



# National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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**Registrar**

No.NEPRA/R/TRF-100/2009/1203-1205

December 14, 2009

**Subject: Amended Decision of the Authority in the matter of procurement of power by NTDC from Laraib Energy Limited – 84 MW New Bong Escape Hydropower Project (Case No. NEPRA/TRF-100/2009) - Intimation of Decision of Tariff pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997)**

Dear Sir,

In continuation of this office letter No.NEPRA/R/TRF-100/2009/9192-9194 dated September 16, 2009 whereby decision of the Authority on Laraib Energy Limited was sent. Please find enclosed herewith the Amended Decision of the Authority along with Annex-I (36 pages) in the matter of Laraib Energy Ltd. in Case No. NEPRA/TRF-100/2009.

2. The Decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).

3. Please note that Amended Decision of the Authority along with Schedule-6 (Annex-I) (36 pages) needs to be notified in the official gazette.

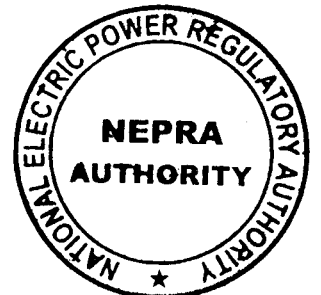
Enclosure: As above

Registrar

The Secretary  
Cabinet Division  
Government of Pakistan  
Cabinet Secretariat  
Islamabad

CC:

1. Secretary, Ministry of Water & Power, Islamabad.
2. Secretary, Ministry of Finance, Islamabad.



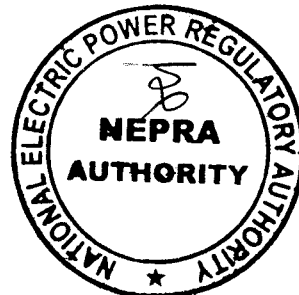
**Amended Decision of the Authority in the matter of  
procurement of power by NTDC from Laraib Energy  
Limited – 84 MW New Bong Escape Hydropower Project.  
(Case No. NEPRA/TRF-100/2009)**

Further to the Authority's decision communicated to the Government of Pakistan vide our letter No. NEPRA/TRF-100/2009/9192-9194 dated September 16, 2009, in the matter of procurement of power by Central Power Purchasing Agency (CPPA) from Laraib Energy Limited -84 MW New Bong Escape Hydropower project, the CPPA vide its letter No. COO/CPPA/CE-II/DH/16138-39 dated October 29, 2009 submitted the final Power Purchase Agreement (PPA) duly signed by the both parties i.e. CPPA and Laraib Energy Limited for approval of the Authority in accordance with the NEPRA Interim Power Procurement (Procedures and Standards) Regulations, 2005.

2. The aforesaid request of the CPPA was considered by the Authority and it was found that certain amendments/corrections have been incorporated in the final PPA as submitted to the Authority over the initialed PPA already approved as per earlier decision of the Authority. The observations of the Authority were conveyed to the power purchaser (CPPA) for its explanation and justification for such subsequent amendments in the PPA. Accordingly, a hearing/meeting with CPPA was held on December 7, 2009, wherein the CPPA explained the rationale along with justification in respect of all the amendments/corrections made in the PPA subsequent to the earlier decision of the Authority. It was assured to the Authority by the CPPA that all these amendments have been made in consultation with the project lenders and the Private Power and Infrastructure Board (PPIB) for clarity and text improvement which, however, have no negative impact on the tariff and its terms and conditions already approved by the Authority in its earlier decision dated September 16, 2009.

3. After thorough examination of the amended and restated PPA dated October 22, 2009, the Authority has decided to amend its earlier decision as follows;

- i) The amended and restated Power Purchase Agreement (PPA) signed between the both parties i.e. Laraib Energy Limited and CPPA/NTDC dated October 22, 2009 is hereby approved. Accordingly the




Schedule-6 of the PPA attached to the earlier decision of the Authority dated September 16, 2009 as Annex-I is replaced with the final/amended schedule-6 of the aforesaid PPA dated October 22, 2009 as attached herewith.

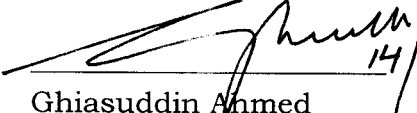
- ii) The typographical error of the rate expressed in US cents " 8.3326/kWh ( 7.5726 + 0.76 Cents/kWh)" at Para 2.7 page 2 of the earlier decision of the Authority be replaced with " 8.5453/kWh (7.7853 + 0.76 Cents/kWh)".

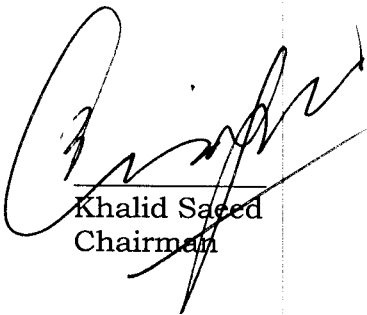
4. The aforementioned decision of the Authority is communicated to the Federal Government for notification in the official gazette in accordance with the Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997).

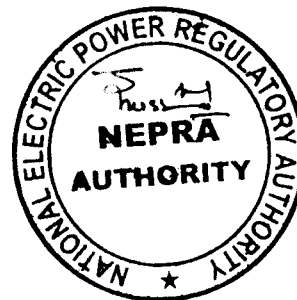
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Authority:

  
Zafar Ali Khan  
Member  
14/12/09

  
Ghiasuddin Ahmed  
Vice Chairman/Member  
14/12

  
Khalid Saeed  
Chairman



SCHEDULE 6  
TARIFF, INDEXATION AND ADJUSTMENT

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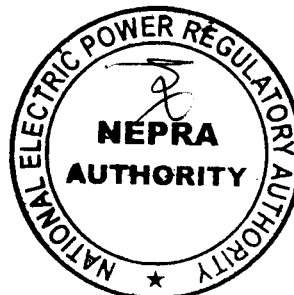
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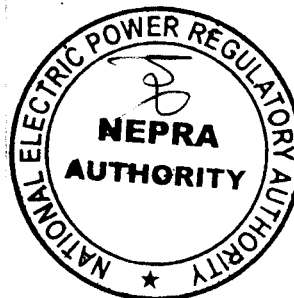
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## PART I: GENERAL

## 1. Introduction

- 1.1 This Schedule 6 is attached to and constitutes an integral part of the Amended and Restated Power Purchase Agreement (the "Power Purchase Agreement") dated as of 22 October, 2009 by and between the Power Purchaser and Laraib Energy Limited (the "Company"). This Schedule 6 specifies the methods for calculating the payments to be made to the Company by the Power Purchaser under 9.1 (Tariff Payments; Payment of Net Electrical Output during Testing; Water Use Payment), 9.2 (Liquidated Damages and Penalties), 9.7 (Supplemental Tariff Payments; Pass-Through Item(s)) and 14.4 (Consequence for Costs and/or Savings resulting from a Change in Tax) of the Power Purchase Agreement. It also specifies the methods for making adjustments to such payments for changes in exchange rate, price indices and in interest rates, among others.
- (a) The methods for calculating the regular payments to be made to the Company by the Power Purchaser under Section 9.1 (Tariff Payments; Water Use Charges; Payment of Net Electrical Output during Testing) and method for calculating liquidated damages to be payable by the Company to the Power Purchaser under Section 9.2 (Liquidated Damages and Penalties) of the Power Purchase Agreement are set forth in Part II of Schedule 6.
- (b) The methods for calculating the Supplemental Tariff Payments to be made to the Company by the Power Purchaser under Section 9.7 (a) of the Power Purchase Agreement are set forth in Part III. Additionally, the methods for calculating payments to be made to the Company by the Power Purchaser or to the Power Purchaser by the Company, as the case may be, for Changes in Tax under Sections 14.4(a) and 14.4(b) of the Power Purchase Agreement are set forth in Part III.
- (c) The methods for calculating the additional payments to be made to the Company by the Power Purchaser for the Pass-Through Item(s) under Section 9.7 (b), payment for Net Electrical Output during testing under Section 9.1 (b) of the Power Purchase Agreement are set forth in Part IV.
- (d) The methods for calculating adjustments for price index changes and foreign Exchange Rate and inflation factor (local/foreign) variations against the reference values are set forth in Part V.
- 1.2 The billing and payment procedures as set forth in Article IX of the Power Purchase Agreement shall apply to all payment obligations referred to in this Schedule 6, unless otherwise specified therein.

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## 2. Definitions

Capitalized terms used but not defined in this Schedule 6 shall have the meaning ascribed to them in the body of the Power Purchase Agreement or the GOP Implementation Agreement. Wherever the following terms appear in this Schedule 6, they shall have the meanings stated below:

"Current Indices" means the Quarterly FX, the Quarterly US-CPI, the Quarterly WPI, as applicable, calculated for the Quarter immediately preceding the current Quarter and applicable for the current Quarter, and the Local Loan Interest Adjustment Factor (LLIAFq) and the Foreign Loan Interest Adjustment Factor (FLIAFq) as applicable, calculated for the semi-annual period immediately preceding the current semi-annual period, and applicable for the current semi-annual period.

"EPC Cost" means the EPC Cost determined at Commercial Operations Date after applying adjustment on Reference EPC Cost as per Section 1 of Annex V;

"Exchange Rate" means the TT&OD selling rate for US Dollars expressed in Rupees, as published by the National Bank of Pakistan prevailing at the close of Wednesday that is also a Business Day, and with respect to any Wednesday that is not a Business Day, the TT&OD selling rate for Dollars expressed in Rupees, as published by the National Bank of Pakistan prevailing at the close of the last preceding Business Day prior to such Wednesday.

"Foreign Loan Interest Adjustment Factor" or "FLIAFq" has the meaning given to it in Section 11.6.

"FX Adjustment Factor" means the factor that is used to adjust the foreign cost components of Reference Tariff for fluctuations in the value of the Rupee against the Dollar, which factor shall be calculated as specified in Part V.

"Inflation Adjustment Factor for WPI" means the factor that is used to adjust the local cost component of the Reference Variable O&M Component, the Reference Fixed O&M Component for fluctuations in the Wholesale Price Index (WPI), which factor shall be calculated as specified in Part V.

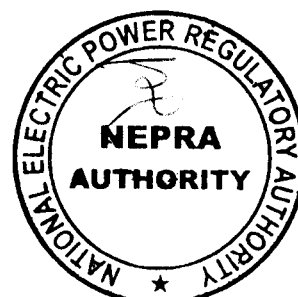
"Inflation Adjustment Factor for US - CPI" means the factor that is used to adjust foreign cost components of the Reference Variable O&M Component, the Reference Fixed O&M Foreign Component for fluctuation in US-CPI which factor shall be calculated as specified in Part V.

"Local Loan Interest Adjustment Factor" or "LLIAFq" has the meaning given to it in Section 11.7.

"Quarter" means each three (3) Month period of a Year, being 1 January through 31 March, 1 April through 30 June, 1 July through 30 September or 1 October through 31 December, as the case may be,

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and the period commencing on the Commercial Operations Date and ending at the beginning of any such three (3) Month period.

"Quarterly FX" means the average of the Exchange Rates in the Quarter immediately preceding the relevant Quarter, which shall equal the sum of all the Exchange Rates in such immediately preceding Quarter divided by the number of such Exchange Rates.

"Quarterly US-CPI" means the average of each of the end of Month values for the US-CPI Index in the Quarter immediately preceding the relevant Quarter, which shall equal the sum of all the Month-end US-CPI values in the Quarter immediately preceding the Quarter divided by the number of such values; provided, that if any such values for any of such Quarter are not available, then the average of the end of Month values for the most recent available three (3) Months shall be used.

"Quarterly WPI" means the average of each of the end of Month values for the Wholesale Price Index (WPI) in the Quarter immediately preceding the relevant Quarter, which shall equal the sum of all the Month-end WPI values in the Quarter immediately preceding the Quarter divided by the number of such values; provided, that if any such values for any of such Quarter are not available, then the average of the end of Month values for the most recent available three (3) Months shall be used, unless directed by NEPRA to use any other months in lieu thereof.

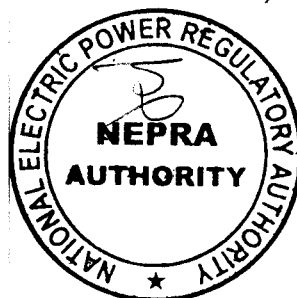
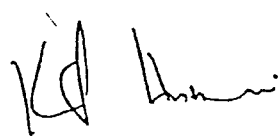
"Reference EPC Cost" means the reference EPC Cost approved as the basis for the Reference Tariff;

"Reference Fixed Energy Purchase Price" means Reference Fixed O&M Foreign Component, Reference Fixed O&M Local Component, Reference Insurance Component, Reference Return on Equity Component, Reference Return on Equity During Construction Component, Reference Special Return on Equity Component, Reference Withholding Tax on Dividend Component (whether or not such aforesaid components actually compensates the Company for the cost of providing energy), Reference Local Debt Service Component and Reference Foreign Debt Service Component as set out in Reference Tariff Table in Annex I.

"Reference Debt Service Component" means the aggregate of Reference Local Debt Service Component and Reference Foreign Debt Service Component.

"Reference Exchange Rate" means 80.0 Rupees to one (1) Dollar.

"Reference Fixed O&M Foreign Component" means the component in Rs./kWh, payable to the Company for the foreign fixed costs of operation and maintenance, which components shall be as set forth in Annex I.



"Reference Fixed O&M Local Component" means the component in Rs./kWh, payable to the Company for the local fixed costs of operation and maintenance, which components shall be as set forth in Annex I.

"Reference Foreign Debt Principal" means the amount of Reference Foreign Debt Principal outstanding at the beginning of each Semiannual Period following the Commercial Operations Date during the foreign loan repayment as set out in Annex II.

"Reference Foreign Debt Interest" means the component in Rs./kWh, payable to the Company for the foreign loan interest charges for foreign debt servicing which components shall be as set forth in Annex I and Annex II.

"Reference Foreign Debt Service Component" means the component comprised of foreign loan repayment and interest charges thereof in Rs./kWh (whether or not such aforesaid components actually compensate the Company for the cost of providing energy), payable to the Company for foreign debt servicing as set forth in Annex I and Annex II.

"Reference Insurance Component or RIC" means the component, in Rs./kWh, payable to the Company as set forth in Annex I.

"Reference Local Debt Service Component" means the component comprised of local loan repayment and interest charges thereof in Rs./kWh (whether or not such aforesaid components actually compensate the Company for the cost of providing energy), payable to the Company for local debt servicing as set forth in Annex I and Annex II.

"Reference Local Debt Principal" means the amount of Reference Local Debt Principal outstanding at the beginning of each Semiannual Period following the Commercial Operations Date during the local debt repayment as set out in Reference Tariff Table Annex I and Annex II.

"Reference Local Debt Interest" means the component comprised of local loan interest charges thereof in Rs./kWh, payable to the Company for local debt servicing as set forth in Annex I and Annex II.

"Reference Return on Equity Component" means the component, in Rs./kWh, payable to the Company for return on equity, which components shall be as set forth in Annex I.

"Reference Return on Equity During Construction Component" means the component, in Rs./kWh, payable to the Company for return on equity during construction period, which component shall be as set forth in Annex I.

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"Reference Special Return on Equity Component" means the component, in Rs./kWh, payable to the Company for the special return on equity during development period, which component shall be as set forth in Annex I.

"Reference Tariff" means the Reference Variable Energy Purchase Price and Reference Fixed Energy Purchase Price as set forth in Reference Tariff Table Annex I.

"Reference US-CPI" means the US-CPI value of 212.709 as of March 2009.

"Reference Variable Energy Purchase Price" means the Reference Water Use Charge and Reference Variable O&M Component as set out in Reference Tariff Table in Annex I.

"Reference Variable O&M Component" means the component, comprised of Variable O&M (Local) in Rs./kWh, payable to the Company for the variable costs of operation and maintenance that are attributable to the generation of Net Electrical Output (whether or not such component actually compensates the Company for such variable O&M costs for providing Net Electrical Output) which components shall be as set forth in Reference Tariff Table Annex I.

"Reference Wholesale Price Index or Reference WPI" means the wholesale price index for manufacturing in Pakistan as notified by the GOP's Federal Bureau of Statistics which is 138.81 dated March 2009.

"Return on Equity (ROE)" has the meaning ascribed in Section 5.1

"Return on Equity during Construction (ROEDC)" has the meaning ascribed in Section 5.1

"Semiannual Period" means each six (6) Month period of a Year, being 1 January through 30 June or 1 July through 31 December, as the case may be, and the period commencing on the Commercial Operations Date and ending at the beginning of any such six (6) Month period.

"Sales Tax" means sales tax levied under the Sales Tax Act 1990 of Pakistan, as may be amended or superseded from time to time.

"Special Return on Equity" has the meaning ascribed in Section 5.1

"Test Energy (PreCOD) Payment" has the meaning given to it in Section 9

"Test Energy (PostCOD) Payment" has the meaning given to it in Section 9

"US-CPI" means the United States Consumer Price Index (All Urban Consumers) issued by US Bureau of Labor Statistics from time to time (or any successor or replacement agency thereto).

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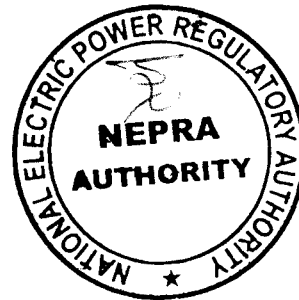
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“Wholesale Price Index (WPI)” means the wholesale price index for manufacturing as notified from time to time by the GOP’s Federal Bureau of Statistics (or any successor or replacement agency thereto).

3. Construction

3.1 This Schedule 6 (including the Annexes) shall be read in conjunction with and to be subject to Section 2.1 and Article IX of the Power Purchase Agreement. To the extent that any provision of this Schedule 6 is inconsistent with Section 2.1 or Article IX or any other Article or Section of the Power Purchase Agreement, the provisions of Section 2.1 or Article IX or the other relevant Article or Section of the Power Purchase Agreement, as the case may be, shall prevail unless otherwise specified.

3.2 References to Parts, Articles, and Sections in this Schedule 6 are to Parts, Articles, and Sections of this Schedule 6, unless indicated otherwise. References to Tables and Annexes in this Schedule 6 are to the Tables and Annexes of this Schedule 6, unless indicated otherwise. References to Articles and Sections of the Power Purchase Agreement are to Articles and Sections contained in the main text of the Power Purchase Agreement.



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## PART II: TARIFF PAYMENT

## 4. Tariff Payment

From and after the Commercial Operations Date, the Power Purchaser shall, for each Month, pay to the Company the Monthly Fixed Energy Payment, the Monthly Variable Energy Payment and the Supplementary Energy Payment that shall be calculated in accordance with Sections 5 and 6.

## 5. Monthly Fixed Energy Payment

5.1 The Power Purchaser shall pay to the Company, Monthly in arrears, the Monthly Fixed Energy Payments as set out below:

$$MFEP_M = FEPP_{REV} \times AE_M$$

Where:

$MFEP_M$  = The Monthly Fixed Energy Payment, in Rupees paid for the relevant month.  
 $FEPP_{REV}$  = Fixed Energy Purchase Price, in Rupees per KWh, as calculated below.

Where:

$FEPP_{REV}$  = Fixed O&M<sub>REV</sub> + Insurance<sub>REV</sub> + Return on Equity<sub>REV</sub> + Return on Equity During Construction<sub>REV</sub> + Special Return on Equity<sub>REV</sub> + Withholding Tax on Dividend<sub>REV</sub> + Debt Service Component<sub>REV</sub>

Where:

Fixed O & M<sub>REV</sub> = Fixed O & M<sub>FREV</sub> + Fixed O & M<sub>LREV</sub>

where:

Fixed O & M<sub>FREV</sub> = Fixed O & M<sub>FREF</sub> × FXadjust<sub>q</sub> × US-CPIadjust<sub>q</sub>

where:

Fixed O & M<sub>FREF</sub> = Reference Fixed O & M Foreign Component in Rs./kWh as per Annex I,

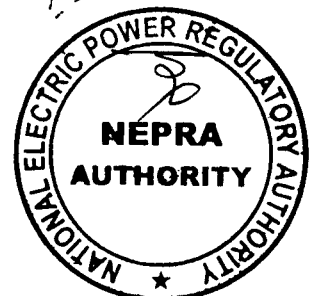
FXadjust<sub>q</sub> = the FX Adjustment Factor as calculated in accordance with Section 11.2 hereof for the Quarter; and

US-CPIadjust<sub>q</sub> = the US-CPI Adjustment Factor as calculated in accordance with Section 11.4 hereof for the Quarter.

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$$\text{Fixed O \& M}_{LREV} = \text{Fixed O \& M}_{LREF} \times \text{WPIadjust}_q$$

where:

$$\text{Fixed O \& M}_{LREF} = \text{Reference Fixed O \& M Local Component in Rs./kWh as per Annex I; and}$$

$$\text{WPIadjust}_q = \text{the applicable Inflation Adjustment Factor for WPI, as calculated in accordance with Section 11.3 for the Quarter.}$$

$$\text{Insurance}_{REV} = \text{INS}_{ADJ} \times \text{FXadjust}_q$$

where:

$$\text{INS}_{ADJ} = \text{as calculated and revised in accordance with Section 11.5.}$$

$$\text{FXadjust}_q = \text{the FX Adjustment Factor for the Quarter as set out in section 11.2}$$

$$\text{Return on Equity}_{REV} = \text{ROE Comp}_{REF} \times \text{FXadjust}_q$$

where:

$$\text{ROE Comp}_{REF} = \text{the Reference Return on Equity Component in Rs/kWh, as per Annex I;}$$

$$\text{FXadjust}_q = \text{The FX Adjustment Factor for the Quarter as set out in section 11.2}$$

$$\text{Return on Equity During Construction}_{REV} = \text{ROEDC Comp}_{REF} \times \text{FXadjust}_q$$

where:

$$\text{ROEDC Comp}_{REF} = \text{the Reference Return on Equity During Construction Component in Rs per kWh as per Annex I;}$$

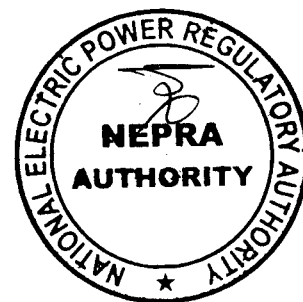
$$\text{FXadjust}_q = \text{the FX Adjustment Factor as calculated in accordance with section 11.2 hereof for the Quarter;}$$

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$$\text{Special Return on Equity}_{\text{REV}} = \text{SROEComp}_{\text{Ref}} \times \text{FXadjust}_q$$

where:

$\text{SROEComp}_{\text{Ref}}$  = The Reference Special Return on Equity Component in Rs/kW/h as per Annex I;

$\text{FXadjust}_q$  = the FX Adjustment Factor as calculated in accordance with section 11.2 hereof for the Quarter;

$\text{Withholding Tax on Dividend}_{\text{REV}}$  = It has been considered as a Pass Through Item and shall be calculated as per Section 10.3(a) of this Schedule 6

$\text{Debt Service Component}_{\text{REV}}$  =  $\text{DebtServiceComp}(F)_{\text{REV}} + \text{DebtServiceComp}(L)_{\text{REV}}$

where:

$\text{Debt Service Comp}(F)_{\text{REV}}$  =  $\text{ForPrin}_{\text{REV}} + \text{ForInt}_{\text{REV}}$

where:

$\text{ForPrin}_{\text{REV}}$  =  $\text{ForPrin}_{\text{Ref}} \times \text{FXadjust}_q$

where:

$\text{ForPrin}_{\text{Ref}}$  = the Reference Foreign Debt Principal for the Semiannual Period as set out in Annex I and II;

$\text{FXadjust}_q$  = the FX Adjustment Factor as calculated in accordance with section 11.2 hereof for the Semiannual Period;

$\text{ForInt}_{\text{REV}}$  =  $\text{ForInt}_{\text{Ref}} \times \text{FXadjust}_q \times \text{FLIAF}_q$

where:

$\text{ForInt}_{\text{Ref}}$  = the Reference Foreign Debt Interest for the relevant Semiannual Period as set out in Annex I and II; and

$\text{FXadjust}_q$  = the FX Adjustment Factor for the Semiannual Period; and

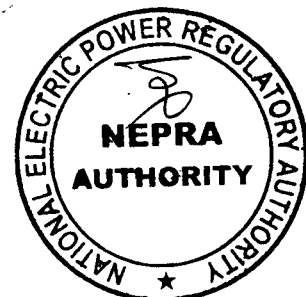
$\text{FLIAF}_q$  = the Foreign Loan Interest Adjustment Factor as

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calculated in accordance with section 11.6 hereof applicable for the Semiannual Period;

$$\text{Debt Service Comp(L)}_{\text{REV}} = \text{LocPrin}_{\text{REV}} + \text{LocInt}_{\text{REV}}$$

where:

$\text{LocPrin}_{\text{REV}}$  = the Reference Local Debt Principal of the relevant Semiannual Period as set out Annex I and II.

$$\text{LocInt}_{\text{REV}} = \text{LocInt}_{\text{Ref}} \times \text{LLIAF}_q$$

$\text{LocInt}_{\text{Ref}}$  = the Reference Local Debt Interest in Rs./kWh for the relevant Semiannual Period as set out in Annex I and II; and

$\text{LLIAF}_q$  = the Local Loan Interest Adjustment Factor applicable for the Semiannual Period as per Section 11.7.

$\text{AE}_M$  = Average Energy for the relevant Month as per Schedule 11 of the Power Purchase Agreement

5.2 The Fixed Energy Purchase Price shall be revised with the approval of NEPRA in accordance with its tariff approval and this Schedule 6 at the Commercial Operations Date and notified by the GOP in the official gazette.

#### 6. Monthly Variable Energy Payment

6.1 The Power Purchaser shall pay to the Company, Monthly in arrears; Monthly Variable Energy Payments as set out below:

$$\text{MVEP}_M = \text{VEPP}_{\text{REV}} \times \text{ADE}_M$$

where:

$\text{MVEP}_M$  = Monthly Variable Energy Payment paid in Rupees for the relevant Month

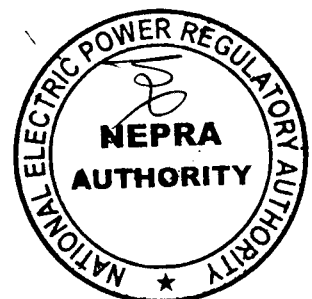
$\text{ADE}_M$  = Aggregate Despatched Energy for the relevant Month or part thereof as defined in the Power Purchase Agreement

$\text{VEPP}_{\text{REV}}$  =  $\text{WUC}_{\text{REV}} + \text{Variable O\&M}_{\text{REV}}$

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where:

$$WUC_{REV} = WUC_{REF} \times WPI_{adjust,q}$$

where:

$WUC_{REF}$  = Reference Water Use Charge in Rs./kWh as set out in Annex I

$WPI_{adjust,q}$  = the applicable Inflation Adjustment Factor for WPI, as set out in Section 11.3 for the Quarter;

Variable O &  $M_{REV}$  = Variable O &  $M_{REF} \times WPI_{adjust,q}$

where:

Variable O &  $M_{REF}$  = Reference Variable O & M Component in Rs./kWh as set out in Annex I

$WPI_{adjust,q}$  = the applicable Inflation Adjustment Factor for WPI, as set out in Section 11.3 for the Quarter;

- 6.2 In case the Aggregate Despatched Energy for the relevant Agreement Year is greater than annual Average Energy then the Power Purchaser shall pay to the Company the Supplementary Energy Payment (as set out below) on an annual basis in addition to the Monthly Fixed Energy Payment and Monthly Variable Energy Payment as set out above:

$$SEP_Y = (ADE_Y - AE_Y) \times STC_{REV}$$

Where:

$SEP_Y$  = Supplementary Energy Payment paid in Rupees for the relevant Agreement Year;

$ADE_Y$  = Aggregate Despatched Energy for the relevant Agreement Year or part thereof as defined in the Power Purchase Agreement;

$AE_Y$  = Average Energy for the Agreement Year (i.e. 470 GWh) as per Schedule 11 of the Power Purchase Agreement;

$STC_{REV}$  =  $MFEP_{REV} \times 10\%$

Where:

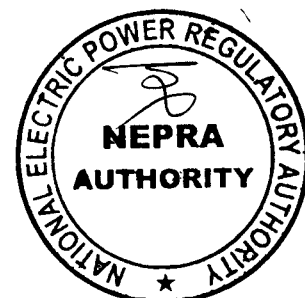
$MFEP_{REV}$  = The Fixed Energy Purchase Price (as defined in Section 5.1 above)

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applicable in the relevant months in which the Aggregate Despatched Energy exceeded the Average Energy.

7. Liquidated Damages (LDs)

7.1 Delay in Commissioning

In the event, the Complex is not Commissioned on or before the Required Commercial Operations Date, then the Company shall pay to the Power Purchaser, Monthly in arrears, as liquidated damages as calculated hereunder for delays in the occurrence of Commercial Operations Date at the rate of US\$ 2.00 per kW of the Estimated Demonstrated Complex Energy divided by 24 per month prorated daily until the Commercial Operations Date:

$$LD_M = \frac{\text{US\$2.00} \times \text{Estimated Demonstrated Complex Energy}}{24 \times \text{Number of days in relevant Month}} \times \text{No. of Days delayed in the Month}$$

$LD_M$  = Liquidated damages due to delay in Commissioning in any month.

7.2 Unexcused Outages

- (a) Scheduled Outages: The Company shall pay to the Power Purchaser as liquidated damages for each kWh of Excess Outage Energy relating to Scheduled Outages in an amount equal to 110% of the prevailing indexed Fixed Energy Purchase Price per kWh for the relevant Agreement Year; provided, however, that the Company shall not be liable to pay liquidated damages as aforesaid if the unexcused outages occur as a result of non-availability of water pursuant to Section 6.12 of the Power Purchase Agreement.

$$LD_{UOS} = EOE_{SO} \times 110\% \times FEPP_{REV}$$

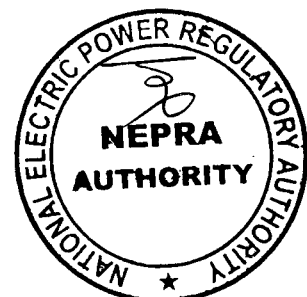
Where:

$LD_{UOS}$  = Liquidated damages for unexcused outages relating to excess Scheduled Outages

$$EOE_{SO} = \frac{\{(AOH_{SO} - AO_{SO}) \times EDCE \times PF\}}{24}$$

Where:

$EOE_{SO}$  = Excess Outage Energy relating to excess Scheduled Outages  
 $AOH_{SO}$  = Actual Scheduled Outages Hours for the relevant Agreement Year  
 $AO_{SO}$  = Allowed Scheduled Outages hours for the relevant Agreement



EDCE = Year as provided in Schedule 11  
 = Estimated Demonstrated Complex Energy  
 $PF_t = ADE + (EDCE \times \text{Number of Days in a Year})$

Where:

$PF_t$  = Actual Plant Factor for the relevant Agreement Year as per above formula  
 ADE = Aggregate Despatched Energy in kWh for the relevant Agreement Year  
 EDCE = Estimated Demonstrated Complex Energy

$FEPP_{REV}$  = Fixed Energy Purchase Price as ascribed in Section 5.1

(b) Forced and Partial Forced Outages: (i) Case 1 – Cumulative actual Forced and Partial Forced Outages exceeds allowance for Forced and Partial Forced Outages plus 200 hours:

The Company shall pay to the Power Purchaser as liquidated damages for each kWh of Excess Outage Energy for Forced and Partial Forced Outages in an amount equal to the Fixed Energy Purchase Price per kWh for the relevant Agreement Year; provided, however, that the Company shall not be liable to pay liquidated damages as aforesaid if the unexcused outages occur as a result of non-availability of water pursuant to Section 6.12 of the Power Purchase Agreement. The Power Purchaser shall be entitled to raise an invoice for liquidated damages on a Monthly basis from and after the Month in which the "Forced and Partial Forced Outage allowance" is exceeded as per the formula below:

$LD_{UOF} = EOE_{FO} \times FEPP_{REV}$

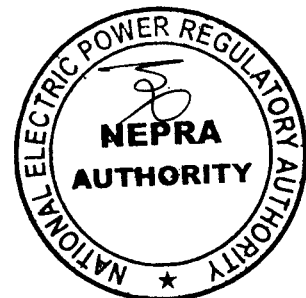
Where:

$LD_{UOF}$  = Liquidated damages for unexcused outages relating to Forced and Partial Forced Outages

$EOE_{FO} = \frac{\{(AOH_{FO} - AO_{FO}) \times EDCE \times PF_t\}}{24}$

Where:

$EOE_{FO}$  = Excess Outage Energy relating to Forced and Partial Forced Outages  
 $AOH_{FO}$  = Cumulative actual Forced and Partial Forced Outages hours that have occurred until the last Day of the relevant Month during the relevant Agreement Year  
 $AO_{FO}$  = (i) Allowed Forced and Partial Forced Outage hours for the relevant Agreement Year as provided in Schedule 11 for the first Month that the allowance is exceeded and thereafter (ii) for each Month actual cumulative Forced and Partial Forced Outages occurred until the last Day of the immediately preceding Month during the relevant Agreement Year



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EDCE = Estimated Demonstrated Complex Energy  
 PF<sub>t</sub> = 63.87%

- (c) (ii) Case 2 – Cumulative actual Forced and Partial Forced Outages does not exceed allowance for Forced and Partial Forced Outages plus 200 hours: The Company shall pay to the Power Purchaser as liquidated damages for each kWh of Excess Outage Energy for Forced and Partial Forced Outages in an amount equal to the 110% of the Fixed Energy Purchase Price per kWh for the relevant Agreement Year; provided, however, that the Company shall not be liable to pay liquidated damages as aforesaid if the unexcused outages occur as a result of non-availability of water pursuant to Section 6.12 of the Power Purchase Agreement. The Power Purchaser shall be entitled to raise an invoice for liquidated damages on yearly basis from and after the Agreement Year in which the "Forced and Partial Forced Outage allowance" is exceeded as per formula below:

$$LD_{UOF} = EOE_{FO} \times 110\% \times FEPP_{REV}$$

Where:

$LD_{UOF}$  = Liquidated damages for unexcused outages relating to Forced and Partial Forced Outages.

$$EOE_{FO} = \frac{\{(AOH - AO_{FO}) \times EDCE \times PF_t\}}{24}$$

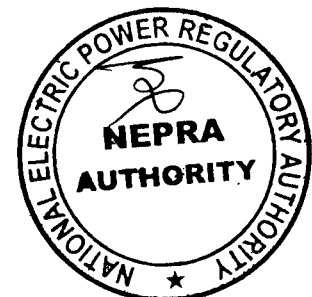
Where:

$EOE_{FO}$  = Excess Outage Energy relating to Forced and Partial Forced Outages  
 $AOH_{FO}$  = Actual Forced and Partial Forced Outages hours for the relevant Agreement Year  
 $AO_{FO}$  = Allowed Forced and Scheduled Outage hours for the relevant Agreement Year as provided in Schedule 11  
 $EDCE$  = Estimated Demonstrated Complex Energy  
 $PF_t$  =  $ADCE + (EDCE \times \text{Number of Days in a Year})$

Where:

$PF_t$  = Actual Plant Factor for the relevant Agreement Year  
 $ADCE$  = Aggregate Despatched Complex Energy in kWh for the relevant Agreement Year  
 $EDCE$  = Estimated Demonstrated Complex Energy

$FEPP_{REV}$  = Fixed Energy Purchase Price as ascribed in Section 5.1



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## PART III: SUPPLEMENTAL TARIFFS

8. Supplemental Tariff Payment for Pakistan Political Force Majeure Event or Change in Law
- 8.1 If, due to a Pakistan Political Force Majeure Event or a Change in Law, a Supplemental Tariff Payment is due and payable to the Company from the Power Purchaser as provided in Sections 13.6 and 13.7 of the Power Purchase Agreement, the Power Purchaser shall, following the completion of the Restoration, pay to the Company the Supplemental Tariff Payment, until the recoverable costs of a Restoration have been received in full by the Company from the Power Purchaser subject to NEPRA approval and notification of GOP. The Supplemental Tariff Payment (which shall be structured to allow the Company to recover the reasonable and necessary costs of a Restoration net of insurance proceeds, if any, over the remainder of the Term, as provided in this Section 8 shall be calculated in accordance with Section 8.2. Each Pakistan Political Force Majeure Event or Change in Law, that may be unrelated to each other, may lead to a separate Supplemental Tariff Payment.
- 8.2 The Supplemental Tariff Payment for a Month shall be equal to the aggregate sum of the Supplemental Tariff Payment for the Month (or part Month). The Supplemental Tariff Payment for the Month shall be calculated as follows:

$$STP_M = RRR_{fixed} \times AE_M$$

where:

$STP_M$  = the Supplemental Tariff Payment for a Restoration, in Rupees, paid for the relevant Month;

$RRR_{fixed}$  =  $R_t / \{AE_M \times PIT_t\}$   
where:

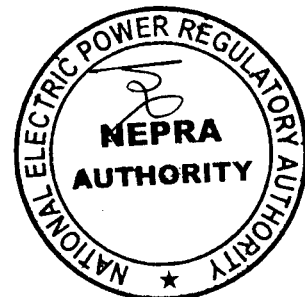
$RRR_{fixed}$  = the Restoration recovery rate, in Rs./kWh, which rate shall be calculated one time following the agreement by the Parties on the Restoration costs or as per the resolution of a dispute over such costs pursuant to Section 5.5(b) of the GOP Implementation Agreement and shall remain fixed thereafter

$R_t$  = the total cost of the Restoration in Rs. in accordance with Section 5.5(a) of the GOP Implementation Agreement;

$PIT_t$  = the total number of Agreement Years (or part thereof) remaining in the Term from time  $t$ ; and

$T$  = following the Day the Parties agree on Restoration costs to be recovered by the Company or the resolution of a dispute over such costs pursuant to Section 5.5(b) of the GOP Implementation Agreement, the date that the Complex returns to operation or if the Complex did not cease operation, the date on which the Restoration is completed.

$AE_M$  = Average Energy for the relevant Month as per Schedule 11 of the Power



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- 8.3 The Company shall be entitled to receive in accordance with Section 13.6 and 13.7 of the Power Purchase Agreement a return of LIBOR plus six and one-half percent (6.5%) per annum on the scheduled unpaid portion of the total cost of a Restoration through the period of cost recovery. The applicable LIBOR shall be the rate prevailing on the date that the Complex returns to operation or if the Complex did not cease operation, the date on which the Restoration is completed. Any delay in Supplemental Payment Invoice will attract interest at Delayed Payment Rate until paid.
- 8.4 At any time after the first (1<sup>st</sup>) Business Day of each Month, the Company may submit an invoice to the Power Purchaser stated in Rupees for the Supplemental Tariff Payment, inclusive of return thereon for the previous Month, together with supporting information as may reasonably be necessary to substantiate the amounts claimed in the invoice.
- 8.5 The Power Purchaser may seek to verify the calculation of a Supplemental Tariff Payment for a Restoration inclusive of return thereon and may require the Company to provide to it copies of its calculations, with reasonable supporting information, which the Company shall provide within thirty (30) Days of such request. Within one (1) year following the commencement of such payments, the Power Purchaser shall have the right to engage, at its own cost, an independent auditor to audit and examine the costs claimed by the Company, and the Company shall make all of its relevant books and records available to the Power Purchaser and its auditors in connection with such audit or examination, provided however, if such restoration cost is submitted to and approved by Power Purchaser no such audit shall be conducted.

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## PART IV: ADDITIONAL PAYMENTS

- 9 Payments for Net Electrical Output during Testing.
- 9.1 For the Net Electrical Output delivered prior to Commercial Operations Date the Power Purchaser shall pay to the Company a Test Energy (PreCOD) Payment that shall be calculated in accordance with this Section 9. Following Commercial Operations Date, the Power Purchaser shall pay to the Company a Test Energy (PostCOD) Payment that shall be calculated in accordance with this Section 9.
- 9.2 A Test Energy Payment shall be calculated Monthly in arrears pursuant to Section 9.1 and 2.1(b) of the Power Purchase Agreement. After Commercial Operations Date, Test Energy Payment shall be calculated for each test of Demonstrated Complex Energy or other retest carried out pursuant to Section 10.5 of the Power Purchase Agreement following the completion of such test pursuant to Section 10.5 of the Power Purchase Agreement.
- 9.3 The Monthly Test Energy (PreCOD) Payment shall be equal to the aggregate sum of the Net Electrical Output delivered during each such Month multiplied by the Variable Energy Purchase price applicable to each kWh in such Month. The Test Energy (PreCOD) Payment earned for each Month shall be calculated as follows:

$$\text{Test Energy (PreCOD) Payment}_M = \text{VEPP}_{\text{REV}} \times \text{NEO}$$

where:

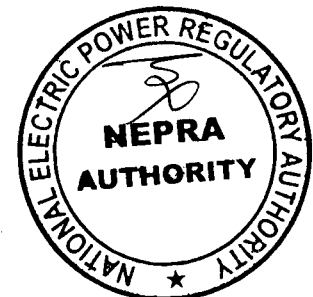
Test Energy (PreCOD) Payment <sub>m</sub>	=	The Test Energy (PreCOD) Payment, in Rupees, earned for the Month <i>m</i>
VEPP <sub>REV</sub>	=	Variable Energy Purchase Price
NEO	=	the Net Electrical Output of the Complex, in kWh, for the Month <i>m</i> of the Pre COD period;

- 9.4 The Test Energy (PostCOD) Payment shall be equal to the aggregate sum (for all of the period during which test for Demonstrated Complex Energy or any retest thereof was carried out pursuant to Section 10.5 of the Power Purchase Agreement after COD) of the Net Electrical Output delivered during each such Month of the test of Demonstrated Complex Energy or other retest period multiplied by the Variable Energy Purchase Price (VEPP<sub>REV</sub>) applicable to each such Month
- 9.5 The Power Purchaser shall purchase the Net Electrical Output produced from individual unit(s) upon the early completion of such unit(s) at the rate to be mutually agreed, prior to Commercial Operation Date.

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10. Pass Through Item(s)
- 10.1 Pass-Through Items shall be payable by the Power Purchaser to the Company on the basis of the actual costs reasonably incurred by the Company to satisfy the requirements of the Power Purchase Agreement or to the extent that the Company is obligated pursuant to the Laws of Pakistan to make payment for such Pass-Through Item(s).
- 10.2 The Company may present an invoice(s) to the Power Purchaser for Pass-Through Items at any time on or after the first (1<sup>st</sup>) Day of the Month following the Month in which the cost(s) was incurred by the Company.
- 10.3 The following items shall be Pass-Through Items:
- (a) Dividend withholding tax is a Pass Through item just like other taxes as indicated in the government guidelines for determination of tariff. The Power Purchaser shall make payment on account of withholding tax at the time of actual payment of dividend subject to maximum of 7.5% of 17% return on total equity (Return on Equity plus Return on Equity During Construction plus Special Return on Equity) according to the formulae given below. In case the Company does not declare a dividend in a particular year or only declares a partial dividend, then the difference in the withholding tax amount (between what is paid in that year and the total entitlement as per the net Return on Equity plus Return on Equity During ) would be carried forward and accumulated so that the Company is able to recover the same payments spread over 12 months period as a Pass Through Item from the Power Purchase in future on the basis of the total dividend payout.

Withholding tax payable=  $[(17\% \times (E_{Ref} - E_{Red})) + ROEDC \text{ Comp}_{Ref} + SROE \text{ Comp}_{Ref}] \times 7.5\%$   
 where:

$E_{Ref}$  = the Reference Equity at Commercial Operations Date; and

$E_{Red}$  = the Equity Redeemed

$ROEDC \text{ Comp}_{Ref}$  = the Reference Return on Equity During Construction.

$SROE \text{ Comp}_{Ref}$  = the Reference Special Return on Equity

Note: Withholding tax calculated as aforesaid shall be adjusted for variation in currency (US\$ to Rupee).



- (b) Payments by the Company into the Workers' Welfare Fund and the Workers' Profit Participation Fund for its employees required to be paid in relation to the Project pursuant to the Laws of Pakistan;
- (c) Sales Tax, excise duty or other duty, levy, charge, surcharge or other governmental impositions (including without limitation, export tax, octroi, rawangi mahsool, etc.) wherever and whenever payable on the generation, sale, exportation, or supply of electricity or electricity generating capacity by the Company during the Term, provided that the Company has not been previously compensated for any such item by the Power Purchaser or the GOP.
- (d) The cost of the Metering System if not procured by the Power Purchaser, as provided in Section 8.2(b) of the Power Purchase Agreement;
- (e) Any upgrade to the protective devices of the Complex required by the Power Purchaser pursuant to Section 7.5 of the Power Purchase Agreement;
- (f) The cost paid by the Company to procure and install more accurate or more reliable Water Meters requested by the Power Purchaser under Section 8.8(b) of the Power Purchase Agreement;
- (g) Subject to the provisions of the Power Purchase Agreement, Costs incurred or suffered by the Company in accordance with Section 14.4 of the Power Purchase Agreement;
- (h) Any change in Water Use Charge beyond PKR 0.15 per KWh; and
- (i) Cost incurred or suffered by the Company for any change in general assumptions as provided in Section 8 of Annex IV; provided that the Power Purchaser may require the Company to provide all reasonable supporting information and or documentation to satisfy itself with regards to the Company's claim.



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## PART V: INDEXATION AND ADJUSTMENT FACTORS

## 11. Indexation and Adjustment Factors

11.1 Indexations and adjustment factors shall be determined by NEPRA from time to time and notified in the official gazette by Government of Pakistan.

11.2 The foreign components of the Variable Energy Purchase Price and the Fixed Energy Purchase Price are each calculated using the FX Adjustment Factor calculated pursuant to this Part V. The FX Adjustment Factor according to the following formula:

$$FXadjust_q = FXRate_{q-1} / FXRate_{Ref}$$

where:

- FXadjust<sub>q</sub> = the FX Adjustment Factor applicable for the Quarter;  
 FXRate<sub>q-1</sub> = the Quarterly FX over the Quarter prior to the Quarter; and  
 FXRate<sub>Ref</sub> = the Reference Exchange Rate

11.3 The local components of the Fixed Energy Purchase Price and Variable Energy Purchase Price shall each be indexed by using the Inflation Adjustment Factor for WPI calculated according to the following formula:

$$WPIadjust_q = WPI_{q-1} / WPI_{Ref}$$

where:

- WPIadjust<sub>q</sub> = the Inflation Adjustment Factor for WPI applicable for the Quarter;  
 WPI<sub>q-1</sub> = the Quarterly WPI over the Quarter prior to the Quarter; and  
 WPI<sub>Ref</sub> = the Reference WPI.

11.4 The foreign components of the Fixed Energy Purchase Price and Variable Energy Purchase Price shall each be indexed using the Inflation Adjustment Factor for US-CPI calculated pursuant to this Part V. The Inflation Adjustment Factor for US-CPI shall be calculated according to the following formula:

$$US-CPIadjust_q = US-CPI_{q-1} / US-CPI_{Ref}$$

where:

- US-CPIadjust<sub>q</sub> = the Inflation Adjustment Factor for US-CPI applicable for the Quarter;

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US-CPI<sub>q-1</sub> = the Quarterly US-CPI over the Quarter prior to the Quarter; and  
 US-CPI<sub>Ref</sub> = the Reference US-CPI.

11.5 The Insurance Component shall be calculated in accordance with the following formula:

$$INS_{ADJ} = RIC / 1.00\% \text{ of EPC Cost} * AP$$

where:

INS<sub>ADJ</sub> = the revised Insurance Component;

RIC = the Reference Insurance Component, in Rs./kW/h;

AP = the actual premium paid by the Company;

11.6 The Reference Foreign Debt Interest shall be indexed by using the Foreign Loan Interest Adjustment Factor as at the Commercial Operation Date and every 1<sup>st</sup> January and 1<sup>st</sup> July thereafter according to the following formula:

$$FLIAF_q = \frac{LIBOR_t + 4.75\%}{LIBOR_{ref} + 4.75\%}$$

where:

FLIAF<sub>q</sub> = The Foreign Loan Interest Adjustment Factor applicable for the Semiannual Period following the relevant indexation date, "t";

LIBOR<sub>t</sub> = the LIBOR on the Day prior to the Commercial Operations Date and thereafter on the last Day of the previous Semiannual Period (30<sup>th</sup> June or 31<sup>st</sup> December, as applicable);

LIBOR<sub>ref</sub> = reference LIBOR Rate i.e. 1.85%

t = time on which such calculation was made

11.7 The Reference Local Debt Interest shall be indexed calculated by using the Local Loan Interest Adjustment Factor as at the Commercial Operations Date and every 1<sup>st</sup> January and 1<sup>st</sup> July thereafter according to the following formula:

$$LLIAF_q = \frac{KIBOR_t + 3.25\%}{KIBOR_{ref} + 3.25\%}$$

where:

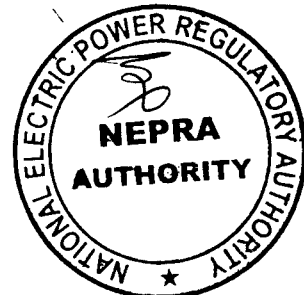
LLIAF<sub>q</sub> = the Local Loan Interest Adjustment Factor applicable for the Semiannual Period (whether such factor actually compensates the Company for local interest or not) following the relevant indexation date, "t";

KIBOR<sub>t</sub> = the KIBOR on the Day prior to the Commercial Operations Date and

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thereafter on the last Day of the previous Semiannual Period (30<sup>th</sup> June or 31<sup>st</sup> December, as applicable);

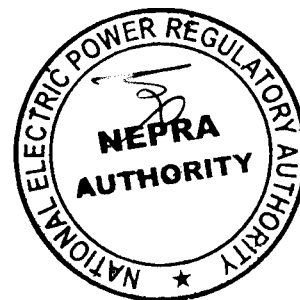
KIBOR<sub>ref</sub> = Reference KIBOR Rate i.e. 12.0%  
t = time on which such calculation was made

11.8 At the beginning of each Quarter or Semiannual Period, as the case may be, following the Financial Closing, the Company shall on the second (2<sup>nd</sup>) Business Day following the end of a Quarter or Semiannual Period, as the case may be, deliver to the Power Purchaser, the Current Indices and values. Provided that the Company shall provide Current Indices and values to the Power Purchaser along with reasonable supporting information if any, and the Company shall do so within ten (10) Business Days following the end of Quarter or Semiannual Period.

11.9 If any index used herein ceases to be available or withdrawn for any reason, the Parties shall request NEPRA to determine an alternative index. Such determination when made available, shall be binding on the Parties for the purpose of such index hereunder. Pending the determination by NEPRA, the last available value of such index shall be used for all relevant purposes hereunder. Upon the determination of such index by NEPRA, either Party(s) shall revise all payment made during the pendency of alternative index, and shall be paid without any interest to the owing Party.

11.10 One Time Adjustment

Subject to the approval of NEPRA, the relevant components of the Fixed Energy Purchase Price shall be adjusted on account of a one time adjustment as provided in Annex V.



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## ANNEX II

## Reference Debt Repayment Schedule

## REFERENCE FOREIGN LOAN REPAYMENT SCHEDULE

Amounts are in PKR (000)

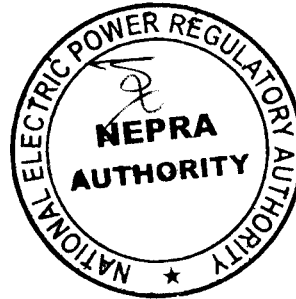
Period	Opening Balance	Interest	Repayment	Debt Service	Closing Balance	Tariff Component	
						Principal	Interest
	PKR	PKR	PKR	PKR	PKR	PKR/KWh	PKR/KWh
1	10,848,000	357,984	471,652	829,636	10,376,348		
2	10,376,348	342,419	471,652	814,072	9,904,696	2.0070	1.4902
3	9,904,696	326,855	471,652	798,507	9,433,043		
4	9,433,043	311,290	471,652	782,943	8,961,391	2.0070	1.3578
5	8,961,391	295,726	471,652	767,378	8,489,739		
6	8,489,739	280,161	471,652	751,814	8,018,087	2.0070	1.2253
7	8,018,087	264,597	471,652	736,249	7,546,435		
8	7,546,435	249,032	471,652	720,685	7,074,783	2.0070	1.0928
9	7,074,783	233,468	471,652	705,120	6,603,130		
10	6,603,130	217,903	471,652	689,555	6,131,478	2.0070	0.9604
11	6,131,478	202,339	471,652	673,991	5,659,826		
12	5,659,826	186,774	471,652	658,426	5,188,174	2.0070	0.8279
13	5,188,174	171,210	471,652	642,862	4,716,522		
14	4,716,522	155,645	471,652	627,297	4,244,870	2.0070	0.6954
15	4,244,870	140,081	471,652	611,733	3,773,217		
16	3,773,217	124,516	471,652	596,168	3,301,565	2.0070	0.5630
17	3,301,565	108,952	471,652	580,604	2,829,913		
18	2,829,913	93,387	471,652	565,039	2,358,261	2.0070	0.4305
19	2,358,261	77,823	471,652	549,475	1,886,609		
20	1,886,609	62,258	471,652	533,910	1,414,957	2.0070	0.2980
21	1,414,957	46,694	471,652	518,346	943,304		
22	943,304	31,129	471,652	502,781	471,652	2.0070	0.1656
23	471,652	15,565	471,652	487,217	(0)	1.0035	0.0331



REFERENCE LOCAL LOAN REPAYMENT SCHEDULE

Amounts are in PKR (000)

Period	Opening Balance	Markup	Repayment	Debt Service	Closing	Tariff Component	
						Principal	Markup
	PKR	PKR	PKR	PKR	PKR	PKR/KWh	PKR/KWh
1	2,042,938	155,774	113,497	269,271	1,929,441		
2	1,929,441	147,120	113,497	260,616	1,815,945	0.4830	0.6445
3	1,815,945	138,466	113,497	251,962	1,702,448		
4	1,702,448	129,812	113,497	243,308	1,588,952	0.4830	0.5708
5	1,588,952	121,158	113,497	234,654	1,475,455		
6	1,475,455	112,503	113,497	226,000	1,361,959	0.4830	0.4972
7	1,361,959	103,849	113,497	217,346	1,248,462		
8	1,248,462	95,195	113,497	208,692	1,134,965	0.4830	0.4235
9	1,134,965	86,541	113,497	200,038	1,021,469		
10	1,021,469	77,887	113,497	191,384	907,972	0.4830	0.3498
11	907,972	69,233	113,497	182,729	794,476		
12	794,476	60,579	113,497	174,075	680,979	0.4830	0.2762
13	680,979	51,925	113,497	165,421	567,483		
14	567,483	43,271	113,497	156,767	453,986	0.4830	0.2025
15	453,986	34,616	113,497	148,113	340,490		
16	340,490	25,962	113,497	139,459	226,993	0.4830	0.1289
17	226,993	17,308	113,497	130,805	113,497		
18	113,497	8,654	113,497	122,151	0	0.4830	0.0552



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ANNEX III  
Payment Schedule

Month	Amounts (PKR)					Coefficients					
	Fixed	Labour	Steel	Fuel	Cement	Total	Fixed	Labour	Steel	Fuel	Cement
	PKR	PKR	PKR	PKR	PKR	PKR	a	b	c	d	e
1	12,160,000	19,840,000	-	-	-	32,000,000	0.38	0.62	0.00	0.00	0.00
2	31,936,000	9,088,000	-	8,256,000	-	49,280,000	0.65	0.18	0.00	0.17	0.00
3	54,761,280	13,722,560	-	19,708,160	-	88,192,000	0.62	0.16	0.00	0.22	0.00
4	56,404,558	9,528,211	-	19,723,231	-	85,656,000	0.66	0.11	0.00	0.23	0.00
5	140,090,000	58,185,500	-	43,874,500	6,000,000	248,150,000	0.56	0.23	0.00	0.18	0.02
6	57,881,536	14,630,544	-	18,541,878	5,497,402	96,551,360	0.60	0.15	0.00	0.19	0.06
7	150,612,469	40,021,898	-	53,124,798	6,413,635	250,172,800	0.60	0.16	0.00	0.21	0.03
8	115,881,952	39,747,688	-	35,650,645	8,573,635	199,853,920	0.58	0.20	0.00	0.18	0.04
9	56,876,117	50,439,810	-	11,562,954	-	118,878,880	0.48	0.42	0.00	0.10	0.00
10	66,897,600	18,480,000	-	25,502,400	-	110,880,000	0.60	0.17	0.00	0.23	0.00
11	46,051,052	11,598,743	-	13,762,421	960,000	72,372,216	0.64	0.16	0.00	0.19	0.01
12	148,041,963	66,814,440	72,368,831	37,601,275	64,254,521	384,081,030	0.39	0.17	0.19	0.08	0.17
13	95,336,833	35,497,642	21,331,232	24,728,674	15,936,000	192,830,381	0.49	0.18	0.11	0.13	0.08
14	161,707,093	70,495,904	73,088,831	37,320,764	65,118,553	407,731,144	0.40	0.17	0.18	0.09	0.16
15	141,396,371	66,579,402	54,200,249	39,649,928	59,362,177	361,188,127	0.39	0.18	0.15	0.11	0.16
16	124,039,881	55,781,341	56,405,249	33,201,833	61,777,177	331,205,482	0.37	0.17	0.17	0.10	0.19
17	106,099,543	39,816,159	34,769,991	25,532,171	23,310,073	229,527,939	0.46	0.17	0.15	0.11	0.10
18	113,886,533	36,902,109	4,410,000	28,593,139	8,433,325	192,225,106	0.59	0.19	0.02	0.15	0.04
19	132,816,133	69,901,206	36,974,993	35,824,947	25,725,073	300,452,352	0.44	0.23	0.12	0.12	0.09
20	119,695,783	29,610,103	15,619,500	28,521,835	15,361,825	208,809,045	0.57	0.14	0.07	0.14	0.07
21	160,802,150	53,778,170	21,511,800	48,723,186	16,983,057	301,798,362	0.53	0.18	0.07	0.16	0.06
22	96,918,653	40,169,448	9,639,000	25,895,657	14,160,325	186,783,083	0.52	0.22	0.05	0.14	0.08
23	102,424,209	54,863,853	12,799,500	36,970,158	10,557,000	217,614,720	0.47	0.25	0.06	0.17	0.05
24	143,602,305	54,297,963	12,816,324	45,307,470	14,175,802	270,199,864	0.53	0.20	0.05	0.17	0.05
25	70,353,891	25,247,232	7,980,000	27,747,576	5,278,500	136,607,198	0.52	0.18	0.06	0.20	0.04
26	71,495,529	23,710,582	3,160,500	29,201,470	-	127,568,080	0.56	0.19	0.02	0.23	0.00
27	101,397,818	36,139,298	-	37,638,836	-	175,175,953	0.58	0.21	0.00	0.21	0.00
28	-	-	-	-	-	-	0.00	0.00	0.00	0.00	0.00
29	1,774,080	502,656	-	680,064	-	2,956,800	0.60	0.17	0.00	0.23	0.00
30	2,828,926	5,301,506	-	708,340	-	8,838,771	0.32	0.60	0.00	0.08	0.00
31	707,231	1,325,376	-	177,085	-	2,209,693	0.32	0.60	0.00	0.08	0.00
32	707,231	1,325,376	-	177,085	-	2,209,693	0.32	0.60	0.00	0.08	0.00
33	-	-	-	-	-	-	0.00	0.00	0.00	0.00	0.00
34	-	-	-	-	-	-	0.00	0.00	0.00	0.00	0.00
35	5,200,000	2,080,000	-	720,000	-	8,000,000	0.65	0.26	0.00	0.09	0.00
36	15,600,000	6,240,000	-	2,160,000	-	24,000,000	0.65	0.26	0.00	0.09	0.00
TOTAL	2,705,594,720	1,061,662,720	437,076,000	791,788,480	427,876,080	5,424,000,000	0.50	0.20	0.08	0.15	0.08



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ANNEX IV  
Key Assumptions of Reference Tariff

## 1. Project Cost

Description	US\$
Reference EPC Cost	152,800,000
Lenders Fees	4,167,019
Lenders Advisors & Agents	4,587,066
Feasibility & Technical Studies	2,738,078
Owner Engineer	2,795,491
Owners advisors	2,506,950
Owners administration/overhead	9,424,983
Land Resettlement/Acquisition	1,583,457
OBE Repair and Foot bridge	640,000
Insurance During Construction	3,707,840
O&M Mobilization	2,240,000
Customs Duties	4,000,000
Staff Colony	2,680,488
L/C Charges	1,250,000
Interest During Construction	19,727,591
<b>Total Project Cost</b>	<b>214,848,963</b>

## 2. Financing Plan

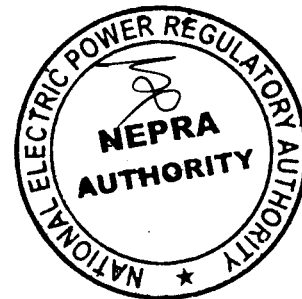
Description	US\$ million
Total Financing	214.85
Debt/Lease Financing (75%)	161.14
Equity Financing (25%)	53.71

## 3. Debt Financing Profile

Loan	US\$ million
Foreign Loan/Financing	135.60
Local Loan (equivalent PKR)	25.54
<b>Total</b>	<b>161.14</b>

## 4. Reference Debt Drawdown Schedule

Timing	%age
Advance Payment	15.0%
Ist Year	10.0%
2 <sup>nd</sup> Year	35.0%
3 <sup>rd</sup> Year	30.0%
4 <sup>th</sup> Year	10.0%



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Total	100.0%
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## 5. Reference Interest During Construction

Based on Reference Debt Drawdown Schedule, Reference Interest During Construction works out to be US\$ 19.73 million assuming the loan disbursement on monthly basis.

## 6. Reference Equity Drawdown Schedule

Timing	Amount (US\$ mln)	%age
Investment up to Construction Start	13.10	24.38%
1st Year	13.43	25.00%
2 <sup>nd</sup> Year	10.74	20.00%
3rd Year	13.43	25.00%
4th Year	3.02	5.62%
Total	53.71	100.00%

## 7. Reference Return on Equity During Construction and Reference Special Return on Equity

Based on Reference Equity Drawdown Schedule the Return on Equity During Construction works out to be US\$ 4.04 million and Special Return on Equity works out to be US\$ 3.57 million.

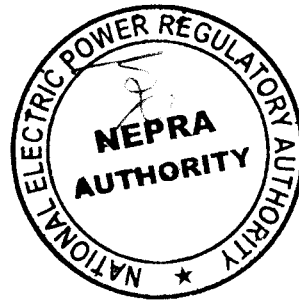
## 8. General Assumptions

- (i) No hedging cost has been assumed for exchange rate or interest rate fluctuations during construction period;
- (ii) The cost of working capital has not been claimed or included in the project cost;
- (iii) Project contingencies or debt reserve fund has not been assumed in project cost/tariff;
- (iv) No other tax (including Federal Excise Duty) has been assumed except Customs Duty of 5% at import stage. It is assumed that no part of the power plant and the associated equipment supplied under the "equipment supply contract" will be treated as locally manufactured;
- (v) No withholding tax on offshore supply of plant and equipment is assumed. Only 6% withholding tax on onshore civil construction and works assumed;
- (vi) The Company is arranging debt financing in excess of US\$ 161.2 million to cater for changes in Interest During Construction, cost of re-openers and any other change in assumptions. The exact proportion of the loans stated in the above table shall be known at Commercial Operations Date with any commensurate adjustment in tariff at that time.
- (vii) All Octroi charges payable by the Company or the Contractors before and after the Commercial Operations Date shall be payable by and shall be the sole responsibility of the Company and/or the Contractors without adjustment or modification of the Tariff.
- (viii) The Company provided that it shall remain incorporated in Pakistan, shall be exempt from the payment of income tax, corporate tax (or the withholding of such tax) in Pakistan and the AJ&K on its income from the sale of the Net Electrical Output to the Power Purchaser for the term of the Power Purchase Agreement.



- (ix) Interest/return, fees, and mark-up or any other sum (including without limitation income from compensation amounts represented by the letter "a" set forth in Schedule 2 of the GOP Implementation Agreement and Schedule 2 of the AJ&K Implementation Agreement) payable to Foreign Lenders under the Financing Documents shall be exempt from income tax (or the withholding of income tax) in Pakistan and the AJ&K (for the purposes of the Project or a Restoration of the Complex).
- (x) If the O&M Contractor is a Pakistan subsidiary of a foreign company:
  - (i) income/corporate tax will be payable by such subsidiary on the income derived by the parent company from the provision of technical services to the O&M Contractor at the rate of six (6%) of the gross revenue derived from the provision of such services; and
  - (ii) the subsidiary shall be exempt from corporate and income tax on its profits in Pakistan.

If the O&M Contractor is a Pakistan branch of a foreign company, it shall pay income tax on its profits derived from the O&M Agreement in accordance with the then-prevailing Laws of Pakistan.



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ANNEX V  
One Time Adjustments

1. One Time Adjustment in Reference EPC Cost for Civil Works cost escalation
- (a) The Reference EPC Cost shall be adjusted for any rises or falls in the cost of labour, steel, fuel, cement and by the addition or deduction of the amounts determined by the formula prescribed in this Section 1 to determine the EPC Cost on the Commercial Operations Date.
- (b) The adjustment formula for adjustment in the Reference EPC Cost for any rises or falls in the cost of labour, steel, fuel, cement and shall be applied throughout the construction period as follows:

Amounts (as reflected in "Total" column) for the relevant Month given in Annex III shall be multiplied by the following adjustment multiplier:

$$P_n = a + b \frac{L_n}{L_0} + c \frac{S_n}{S_0} + d \frac{F_n}{F_0} + e \frac{C_n}{C_0}$$

Where:

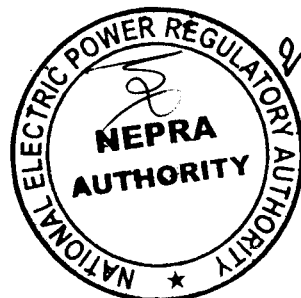
$P_n$  is the adjustment multiplier to be applied to the amounts for the relevant Month in Annex III in Rupees for work carried out in period "n", this period being the Month.

"a" is a fixed coefficient, stated in Annex III representing the non-adjustable portion of the monthly amounts.

"b", "c", "d" and "e" are coefficients representing the proportion of each cost element related to monthly amount, as stated in Annex III;

" $L_n$ ", " $S_n$ ", " $F_n$ ", " $C_n$ " are the current cost indices for labour, steel, fuel and cement respectively, for period "n", each of which is applicable for the relevant month;

" $L_0$ ", " $S_0$ ", " $F_0$ ", " $C_0$ "  $E_0$  are the base cost indices for labour, steel, fuel and cement respectively, each of which is applicable on the base date of March 2009.



(c) The sources of indices for cement, steel, labour and fuel shall be as follows:  
For cement, the cost index shall be the index number applicable to "cement" as given under Index Numbers of Wholesales Prices by Commodities - Building Materials, presently in Table 11.9, of the Monthly Bulletin of Statistics, published by the Federal Bureau of Statistics, Statistics Division, Government of Pakistan;

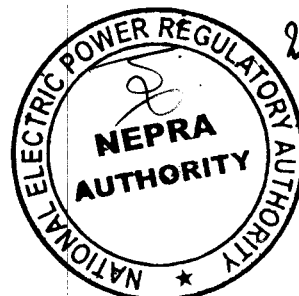
For steel, the cost index shall be the index number applicable to "iron bars & sheets" as given under Index Numbers of Wholesales Prices by Commodities-Building Materials, presently in Table 11.9, of the Monthly Bulletin of Statistics, published by the Statistics Division, Federal Bureau of Statistics, Government of Pakistan;

For fuel (diesel), the index shall be the index number applicable to "Diesel Oil" as given under Index Number of Wholesale Prices by Commodities-Fuel, Lighting and Lubricants, presently in Table 11.9, of the Monthly Bulletin of Statistics, published by the Statistics Division, Federal Bureau of Statistics, Government of Pakistan;

For local labour, the index shall be the wages applicable for the "mason (raj)" for the city of "Rawalpindi" as given under Intercity Price of Construction Input Items and Labour Wages, presently in Table 11.12, of the Monthly Bulletin of Statistics, published by the Federal Bureau of Statistics, Statistics Division, Government of Pakistan;

For foreign staff and labour, the index shall be the index number applicable to "Average Hourly Earnings of Production Workers", NAICS Code 23, Series Id: CES2000000006, given under "Employment, Hours, and Earnings from the Current Employment Statistics Survey (National), published by the U.S. Department of Labour, Bureau of Labour Statistics, Web Address: www.bls.gov

(d) The EPC Cost shall form the basis for determination of the total project cost and at such time the relevant components of Reference Tariff shall be adjusted accordingly.



- (e) The Company shall have the flexibility to finance difference between EPC Cost and Reference EPC Cost through the combination of any of the debt financing options available at that time.
- (f) The Company shall submit to the Power Purchaser the relevant documents, formulae and invoices to give effect aforesaid adjustments applicable by that time three (3) Months prior to the Required Commercial Operations Date, subject to minor adjustments to be effected at Commercial Operations Date.

2. Adjustments due to Customs Duties and Interest During Construction

Relevant components of Fixed Energy Purchase Price shall be adjusted on account of the variation between the actual amount incurred as Customs Duties and "Interest During Construction" with reference to the estimated figures of US\$ 4.0 million and US\$ 19.73 million respectively. The Company shall submit the relevant documents to Power Purchaser within seven (7) days of Commercial Operations Date for adjustment of the relevant tariff components.

3. Adjustments in Project Cost due to variation in US\$/Rupee parity

Any variation in the total project cost during construction period on account of variation in US\$/Rupee parity shall be allowed through an adjustment in total project cost to allow for the full recovery of such costs; provided that no such adjustment shall be allowed after the Required Commercial Operations Date. For the purposes of such adjustment, the Company shall provide the Power Purchaser the payment schedule along with the exchange rate prevalent on the date of particular transaction. The relevant component of the Reference Tariff set out in Annex I shall be revised on the Commercial Operations Date to incorporate the additional costs related to changes in the US\$/Rupee rate during construction period.

4. Adjustments in Project Cost due to variation in US\$/RMB parity

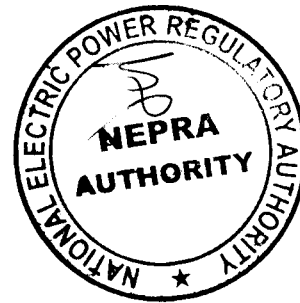
US\$ 51.81 million of the EPC Cost is in equivalent Chinese currency (RMB) using the reference US\$/RMB exchange rate of 6.844. Subject to the approval of GOP for US \$/RMB currency risk coverage, any variation in the project cost during construction period on account of variation in US\$/RMB parity shall be allowed through adjustment in project cost and relevant tariff components. For the purposes of such adjustment, the Company shall provide the Power



Purchaser the payment schedule along with the exchange rate prevalent on the date of particular transaction, provided, however, Company shall bear such currency risk for the first Year from Construction Start.

5. Adjustments due to Change in Resettlement Cost

Relevant components of the Fixed Energy Purchase Price shall be adjusted on account of actual variation in resettlement cost with reference to the estimated figure of US\$ 1.58 million.



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