and
 - (b) the number of these connections which generate electricity regularly.
20. For each 5-year Period, an additional Five-Year Renewable Energy Connections Incentive Factor of 0.01% will apply if there are more than 250 new Renewable Energy Systems connections in that 5-year Period which generate electricity on a regular basis.
21. For the avoidance of doubt, the number of Renewable Energy Systems connections shall be reset to zero upon the beginning of each 5-year Period for the purpose of determining the applicability of the additional Five-Year Renewable Energy Connections Incentive Factor of 0.01%.

RE Certificate Sales Incentive

22. The RE Certificate Sales Incentive Amount for any Year which is a full calendar year shall be ten percent (10%) of the total revenue generated from sale of RE Certificates by HEC to customers pursuant to paragraph 14 in that Year.

ENERGY EFFICIENCY, DEMAND RESPONSE AND RENEWABLES INCENTIVE AMOUNT

23. In relation to any Year which is a full calendar year, the Energy Efficiency, Demand Response and Renewables Incentive Amount shall be the sum of:-
- (a) the Energy Saving from Audit Incentive Factor for that Year determined in accordance with paragraph 2;
 - (b) the Energy Audit Incentive Factor for that Year determined in accordance with paragraph 4;
 - (c) the New Smart Power Fund Incentive Factor for that Year determined

in accordance with paragraph 5.4;

- (d) the Demand Response Incentive Factor for that Year determined in accordance with paragraph 9;
- (e) the Renewable Energy Incentive Factor for that Year determined in accordance with paragraph 16; and
- (f) the Renewable Energy Connections Incentive Factor for that Year determined in accordance with paragraph 18,

multiplied by the total value of HEC's Average Net Fixed Assets for that Year.

- 24. In relation to any Year which is a full calendar year, the RE Certificate Sales Incentive Amount for that Year shall be determined in accordance with paragraph 22.
- 25. In relation to each 5-year Period, the Five-Year Energy Saving Incentive Amount and Five-Year Renewable Energy Connections Incentive Amount shall be the sum of:-
 - (a) the Five-Year Energy Saving Incentive Factor for that 5-year Period determined in accordance with paragraphs 6.1 to 6.3; and
 - (b) the Five-Year Renewable Energy Connections Incentive Factor for that 5-year Period determined in accordance with paragraphs 20 to 21;

multiplied by the total value of HEC's Average Net Fixed Assets for the final year of that 5-year Period.

INTERCONNECTION STUDY

- 26. HEC will cooperate with the Government in a study (“**Interconnection Study**”) to consider the detailed arrangements for strengthening the interconnection between Mainland China and Hong Kong, as well as that between the existing grids in Hong Kong, taking into account the technical feasibility, the implications to the overall performance of the power supply including safety, reliability, tariffs and environmental performance, efficiency of the power system, cost and benefit to consumers, and the impact to HEC.

GRID ACCESS STUDY

- 27. HEC will cooperate with the Government in a study of potential access to

the electricity grid by third parties, taking into consideration the results of the Interconnection Study and taking full account of safety, reliability, technical feasibility, environmental performance, efficiency of the power system, cost and benefit to consumers, possible changes to be implemented to the future regulatory framework and the impact to HEC.

Schedule 6

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 mandated targets related to air pollutant emissions reductions, including emission requirements as stipulated in the Specified Process Licences, and/or the Government’s targets related to carbon emissions reductions for Hong Kong.
- (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 this 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 100% of the overall mechanical and electrical (M&E) equipment costs¹ of the Additional Unit,

¹ 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.

that gives rise to excess generating capacity, plus the capitalised interest² attributable to the 100% 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 this 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
= 8% 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 7% per annum x the average of the opening and closing balances of the Excess Capacity Expenditure.

- (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.

² The amount of capitalised interest will be the product of the average accumulation of the 100% 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 100% of the M&E costs were incurred, divided by 365.

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

= LOLP³ 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)

³ 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 capacity⁴ being less than the maximum demand for a given hour or day in the year.

⁴ Operating capacity is defined as the sum of capacity of all available units⁵ minus sum of capacity of all available units which are under unplanned outage.

⁵ 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.

on HEC's system plus the hot standby reserve requirement.

Excess Capacity Expenditure

= 100% 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 100% 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.

(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: 8%

(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"> LOLP computer model 	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"> Interconnection capacity between CLP Power-HEC 	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.

• HEC system	
○ Maximum demand	○ Use (100 +4) % of the actual local maximum demand.
○ Load pattern	○ Use the assumptions for all 365 days of the Year in UG basis adopted to derive the generating unit installation programme for approved DP.
○ Units in system	○ Use the actual units in system excluding the Additional Units.
○ Unit characteristics (i.e. rating and forced outage rate, etc.)	○ Use the assumptions adopted to derive the generation unit installation programme for approved DP.
○ Maintenance schedule of units	○ Ditto.
• CLP Power System	
○ Maximum demand	○ Use the assumptions adopted to derive the generating unit installation programme for approved DP.
○ Load pattern	○ Ditto
○ Units in system	○ Ditto
○ Unit characteristics (i.e. rating and forced outage rate, etc.)	○ Ditto
○ Maintenance schedule of units	○ 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

The required reserve capacity shall be reviewed by the Government and HEC from time to time based on the system configuration of HEC at the relevant time, and any update to such required reserve capacity shall be mutually agreed between the Government and HEC.