National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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Registrar

No. NEPRA/R/TRF-122/UCH-II-2008/6601-6603
June 26, 2009

Subject: **Decision of the Authority regarding Motion for Leave for Review filed by Uch-II Power (Pvt.) Ltd. (UCH-II) Pursuant to Rule 16(6) of NEPRA (Tariff Standards and Procedure) Rules, 1998 (Case No. NEPRA/TRF-122/UCH-II-2008)** - Pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997)

Dear Sir,

Subsequent to the culmination of proceedings in the subject Motion for Leave for Review the decision of the Authority along with Annexes-I & II (27 pages) is being intimated to the Federal Government for the purpose of notification of the specified tariff, in the official Gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997) read with Rule 16(11) of the National Electric Power Regulatory Authority Tariff (Standards and Procedure) Rules, 1998.

3. Please be informed that the Reference Tariff earlier intimated vide para 16.2 of the Authority's determination dated April 24, 2009 communicated through letter No. NEPRA/R/TRF-122/UCH-II-2009/1744-1746 dated 24.04.2009 stands revised to the extent as detailed in para 13 of the decision of the Authority on the subject motion. The Final Order along with Annexes-I & II are required to be notified in the official Gazette. For the purpose of clarity the Final Order is reproduced and is attached herewith.

Enclosure: As above

(Arshad Mehmood)

Secretary
Cabinet Division,
Government of Pakistan
Cabinet Secretariat
Islamabad

CC:

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

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FINAL ORDER OF THE AUTHORITY
IN CASE NO. NEPRA/TRF-122/Uch-II-2008
TO BE NOTIFIED IN THE OFFICIAL GAZETTE

Pursuant to Rule 16(11) of the NEPRA Licensing (Generation) Rules, Uch-II Power (Pvt.) Limited (Uch-II) is allowed to charge, subject to adjustment of Capacity Purchase Price on account of net dependable capacity and net thermal efficiency as determined by test jointly carried out by the Central Power Purchasing Agency (CPPA) of the National Transmission and Dispatch Company (NTDC) and the Petitioner in the presence of NEPRA representative , the following is approved as specified tariff for Uch-II for delivery of electricity to the CPPA of the NTDC for procurement on behalf of Ex-WAPDA Distribution Companies:

REFERENCE SPECIFIED TARIFF

Tariff Components	Year 1 to 10	Year 11 to 14	Year 15 to 25	Indexation
Capacity Charge PKR/kW/Hour				
O&M Foreign	0.1285	0.1285	0.1285	US$ /PKR & US CPI
O&M Local	0.0621	0. 0621	0. 0621	WPI
Insurance	0.0852	0.0852	0.0852	US$ /PKR
Debt Service	1.3085	0.1191	-	LIBOR/EuriBOR/KIBOR
Return on Equity	0.4533	0.4533	0.4533	US$/PKR
ROE during Construction	0.0929	0.0929	0.0929	US$ /PKR
Total Capacity Charge	**2.1407**	**0.9411**	**0.8220**	
Energy Charge on Operation on Gas Rs./kWh				
Fuel Cost Component	3.0780	3.0780	3.0780	Fuel Price
Variable O&M - Foreign	0.1173	0.1173	0.1173	US$ /PKR & US CPI
Local	0.0221	0.0221	0.0221	WPI

Note:

i) The levelized tariff over the life of 25 years at a notional 60% plant factor and 10% discount rate has been determined as Rs. 6.1510/kWh.

ii) The applicable component wise tariff is indicated at Annex-I.

iii) Debt Servicing Schedule is attached as Annex-II.

iv) The Annex I&II are the inherent part of this Order.

v) Debt Service component will be adjusted for exchange rate variation for currencies in which the borrowing is taken permissible GOP policy.

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The following adjustments /indexations shall be applicable to reference tariff;

I. **One Time Adjustments**

I.(i) **Adjustment in EPC Cost**

The Authority has assessed EPC cost as US$ 370.253 million out of which US$ 318.753 million (Offshore-I US$ 235.938 million and Offshore-II US$ 82.815 million) is Off-shore and US$ 51.5 million is as onshore. Since the exact timing of payment to EPC contractor is not known at this point of time, therefore, an adjustment for foreign currency fluctuation for the portion paid in the relevant foreign currency will be made. In this regard, the sponsor will be required to provide all the necessary relevant details along with documentary evidence. Based upon such information the relevant currency of EPC cost components shall be established and applied to the corresponding EPC cost components. The relevant tariff components i.e. Insurance, ROE, ROEDC, Principal Repayment and Interest Charges shall be adjusted only for currency fluctuation against the reference parity values.

I.(ii) **Adjustment due to Variation in Net Capacity**

The reference tariff has been determined on the basis of minimum net capacity of 375.20 MW at delivery point, at following reference site conditions;

- Ambient temperature 27.3° C
- Relative humidity 48.5%
- Atmospheric pressure 1006 mbar

All the relevant tariff components shall be adjusted at the time of COD based upon the Initial Dependable Capacity (IDC) to be carried out for determination of contracted capacity. Adjustments shall be made according to the following formula:

$$CC_{(Adj)} = CC_{(Ref)} \times 375.20 \text{ MW} / NC_{(IDC)}$$

No Adjustment shall be made if IDC is established at less than the net capacity of 375.20 MW at reference site conditions.

Note: Above formula shall be applicable to all the individual relevant components of Capacity Charges.

Where;

$CC_{(Adj)}$ = Adjusted relevant Capacity Charge components of tariff

$CC_{(Ref)}$ = Reference relevant Capacity Charge components of tariff

$NC_{(IDC)}$ = Net Capacity at reference site conditions established at the time of

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IDC test

Note:- Reference capacity charge components of Tariff i.e. Revised O&M Foreign, Revised O&M Local, Insurance, Debt Servicing, Return on Equity and ROEDC to be adjusted as per IDC test.

I.(iii) Adjustment due to variation in Net Efficiency

The reference tariff has been determined on the basis of minimum net efficiency of 49.551%. However the fuel cost component shall not be adjusted if the net thermal efficiency is established less than efficiency of 49.551%. Based upon the heat rate test of the complex to be carried out jointly by the CPPA and the Petitioner at the time of COD, the reference fuel cost component of tariff shall be adjusted in case the net efficiency is established at higher than 49.551%. The adjustment shall be made according to the following formula;

$FC_{(Adj)}$ = Rs. 3.0780 per kWh / 6886 x $HR_{(T)}$

Where;

$FC_{(Adj)}$	=	Adjusted fuel cost component at the time of heat rate test at COD
$HR_{(T)}$	=	Net Efficiency in Btu per kWh established after Heat Rate Test at the time of COD

I.(iv) Adjustment Based on Actual Interest During Construction & Financing Fees

Debt Service, ROE and ROEDC shall be adjusted on account of actual variation in drawdown and Interest During Construction & Financing Fees with reference to the estimated figure of US$ 40.09 million and US$ 22.05 million respectively.

I. (v) Adjustment due to Custom Duties & Taxes

Debt Service, Return on Equity and ROE during construction shall be adjusted on account of actual variation in custom duties and withholding taxes with reference to the estimated figure of US$ 18.600 million.

I.(vi) Adjustment for variation in Dollar/Rupee parity

Relevant reference tariff components shall be adjusted at COD on account of variation in Dollar/Rupee parity.

II. Adjustment in Insurance as per actual

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The actual insurance cost for the minimum cover required under contractual obligations with the Power Purchaser, not exceeding 1.35% of the EPC cost, will be treated as pass-through. Insurance component of reference tariff shall be adjusted as per actual on yearly basis upon the production of authentic documentary evidence by Uch-II according to the following formula;

$$\text{Insurance}_{(Adj.)} = AIC / P_{(Ref)} * P_{(Act)} / 80.45 * ER_{(Rev)}$$

Where;

AIC	=	Adjusted Insurance Component (Rs. kW/hr) as per IDC Test
$P_{(Ref)}$	=	Reference Premium US$ 3.4801 million
$P_{(Act)}$	=	Actual Premium or 1.35% of the adjusted EPC whichever is lower
$ER_{(Rev)}$	=	The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan at Invoice date

III. Adjustment in Return on Equity (ROE)

The Petitioner also requested to allow quarterly adjustment on account of US$/PKR exchange rate based on the revised TT &OD selling rate of US dollar notified by the National Bank of Pakistan (NBP). The Petitioner request is inline with the decision of the Economic Coordination Committee (ECC) and is, therefore, being allowed subject to adjustment on account of exchange rate variation according to the following formula;

$$ROE_{(Rev)} = ROE_{(Ref)} * ER_{(Rev)} / ER_{(Ref)}$$

Where:

$ROE_{(Rev)}$	=	The revised ROE component of the Capacity Purchase Price
$ROE_{(Ref)}$	=	The reference ROE component of the Capacity Purchase Price determined at the time of COD
$ER_{(Rev)}$	=	The revised TT & OD selling rate of US$ as notified by the National Bank of Pakistan
$ER_{(Ref)}$	=	The reference exchanges rate of PKR 80.45 = 1 US$.

IV. Adjustment on Return on Equity during Construction (ROEDC)

ROEOC component of tariff will be adjusted subject to exchange rate variation according to the following formula;

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$ROEDC_{(Rev)} = ROEDC_{(Ref)} * ER_{(Rev)} / ER_{(Ref)}$

Where:

$ROEDC_{(Rev)}$	=	The revised ROEDC component of the Capacity Purchase Price
$ROEDC_{(Ref)}$	=	The reference ROEDC component of the Capacity Purchase Price determined at the time of COD
$ER_{(Rev)}$	=	The revised TT & OD selling rate of US$ as notified by the National Bank of Pakistan
$ER_{(Ref)}$	=	The reference exchanges rate of PKR 80.45 = 1 US$.

V. Adjustment of Withholding Tax

Withholding tax will be adjusted on account of exchange rate variation according to the following formula:

$WT\ (Rev) = WT_{(Ref)} * ER_{(Rev)} / 80.45$

Where;

$WT_{(Rev)}$	=	Revised Withholding tax
$WT_{(Ref)}$	=	Reference Withholding tax
$ER_{(Rev)}$	=	The revised TT&OD selling rate of US dollar as notified by the National Bank of Pakistan

VI. Pass-Through Items

No provision for income tax, workers' profit participation fund and workers' welfare fund, any other tax, excise duty or other duty, levy, charge, surcharge or other governmental impositions, payable on the generation sales, has been accounted for in the tariff. If Uch-II is obligated to pay any tax on the income purely generated from its operation i.e. Electricity Generation of power producer, the exact amount should be reimbursed by CPPA on production of original receipts. This payment may be considered as pass-through (Rs./kW/hr) payment spread over a 12 months period in addition to the capacity purchase price in the Reference Tariff. Furthermore, in such a scenario, Uch-II may also submit to the CPPA details of any tax shield savings and the CPPA will deduct the amount of these savings from its payment to Uch-II on account of taxation.

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Withholding tax on dividend is a pass-through item, which is allowed in accordance with the "Government Guidelines for determination of tariff for new IPPs". In a reference tariff table, withholding tax number is indicated as reference and CPPA (NTDC) shall make payment on account of withholding tax at the time of actual payment of dividend subject to maximum of 7.5% of 15% equity at the time of hourly payment (Rs./kW/hour) spread over a 12 months period according to the following formula:

Withholding Tax Payable = $[\{15\% * (E_{(Ref)} - E_{(Red)}\} + ROEDC_{(Ref)}] * 7.5\% * ER_{(Rev)} / 80.45$

Where:

$E_{(Ref)}$	=	Adjusted Reference Equity at COD
$E_{(Red)}$	=	Equity Redeemed
$ROEDC_{(Ref)}$	=	Reference Return on Equity During Construction
$ER_{(Rev)}$	=	The revised IT & OD selling rate of US dollar as notified by the National Bank of Pakistan

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) would be carried forward and accumulated so that the Company is able to recover the same in hourly payments spread over 12 months period as a pass through from the Power Purchaser in future on the basis of the total dividend payout.

VII. Indexations:

The following indexation shall be applicable to the reference tariff as follows;

a) Indexation applicable to O&M

The Fixed O&M local component of Capacity Charge will be adjusted on account of Inflation (WPI) and Fixed O&M foreign component on account of variation in US CPI and dollar/Rupee exchange rate. Quarterly adjustment for local inflation, foreign inflation and exchange rate variation will be made on 1st July, 1st October, 1st January and 1st April based on the latest available information with respect to WPI notified by the Federal Bureau of Statistics (FBS), US CPI issued by US Bureau of Labor Statistics and revised TT & OD selling rate of US Dollar notified by the National Bank of Pakistan. The mode of indexation will be as under:

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i) **Fixed O&M**

$F\ O\&M_{(FREV)}$ = Rs. 0.1285 / kW / Hour * US $CPI_{(REV)}$/ 212.193 * $ER_{(REV)}$ / 80.45

$F\ O\&M_{(LREV)}$ = Rs. 0.0621 / kW / Hour * $WPI_{(REV)}$ /138.38

Where:

$F\ O\&M_{(FREV)}$	=	the revised foreign Fixed O&M Foreign Component of tariff
$F\ O\&M_{(LREV)}$	=	the revised local Fixed O&M Local Component of tariff
$WPI_{(REV)}$	=	the revised Wholesale Price Index (manufactures)
$WPI_{(REF)}$	=	The reference WPI (manufactures) of 138.38 of February 2009
US $CPI_{(REV)}$	=	the revised US CPI (All Urban Consumers)
US $CPI_{(REF)}$	=	Reference US CPI of 212.193 for February 2009
$ER_{(REV)}$	=	the Revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

Note: The reference numbers indicated above shall be replaced by the revised numbers after incorporating the required adjustments at COD.

ii) **Variable O&M**

The formula for indexation of variable O&M component will be as under:

$V\ O\&M_{(FREV)}$ = Rs. 0. 1173/kWh * US $CPI_{(REV)}$/ 212.193 * $ER_{(REV)}$ / 80.45

$V\ O\&M_{(LREV)}$ = Rs. 0.0221/kWh * $WPI_{(REV)}$ /138.38

Where:

$V\ O\&M_{(FREV)}$	=	the revised foreign Variable O&M Foreign Component of tariff
$V\ O\&M_{(LREV)}$	=	the revised local variable O&M Local Component of tariff
$WPI_{(REV)}$	=	the revised Wholesale Price Index (manufactures)
$WPI_{(Ref)}$	=	Reference WPI (manufactures) of 138.38 of February 2009
US $CPI_{(REV)}$	=	the revised US CPI (All Urban Consumers)
US $CPI_{(REF)}$	=	Reference US CPI of 212.193 for February 2009

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$ER_{(REV)}$ = the Revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

Note: The reference Variable O&M indicated above shall be replaced with the revised number at COD after incorporating the required adjustment based upon the IDC Test.

iii) **Adjustment for KIBOR and LIBOR variation**

The interest part of fixed charge component will remain unchanged throughout the term except for the adjustment due to variations in interest rate as a result of variation in quarterly KIBOR and LIBOR according to the following formula;

$\Delta I(L) = P_{(LREV)} * (KIBOR_{(REV)} - 12.81\%) / 4$

$\Delta II(\text{Foreign Debt-US\$}) = P_{(FREV)} * (LIBOR_{(REV)} - 4\%) / 4$

$\Delta III(\text{Foreign Debt-Euro}) = P_{(FREV)} * (EURIBOR_{(REV)} - 4\%) / 4$

Where:

$\Delta I(\text{local debt})$ = the variation in interest charges applicable corresponding to variation in quarterly KIBOR. Δ I can be positive or negative depending upon whether $KIBOR_{(REV)}$ > or < 12.81%. The interest payment obligation will be enhanced or reduced to the extent of ΔI for each quarter under adjustment applicable on quarterly basis.

$\Delta II(\text{US\$ debt})$ = the variation in interest charges applicable corresponding to variation in quarterly LIBOR. Δ II can be positive or negative depending upon whether $LIBOR_{(REV)}$ > or < 4%. The interest payment obligation will be enhanced or reduced to the extent of ΔII for each quarter under adjustment applicable on quarterly basis.

$\Delta III(\text{Euro debt})$ = the variation in interest charges applicable corresponding to variation in quarterly EURIBOR. Δ III can be positive or negative depending upon whether $EURIBOR_{(REV)}$ > or < 4%. The interest payment obligation will be enhanced or reduced

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to the extent of ΔIII for each quarter under adjustment applicable on quarterly basis.

$P_{(REV)}$ = is the outstanding principal (as indicated in the attached debt service schedule to this order) on a quarterly basis on the relevant quarterly calculations date. Period I shall commence on the date on which the 1st installment is due after availing the grace period.

iv) Fuel Price Variation

The Variable Charge Part of the tariff relating to fuel cost shall be adjusted on account of the fuel price variations as agreed between OGDCL and the petitioner and approved by the competent Authority. In this regard, the fuel cost component of tariff shall be revised according to the following formula:

$FC_{(Rev)} = FC_{(Adj)}$ per kWh * $FP_{(Rev)} / FP_{(Ref)}$

Where:

$FC_{(Rev)}$ = The revised fuel cost component of Variable Charge on low BTU gas.

$FP_{(Rev)}$ = The new price of gas as agreed between OGDCL and the petitioner and approved by the competent Authority

$FP_{(Ref)}$ = The reference price of gas as indicated by the petitioner of US$ 5.0102 / MMBTU adjusted for HHV-LHV factor of 1.109 and exchange rate of Rs. 80.45/US$.

$FC_{(Adj)}$ = Adjusted fuel cost component subsequent to heat rate test at COD

Adjustment on account of local inflation, foreign inflation, foreign exchange variation, KIBOR, LIBOR and EURIBOR variation and fuel price variation will be approved and announced by the Authority for immediate application within seven working days after receipt of Uch-II request for adjustment in accordance with the requisite indexation mechanism stipulated herein.

For one time adjustment of relevant tariff components at COD according to the mechanism laid down in this order, Uch-II shall submit the relevant documents to NEPRA within 30 days of COD for adjustment.

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VIII. Terms and Conditions of Tariff:

i) Capacity Charge (Rs./kW/hour) applicable to dependable capacity at the delivery point.

ii) The tariff is applicable for a period of 25 years commencing from the date of the Commercial Operation.

iii) Use of Low BTU Gas is allowed as single fuel for operation of the plant.

iv) All new equipment will be installed and the plant will be of standard configuration.

v) The plant availability shall be 90%.

vi) Dispatch criterion will be based on the Energy Charge.

vii) Scheduled Outage periods per annum shall be in accordance with the 2006 standardized PPA.

viii) NTDC/CPPA will be responsible for constructing the interconnection to the grid.

ix) All invoicing and payment terms are assumed to be in accordance with the 2006 standardized PPA.

x) Tolerance in Dispatch shall be in accordance with the 2006 standardized PPA.

xi) If there is any change in any assumption that may lead to change in the tariff shall be referred to NEPRA for approval.

xii) No corporate income tax and no minimum turnover tax have been assumed.

The above tariff and terms and conditions are to be incorporated in the PPA between Uch-II and CPPA.

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Annexure - I

UCH II Power (Private) Limited

Reference Tariff Schedule Based on Gas Operation

Year	Energy Charge (PKR/kWh)				Capacity Charge (PKR/kW/Hr)									Capacity Charge at 60% PF	Tariff
	Fuel	Variable O&M Local	Variable O&M Foreign	Total	Fixed O&M-Local	Fixed O&M-Foreign	Insurance	Return on Equity	Return on Equity during Construction	Withholding Tax @7.5%	Loan Repayment	Interest Charges	Total	PKR per kWh	PKR per kWh
1	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.5748	0.7440	2.1817	3.6362	6.8536
2	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.6243	0.6944	2.1817	3.6362	6.8536
3	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.6784	0.6404	2.1817	3.6362	6.8536
4	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.7375	0.5813	2.1817	3.6362	6.8536
5	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.8021	0.5166	2.1817	3.6362	6.8536
6	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.8728	0.4459	2.1817	3.6362	6.8536
7	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.9503	0.3684	2.1817	3.6362	6.8536
8	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	1.0352	0.2836	2.1817	3.6362	6.8536
9	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	1.1282	0.1905	2.1817	3.6362	6.8536
10	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	1.2304	0.0884	2.1817	3.6362	6.8536
11	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.1009	0.0182	0.9820	1.6367	4.8541
12	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.1056	0.0135	0.9820	1.6367	4.8541
13	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.1105	0.0085	0.9820	1.6367	4.8541
14	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.1157	0.0033	0.9820	1.6367	4.8541
15	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
16	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
17	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
18	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
19	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
20	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
21	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
22	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
23	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
24	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
25	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
Levelized Tariff (1-25 Years)				**3.2174**	**0.0621**	**0.1285**	**0.0852**	**0.4533**	**0.0929**	**0.0410**	**0.5616**	**0.3471**	**1.7717**	**2.9528**	**6.1702**

Net Capacity	375.2000				
Reference Exchange Rate	PKR	80.45	/ US$	PKR	108.47 / Euro
Reference US CPI	212.193 for February 2009 as notified by the US Labour Bureau of Labor Statistics				
Reference WPI (Manufacturer)	138.38 for February 2009 as notified by the Federal Bureau of Statistics				
Efficiency	49.551%				
Levelized Tariff (at 60% plant factor) per kWh	US Cents	7.6696			

For calculating levellized tariff notional 60% load factor has been used which is an indicative number.

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UCH II Power (Private) Limited
Debt Servicing Schedule

Period	Foreign Debt-USD Commercial Facility					Foreign Debt-DFI USD					Annual Principal Repayment Rs./kW/ hr.	Annual Interest Rs./kW/ hr.	Annual Debt Servicing Rs./kW/ hr.
	Principal Million $	Repayment Million $	Mark-Up Million $	Balance Million $	Debt Service Millin $	Principal Million $	Repayment Million $	Mark-Up Million $	Balance Million $	Debt Service Millin $			
	84.90	1.29	2.02	83.61	$3.31	86.21	1.43	1.72	84.78	3.15			
	83.61	1.33	1.99	82.28	3.31	84.78	1.46	1.70	83.33	3.15			
	82.28	1.36	1.95	80.93	3.31	83.33	1.48	1.67	81.84	3.15			
	80.93	1.39	1.92	79.54	3.31	81.84	1.51	1.64	80.33	3.15			
1	**84.90**	**5.37**	**7.88**	**79.54**	**13.25**	**86.21**	**5.88**	**6.72**	**80.33**	**12.61**	**0.2754**	**0.3574**	**0.6328**
	79.54	1.42	1.89	78.11	3.31	80.33	1.54	1.61	78.78	3.15			
	78.11	1.46	1.86	76.66	3.31	78.78	1.58	1.58	77.21	3.15			
	76.66	1.49	1.82	75.17	3.31	77.21	1.61	1.54	75.60	3.15			
	75.17	1.53	1.79	73.64	3.31	75.60	1.64	1.51	73.96	3.15			
2	**79.54**	**5.90**	**7.35**	**73.64**	**13.25**	**80.33**	**6.37**	**6.24**	**73.96**	**12.61**	**0.3002**	**0.3326**	**0.6328**
	73.64	1.56	1.75	72.08	3.31	73.96	1.67	1.48	72.29	3.15			
	72.08	1.60	1.71	70.48	3.31	72.29	1.71	1.45	70.58	3.15			
	70.48	1.64	1.67	68.84	3.31	70.58	1.74	1.41	68.84	3.15			
	68.84	1.68	1.63	67.16	3.31	68.84	1.77	1.38	67.07	3.15			
3	**73.64**	**6.48**	**6.77**	**67.16**	**13.25**	**73.96**	**6.89**	**5.71**	**67.07**	**12.61**	**0.3272**	**0.3056**	**0.6328**
	67.16	1.72	1.60	65.45	3.31	67.07	1.81	1.34	65.26	3.15			
	65.45	1.76	1.55	63.69	3.31	65.26	1.85	1.31	63.41	3.15			
	63.69	1.80	1.51	61.89	3.31	63.41	1.88	1.27	61.53	3.15			
	61.89	1.84	1.47	60.05	3.31	61.53	1.92	1.23	59.61	3.15			
4	**67.16**	**7.11**	**6.13**	**60.05**	**13.25**	**67.07**	**7.46**	**5.15**	**59.61**	**12.61**	**0.3567**	**0.2760**	**0.6328**
	60.05	1.89	1.43	58.17	3.31	59.61	1.96	1.19	57.65	3.15			
	58.17	1.93	1.38	56.24	3.31	57.65	2.00	1.15	55.65	3.15			
	56.24	1.98	1.34	54.26	3.31	55.65	2.04	1.11	53.61	3.15			
	54.26	2.02	1.29	52.24	3.31	53.61	2.08	1.07	51.53	3.15			
5	**60.05**	**7.81**	**5.43**	**52.24**	**13.25**	**59.61**	**8.08**	**4.53**	**51.53**	**12.61**	**0.3889**	**0.2438**	**0.6328**
	52.24	2.07	1.24	50.17	3.31	51.53	2.12	1.03	49.41	3.15			
	50.17	2.12	1.19	48.05	3.31	49.41	2.16	0.99	47.25	3.15			
	48.05	2.17	1.14	45.88	3.31	47.25	2.21	0.94	45.04	3.15			
	45.88	2.22	1.09	43.65	3.31	45.04	2.25	0.90	42.79	3.15			
6	**52.24**	**8.58**	**4.66**	**43.65**	**13.25**	**51.53**	**8.74**	**3.86**	**42.79**	**12.61**	**0.4241**	**0.2087**	**0.6328**
	43.65	2.27	1.04	41.38	3.31	42.79	2.29	0.86	40.50	3.15			
	41.38	2.33	0.98	39.05	3.31	40.50	2.33	0.81	38.15	3.15			
	39.05	2.38	0.93	36.67	3.31	38.15	2.39	0.76	35.76	3.15			
	36.67	2.44	0.87	34.23	3.31	35.76	2.44	0.72	33.33	3.15			
7	**43.65**	**9.43**	**3.82**	**34.23**	**13.25**	**42.79**	**9.46**	**3.14**	**33.33**	**12.61**	**0.4624**	**0.1704**	**0.6328**
	34.23	2.50	0.81	31.73	3.31	33.33	2.48	0.67	30.84	3.15			
	31.73	2.56	0.75	29.17	3.31	30.84	2.53	0.62	28.31	3.15			
	29.17	2.62	0.69	26.55	3.31	28.31	2.59	0.57	25.72	3.15			
	26.55	2.68	0.63	23.87	3.31	25.72	2.64	0.51	23.09	3.15			
8	**34.23**	**10.36**	**2.89**	**23.87**	**13.25**	**33.33**	**10.24**	**2.36**	**23.09**	**12.61**	**0.5042**	**0.1286**	**0.6328**
	23.87	2.74	0.57	21.13	3.31	23.09	2.69	0.46	20.40	3.15			
	21.13	2.81	0.50	18.32	3.31	20.40	2.74	0.41	17.65	3.15			
	18.32	2.88	0.44	15.44	3.31	17.65	2.80	0.35	14.85	3.15			
	15.44	2.94	0.37	12.50	3.31	14.85	2.85	0.30	12.00	3.15			
9	**23.87**	**11.38**	**1.87**	**12.50**	**13.25**	**23.09**	**11.09**	**1.52**	**12.00**	**12.61**	**0.5498**	**0.0830**	**0.6328**
	12.50	3.01	0.30	9.48	3.31	12.00	2.91	0.24	9.09	3.15			
	9.48	3.09	0.23	6.39	3.31	9.09	2.97	0.18	6.12	3.15			
	6.39	3.16	0.15	3.23	3.31	6.12	3.03	0.12	3.09	3.15			
	3.23	3.23	0.08	(0.00)	3.31	3.09	3.09	0.06	0.00	3.15			
10	**12.50**	**12.50**	**0.75**	**(0.00)**	**13.25**	**12.00**	**12.00**	**0.61**	**0.00**	**12.61**	**0.5996**	**0.0332**	**0.6328**

UCH II Power (Private) Limited
Debt Servicing Schedule

Period	Foreign Debt-DFI Euro					Local Debt					Annual Principal Repayment Rs./kW/ hr.	Annual Interest Rs./kW/ hr.	Annual Debt Servicing Rs./kW/ hr.
	Principal Million €	Repayment Million €	Mark-Up Million €	Balance Million €	Debt Service Million €	Principal Million Rs.	Repayment Million Rs.	Mark-up Million Rs.	Balance Million Rs.	Debt Service Millia Rs.			
	92.62	1.53	1.85	91.09	3.39	1,964.73	20.91	77.66	1,943.82	98.56			
	91.09	1.56	1.82	89.52	3.39	1,943.82	21.73	76.83	1,922.08	98.56			
	89.52	1.60	1.79	87.93	3.39	1,922.08	22.59	75.97	1,899.49	98.56			
	87.93	1.63	1.76	86.30	3.39	1,899.49	23.49	75.08	1,876.00	98.56			
1	**92.62**	**6.32**	**7.22**	**86.30**	**13.54**	**1,964.73**	**88.72**	**305.53**	**1,876.00**	**394.26**	0.2356	0.3313	0.5669
	86.30	1.66	1.73	84.64	3.39	1,876.00	24.42	74.15	1,851.59	98.56			
	84.64	1.69	1.69	82.95	3.39	1,851.59	25.38	73.18	1,826.21	98.56			
	82.95	1.73	1.66	81.22	3.39	1,826.21	26.38	72.18	1,799.82	98.56			
	81.22	1.76	1.62	79.46	3.39	1,799.82	27.43	71.14	1,772.40	98.56			
2	**86.30**	**6.84**	**6.70**	**79.46**	**13.54**	**1,876.00**	**103.61**	**290.65**	**1,772.40**	**394.26**	0.2573	0.3096	0.5669
	79.46	1.80	1.59	77.66	3.39	1,772.40	28.53	70.05	1,743.89	98.56			
	77.66	1.83	1.55	75.83	3.39	1,743.89	29.64	68.93	1,714.25	98.56			
	75.83	1.87	1.52	73.96	3.39	1,714.25	30.81	67.76	1,683.44	98.56			
	73.96	1.91	1.48	72.05	3.39	1,683.44	32.03	66.54	1,651.42	98.56			
3	**79.46**	**7.40**	**6.14**	**72.05**	**13.54**	**1,772.40**	**120.98**	**273.27**	**1,651.42**	**394.26**	0.2812	0.2857	0.5669
	72.05	1.94	1.44	70.11	3.39	1,651.42	33.29	65.27	1,618.12	98.56			
	70.11	1.98	1.40	68.13	3.39	1,618.12	34.61	63.96	1,583.52	98.56			
	68.13	2.02	1.36	66.10	3.39	1,583.52	35.98	62.59	1,547.54	98.56			
	66.10	2.06	1.32	64.04	3.39	1,547.54	37.40	61.17	1,510.14	98.56			
4	**72.05**	**8.02**	**5.53**	**64.04**	**13.54**	**1,651.42**	**141.27**	**252.98**	**1,510.14**	**394.26**	0.3075	0.2594	0.5669
	64.04	2.11	1.28	61.93	3.39	1,510.14	38.88	59.69	1,471.27	98.56			
	61.93	2.15	1.24	59.79	3.39	1,471.27	40.41	58.15	1,430.85	98.56			
	59.79	2.19	1.20	57.60	3.39	1,430.85	42.01	56.55	1,388.84	98.56			
	57.60	2.23	1.15	55.36	3.39	1,388.84	43.67	54.89	1,345.17	98.56			
5	**64.04**	**8.68**	**4.87**	**55.36**	**13.54**	**1,510.14**	**164.97**	**229.29**	**1,345.17**	**394.26**	0.3365	0.2304	0.5669
	55.36	2.28	1.11	53.08	3.39	1,345.17	45.40	53.17	1,299.78	98.56			
	53.08	2.32	1.06	50.76	3.39	1,299.78	47.19	51.37	1,252.59	98.56			
	50.76	2.37	1.02	48.39	3.39	1,252.59	49.06	49.51	1,203.53	98.56			
	48.39	2.42	0.97	45.97	3.39	1,203.53	50.99	47.57	1,152.54	98.56			
6	**55.36**	**9.39**	**4.15**	**45.97**	**13.54**	**1,345.17**	**192.64**	**201.62**	**1,152.54**	**394.26**	0.3685	0.1984	0.5669
	45.97	2.47	0.92	43.50	3.39	1,152.54	53.01	45.55	1,099.53	98.56			
	43.50	2.52	0.87	40.99	3.39	1,099.53	55.11	43.46	1,044.42	98.56			
	40.99	2.57	0.82	38.42	3.39	1,044.42	57.28	41.28	987.14	98.56			
	38.42	2.62	0.77	35.81	3.39	987.14	59.53	39.02	927.59	98.56			
7	**45.97**	**10.17**	**3.38**	**35.81**	**13.54**	**1,152.54**	**224.95**	**169.31**	**927.59**	**394.26**	0.4039	0.1630	0.5669
	35.81	2.67	0.72	33.14	3.39	927.59	61.90	36.66	865.69	98.56			
	33.14	2.72	0.66	30.41	3.39	865.69	64.35	34.22	801.34	98.56			
	30.41	2.78	0.61	27.64	3.39	801.34	66.89	31.67	734.45	98.56			
	27.64	2.83	0.55	24.80	3.39	734.45	69.54	29.03	664.91	98.56			
8	**35.81**	**11.00**	**2.54**	**24.80**	**13.54**	**927.59**	**262.68**	**131.58**	**664.91**	**394.26**	0.4431	0.1239	0.5669
	24.80	2.89	0.50	21.91	3.39	664.91	71.28	26.28	592.63	98.56			
	21.91	2.95	0.44	18.97	3.39	592.63	75.14	23.42	517.49	98.56			
	18.97	3.01	0.38	15.96	3.39	517.49	78.11	20.45	439.38	98.56			
	15.96	3.07	0.32	12.89	3.39	439.38	81.20	17.37	358.18	98.56			
9	**24.80**	**11.91**	**1.63**	**12.89**	**13.54**	**664.91**	**306.73**	**87.52**	**358.18**	**394.26**	0.4864	0.0805	0.5669
	12.89	3.13	0.26	9.76	3.39	358.18	84.41	14.16	273.77	98.56			
	9.76	3.19	0.20	6.57	3.39	273.77	87.74	10.82	186.03	98.56			
	6.57	3.25	0.13	3.32	3.39	186.03	91.20	7.35	94.82	98.56			
	3.32	3.32	0.07	(0.00)	3.39	94.82	94.82	3.75	0.00	98.56			
10	**12.89**	**12.89**	**0.65**	**(0.00)**	**13.54**	**358.18**	**358.18**	**36.08**	**0.00**	**394.26**	0.5344	0.0325	0.5669

UCH II Power (Private) Limited
Debt Servicing Schedule

Period	Foreign Debt-ECA Facility USD					Annual Principal Repayment Rs./kW/ hr.	Annual Interest Rs./kW/ hr	Annual Debt Servicing Rs./kW/ hr.	Total for 5 Loan Facilites		
	Principal Million $	Repayment Million $	Mark-Up Million $	Balance Million $	Debt Service Millin $				Annual Principal Repayment Rs./kW/hr.	Annual Interest Rs./kW/hr.	Annual Debt Servicing Rs./kW/hr.
	50.00	0.64	0.58	49.36	1.22						
	49.36	0.65	0.57	48.71	1.22						
	48.71	0.66	0.56	48.05	1.22						
	48.05	0.66	0.55	47.39	1.22						
1	**50.00**	**2.61**	**2.26**	**47.39**	**4.86**	0.0638	0.0552	0.1191	0.5748	0.7440	1.3187
	47.39	0.67	0.55	46.72	1.22						
	46.72	0.68	0.54	46.04	1.22						
	46.04	0.69	0.53	45.36	1.22						
	45.36	0.69	0.53	44.66	1.22						
2	**47.39**	**2.73**	**2.13**	**44.66**	**4.86**	0.0668	0.0522	0.1191	0.6243	0.6944	1.3187
	44.66	0.70	0.51	43.96	1.22						
	43.96	0.71	0.51	43.25	1.22						
	43.25	0.72	0.50	42.53	1.22						
	42.53	0.73	0.49	41.80	1.22						
3	**44.66**	**2.86**	**2.01**	**41.80**	**4.86**	0.0700	0.0491	0.1191	0.6784	0.6404	1.3187
	41.80	0.74	0.48	41.07	1.22						
	41.07	0.74	0.47	40.32	1.22						
	40.32	0.75	0.46	39.57	1.22						
	39.57	0.76	0.46	38.81	1.22						
4	**41.80**	**2.99**	**1.87**	**38.81**	**4.86**	0.0732	0.0458	0.1191	0.7375	0.5813	1.3187
	38.81	0.77	0.45	38.04	1.22						
	38.04	0.78	0.44	37.26	1.22						
	37.26	0.79	0.43	36.48	1.22						
	36.48	0.80	0.42	35.68	1.22						
5	**38.81**	**3.13**	**1.73**	**35.68**	**4.86**	0.0767	0.0424	0.1191	0.8021	0.5166	1.3187
	35.68	0.81	0.41	34.87	1.22						
	34.87	0.81	0.40	34.06	1.22						
	34.06	0.82	0.39	33.23	1.22						
	33.23	0.83	0.38	32.40	1.22						
6	**35.68**	**3.28**	**1.59**	**32.40**	**4.86**	0.0803	0.0388	0.1191	0.8728	0.4459	1.3187
	32.40	0.84	0.37	31.56	1.22						
	31.56	0.85	0.36	30.70	1.22						
	30.70	0.86	0.35	29.84	1.22						
	29.84	0.87	0.34	28.97	1.22						
7	**32.40**	**3.43**	**1.43**	**28.97**	**4.86**	0.0840	0.0350	0.1191	0.9503	0.3684	1.3187
	28.97	0.88	0.33	28.09	1.22						
	28.09	0.89	0.32	27.19	1.22						
	27.19	0.90	0.31	26.29	1.22						
	26.29	0.91	0.30	25.38	1.22						
8	**28.97**	**3.59**	**1.27**	**25.38**	**4.86**	0.0879	0.0311	0.1191	1.0352	0.2836	1.3187
	25.38	0.92	0.29	24.45	1.22						
	24.45	0.93	0.28	23.52	1.22						
	23.52	0.95	0.27	22.57	1.22						
	22.57	0.96	0.26	21.61	1.22						
9	**25.38**	**3.76**	**1.10**	**21.61**	**4.86**	0.0921	0.0270	0.1191	1.1282	0.1905	1.3187
	21.61	0.97	0.25	20.65	1.22						
	20.65	0.98	0.24	19.67	1.22						
	19.67	0.99	0.23	18.68	1.22						
	18.68	1.00	0.21	17.68	1.22						
10	**21.61**	**3.94**	**0.93**	**17.68**	**4.86**	0.0964	0.0227	0.1191	1.2304	0.0884	1.3187
	17.68	1.01	0.20	16.67	1.22						
	16.67	1.02	0.19	15.64	1.22						
	15.64	1.04	0.18	14.60	1.22						
	14.60	1.05	0.17	13.56	1.22						
11	**17.68**	**4.12**	**0.74**	**13.56**	**4.86**	0.1009	0.0182	0.1191	0.1009	0.0182	0.1191
	13.56	1.06	0.16	12.50	1.22						
	12.50	1.07	0.14	11.42	1.22						
	11.42	1.08	0.13	10.34	1.22						
	10.34	1.10	0.12	9.24	1.22						
12	**13.56**	**4.31**	**0.55**	**9.24**	**4.86**	0.1056	0.0135	0.1191	0.1056	0.0135	0.1191
	9.24	1.11	0.11	8.13	1.22						
	8.13	1.12	0.09	7.01	1.22						
	7.01	1.14	0.08	5.88	1.22						
	5.88	1.15	0.07	4.73	1.22						
13	**9.24**	**4.52**	**0.35**	**4.73**	**4.86**	0.1105	0.0085	0.1191	0.1105	0.0085	0.1191
	4.73	1.16	0.05	3.57	1.22						
	3.57	1.17	0.04	2.39	1.22						
	2.39	1.19	0.03	1.20	1.22						
	1.20	1.20	0.01	0.00	1.22						
14	**4.73**	**4.73**	**0.14**	**0.00**	**4.86**	0.1157	0.0033	0.1191	0.1157	0.0033	0.1191

DISSENTING NOTE OF MR. SHAUKAT ALI KUNDI, MEMBER (CONSUMER AFFAIRS) IN THE MATTER OF MOTION FOR LEAVE FOR REVIEW FILED BY UCH-II POWER (PVT.) LTD. (UCH-II)
(CASE NO. NEPRA/TRF-122/UCH-II-2008)

I generally agree with the decision of the Authority on all the issues regarding review motion filed by Uch-II Power (Pvt.) Ltd., except for the increase allowed in O&M mobilization cost which at the face it, seems to be much on the higher side. In my opinion, allowing increase in the O&M mobilization cost from US$ 1 million to US$ 4 million is not reasonable on the following grounds:

i) The decision of the Authority in the original determination (April 2009) was a considered decision, based on proper analysis and reasoning and evidence submitted by the petitioner.

ii) The additional information that is relied upon for modifying earlier decision of the Authority is inadequate, fragile and not convincing.

iii) The letter from ESBI (O&M Contractor) only mentions that it has agreed to reduce the original proposed cost, based on reduced scope without referring to the scope that has been reduced. A perusal of the original cost, revised cost and second revised cost reflects that ESBI quoted cost is not firm.

iv) All the IPPs have to maintain at least the same, if not high, operating and performance level as guaranteed in the instant case.

v) Maximum of US$ 1 million as O&M mobilization cost has been allowed to Fauji Foundation Power (Dharki) Ltd. which is a green field project as opposed to the Uch-II which is an expansion of Uch-I.

In my judgment, allowing US$ 02 million as cost of O&M mobilization in the instant case, considering the size of the plant and allowance for geographical location, would be reasonable assessment of O&M mobilization cost which is about two times the amount allowed in the case of Fauji Foundation Power (Dharki) Ltd.

Shaukat Ali Kundi

(Shaukat Ali Kundi)
Member (CA) 24.06.09

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA AUTHORITY

DECISION OF THE AUTHORITY REGARDING MOTION FOR LEAVE FOR REVIEW FILED BY UCH-II POWER (PVT.) LTD. (No. NEPRA/TRF-122/Uch-II-2008)

Uch-II Power (Pvt.) Ltd. hereinafter ("the Petitioner") filed motion for leave for review on May 5, 2009 (received on May 7, 2009) with respect to determination of the Authority dated April 24, 2009 in Case No. NEPRA/TRF-122 /Uch-II-2008. The Authority admitted the motion for leave for review on May 14, 2009. The letters were sent to the stakeholders in order to invite their participation in the tariff review process. Hearing in the matter was held on May 19, 2009 which was attended by the key stakeholders. The Petitioner sought review in the following:

- Technology, Net Capacity and Heat Rate
- EPC Cost
- O&M Mobilization
- Startup and Production Cost
- Mobile Equipment
- Insurance Cost during Construction
- Land Lease and Office Rent
- Owner's Engineer
- LTSA Spares
- Non-LTSA Spares
- Project Development
- Residential Colony
- Variable O&M (Foreign) and Variable O&M (Local)
- Cost of Crane for Outages
- Cost of Working Capital
- Financing Cost
- Assumptions Requiring Clarification

1.2 The Authority considered the oral and written statements put forth by the Petitioner during hearing and thereafter. The Authority also considered the comments of the Central Power Purchasing Agency (CPPA). Having examined all the information submitted by the petitioner, comments of the CPPA, the Authority considers that in many of the above-mentioned issues the petitioner has failed to substantiate its claim with additional / new evidence and the Authority does not consider it necessary to reconsider its earlier decision. The Authority however considers that petitioner has provided some additional information and documents regarding the following issues which merit reconsideration;

- Heat Rate (Thermal Efficiency)
- EPC-Onshore

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- O&M Mobilization
- Startup & Production Cost
- Insurance Cost During Construction
- Cost of Owner's Engineer
- LTSA Spares
- Residential Colony
- Assumptions Requiring Clarification
- Cost of Debt and Financing Fees & Charges

2. Heat Rate (Thermal Efficiency)

2.1 The Petitioner submitted that the Authority did not consider its explanation of the difference between the performance guarantee heat rate and the actual heat rate achieved when entering commercial operation. According to the Petitioner the Heat Rate guaranteed by the EPC contractor, is the headline number for the new and clean plant (<200 operating hours) with the water steam cycle configured for no blow down loss during the actual test. The Petitioner stated that;

- The Heat Rate as measured is subject to degradation correction and customary corrections for ambient conditions;
- Any allowance for measurement uncertainty is capped at the allowable uncertainty and is to be substantiated by the EPC contractor through an uncertainty calculation of the measurement circuit;
- This process is well documented in international standards, including ISO and ASME PTC;
- The measurement uncertainty is only applied when assessing shortfall of performance or heat rate due to degradation of the plant between first fire and achieving COD and the inherent losses due to blow down of the water steam cycle and cooling tower,

2.2 The Petitioner further stated that the actual achieved heat rate at COD when operating commercially will be somewhat higher than the headline performance guarantee heat rate. Throughout the life of the project, the plant will be degraded further, under the mechanisms of the PPA, degradation allowance will be made at the beginning of each year. According to the Petitioner the allowance covers the degradation of the previous year only, exposing the project to losses throughout the year. The Petitioner therefore disagreed that the plant optimization ensures the guaranteed heat rate and annual degradation allowance will be sufficient to cater for the fuel recovery cost. In support of its stance the Petitioner explained that the testing procedure used for the guarantee EPC testing is based on complete cycle isolation including zero blow down which is impossible during normal operation. Therefore, considering the plant loss factor during commercial operation, degradation during the first

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year (typically 2% at the end of the first year) and taking into account the measuring tolerances/uncertainties, the Petitioner had proposed thermal efficiency of 48.91% or net heat rate 7360.71 kJ/kWh. In the Petitioner's opinion, the provision of adjustment in case plant heat rate is lower than 7163 kJ/kWh was redundant. The Petitioner, in view of the foregoing, requested to determine the thermal efficiency / heat rate of 48.91% / 7360.71 kJ/kWh for calculating fuel cost element along with degradation allowance at each anniversary of COD.

2.3 Having considered the Petitioner's argument the Authority sought detailed technical input from the Power Purchaser to determine the base Thermal Efficiency and net Heat Rate for the first year of operation and the degradation allowance for subsequent years. The Petitioner subsequently informed that as per the Authority's direction, meeting was held between the Petitioner and WPPO on May 26, 2009 and both parties discussed the impact of following technical parameters for necessary adjustments for determination of a realistic base heat rate for the first year.

- Recoverable and Non Recoverable Degradation
- Gas Turbine Air Inlet Filter Degradation
- HRSG Blow Down
- Grid Frequency
- Mean Site Ambient Air Temperature
- Miscellaneous Adjustments, i.e. Steam throttle valve, Low BTU gas CV variation etc.
- Allowance for Measurement Uncertainty

2.4 According to the Petitioner, he submitted relevant technical details and analysis to the Power Purchaser, which established the Thermal Efficiency and net plant Heat Rate for the first year of operations at 48.10% and 7485kJ/kWh respectively. The Petitioner stated that it was also agreed with the Power Purchaser that the degradation allowance must also be applied at each anniversary of COD in line with the PPA provisions. In this regard, the Heat Rate correction curves will be forwarded to the Power Purchaser as soon as practically available from the EPC contractor. The correction factors derived from the correction curves will become part of the PPA.

2.5 The CPPA in its communication to the Authority vide No.GMWPPO/CE-II/The Petitioner/7002 dated June 3, 2009 has worked out the degradation factor for recoverable and non-recoverable efficiency for the first year as 0.4271% as against the Petitioner's adjustment factor of 3.22% on the basis of GE degradation curves. According the CPPA the main reason for this is that the Petitioner applied the adjustment factor on Heat rate of Combined Cycle rather that applying this adjustment on Gas Turbine. The CPPA understands that Air Inlet Filter Degradation affects the performance of Gas Turbines and the degradation on this account is covered under recoverable and non-recoverable degradation curve. The CPPA

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further stated that the assessment of loss due to Blow Down for HRSG HPP&LP done by the Petitioner was accepted because it did not have any method to measure exact loss on this account at this stage. It could however be confirmed at COD stage.

2.6 The CPPA did not agree to the Petitioner's claim for 0.2% degradation for Grid Frequency variation because it is not in line with the GE document (GE Power System GER-36205) according to which GE heavy Gas Turbines are designed to operate over a frequency range of 49.5 to 50.5 Hz at 100% active power output without any change. The CPPA stated that as per the terms of PPA signed with other IPPs the required operation of Complex is in the band of ±3% frequency.

2.7 CPPA on the issue of adjustment on account of variation in ambient temperature stated that the Section 9.1 (b)(v) of the PPA takes care of the effect of temperature impact. In terms of aforementioned section of the PPA, the complex can deliver the excess capacity and net electrical output by 1.5% to 100% dispatch and the petitioner is entitled to claim capacity payment for the same.

2.8 On the issue of adjustment factor of 0.2% claimed due to variation in Calorific Value and ST Throttle, the CPPA is of the view that the loss to some extent can be avoided / cured with be overcome through the state of the art burner management system. The CPPA in this regard has proposed to accept 0.1% degradation. The CPPA has requested NEPRA to take care of the uncertainty factor i.e. allowance for management in uncertainty at the time of COD while determining the commercial heat rate. The CPPA also referred to the technical bulletin GE Power System (GER-3571H) wherein the uprate operations for improvement in heat rate up to - 3.3% is indicated while the company has only referred to the factors for degradation in heat rate.

2.9 The Authority having considered all the information put-forth by the petitioner and the analysis of CPPA is convinced that the efficiency of 49.551% as recommended by the CPPA for the first year after COD is more realistic and is accepted.

3 EPC Contract – Onshore

3.1 The petitioner stated that the Authority has fixed On-shore component of the EPC contract in Pak rupees and has used 1.3483 as US$ to Euro parity against the assumed US$ to Euro parity of 1.25 in the tariff petition. The petitioner further stated that its On-shore component in EPC contract is fixed in US$ for an amount of US$ 51.5 million. The petitioner requested that since its On-shore EPC contract is in US$ therefore should be allowed as such subject to adjustment for Pak Rupees to US$ exchange rate fluctuation at the time of COD.

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3.2 Having considered the Petitioner's request the Authority has decided to accept the petitioner's request and modify its earlier decision accordingly.

4 O&M Mobilization

4.1 The Petitioner contended that NEPRA has determined the cost of O&M Mobilization at US$1 million against a cost of US$7.707 million proposed in the revised tariff petition, which was based on the following reasons;

i) Objective of Capital & O&M Cost saving as a result of sharing of facility and manpower is not achieved;

ii) O&M Mobilization cost requested is higher as compared to the cost allowed by the Authority in other similar cases;

iii) The number of additional professionals required is very small and does not support the Petitioner's request;

iv) Most of the already trained professionals are working on Uch-I and activities like preparation of O&M manual, integrated management system are already in place.

4.2 While justifying its request the Petitioner stated that the O&M proposal clearly reflects benefits obtained by considering combined O&M operation for both Uch-I and Uch-II compared to Uch-II standalone option. The Petitioner further stated that due to synergy and benefit of sharing facility/ manpower, combined mobilization quote of US$7.707 million was used for the revised Tariff Petition as compared to ESBI's quote for standalone Uch-II of US$11.037 million. According to the Petitioner in order to ensure reliable start up/commissioning of the project, a well planned mobilization of the O&M personnel is necessary. The petitioner stated that in view of the Authority's reservation, the scope has been further reviewed with the O&M Contractor that has resulted in reduction of US$ 2.25 million. Accordingly the O&M cost of US$ 7.707 million original requested has been revised to US$ 5.457 million. The petitioner in support of its claim has provided a copy of letter from ESBI confirming the discount of US$ 2.25 million.

4.3 Having considered the Petitioner's arguments and the additional information the Authority is of the view that the Petitioner being a foreign company has to maintain high performance standards for which foreign experts would be visiting the project. Due to the location and size of the project the Petitioner would have to pay extra cost in this context. In view of aforementioned reasons the Authority considers that the cost allowed in other similar cases is relevant in the instant case. Although the Authority considers that in the instant case higher O&M Mobilization cost is justified but it also believes that there is still some room for further reduction in this cost. In the Authority's opinion US$ 4 million is a reasonable assessment on this account.

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5 Start-up and production cost

5.1 The Petitioner submitted that the Authority has determined start-up and production cost of US$ 1.964 million (800 tonnes) against the proposed amount of US$ 7.269 million (6915 tonnes) in the revised tariff petition. The petitioner submitted that the tests which are integral part of start-up, commissioning and performance be conducted and completed successfully in first attempt, otherwise, repeat test should be carried out at the risk and cost of EPC contractor. The Petitioner submitted that it strongly believes that for satisfactory commissioning and start-up tests, the EPC provided tests are essential and the PPA is not expected to cover the minute details. In order to prove the integrity of the liquid fuel circuit, the tests at 20, 50, 70 and 100% on HSD are unavoidable. The petitioner stated that the possibility of tapping of steam required for blowing out, vac-up test and gland sealing, no such arrangement currently exist between Uch-I and the Petitioner. Neither Uch-I has excess steam available nor provision / infrastructure to supply the steam to the Petitioner is existing. Any possibility to consider such arrangement will substantially increase the project cost, i.e. much higher than the cost of fuel in question. The Petitioner further stated that in view of the Authority's observations hectic negotiations were carried out with the EPC contractor to limit his HSD usage to minimum possible. Any extra cost of fuel and electric power quantities in excess of those mutually agreed will be borne by the EPC contractor. The Petitioner stated that the EPC contractor has acknowledged that the agreed maximum fuel consumption does not allow for repeat test. In view of the above explanation. The Petitioner request, that the start-up and production cost allowance, as originally estimated, be allowed, i.e. US$ 7.269 million (6915 tonnes). The petitioner further submitted that in order to protect all parties and to ensure safe and reliable plant, the verification of the actual fuel consumed at COD up to the limit of 6915 tonnes may be made.

5.2 On the basis of oral and written statements of the petitioner, the Authority has re-examined its earlier decision. Having considered all the information and evidence the Authority considers that the petitioner's request for allowing 6915 tonnes of HSD is not justifiable and cannot be accepted. The Authority however considers that the quantities of HSD and electricity capped at 3 million liters and 1.3 GWh respectively as per the paragraph of 4.7 of the EPC term-sheet is reasonable. Accordingly the Authority has decided to allow quantities of HSD and electricity as per the actual at the time of COD subject to maximum of the capped quantities of 3 million liters (2610 tonnes) and 1.3 GWh respectively. Based on the aforesaid the amount of US$ 2.789 million has been assessed.

6 Insurance Cost during Construction

6.1 The Petitioner stated that the Authority disallowed US$ 2.433 million and US$ 0.95 million on account of delays in start-up and marine delay in start-up. According to the petitioner,

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PPA Schedule 8 (Insurance – Construction Period) provides cover against loss of revenue following delay in start of commercial operations as a result or physical loss or damage to the materials, equipment, machinery and other items in transit by sea or air to the Site, to the extent covered under the Marine Cargo insurance.

6.2 The Authority having considered the petitioner's request and examination of the Schedule 8 of standard PPA has decided to reconsider its earlier decision. The Authority has accordingly decided to allow US$ 7.428 million as insurance premium during construction to be adjusted as per the actual at the time of COD based on the documentary evidence subject to maximum of 1.35% of EPC cost.

7 Cost of the Owner's Engineer

7.1 The Petitioner stated that the Authority has disallowed US$ 4 million on account of cost of the owner's engineer on the basis of cost determined for other IPPs. The Petitioner stated that it will be difficult for it to comment on the comparability of the approved cost without a detailed knowledge of the scope of work of the Owner's Engineer in other IPPs. According to the petitioner the role of the Owner's Engineer is critical in ensuring adherence to the construction schedule and the desired quality standards. The Petitioner stated that it envisaged an exhaustive scope of work for the Owner's Engineer, which will be managed by a team of international professionals, specializing in the areas of Electrical, Mechanical, Civil, Instrument and Control, Performance testing, Quality, Safety, Chemical & Environment. According to the Petitioner, the scope of the Owner's Engineer work will include: design review of the EPC contract, engineering and specifications; supervise the EPC contractor during layout and set-up of site facilities; supervise EPC contractor during civil construction work; inspection of equipment at manufacturing works; monitor delivery of plant and equipment and report on EPC contractor compliance with the overall project schedule; supervise the production of testing and operational and maintenance documents; supervise the EPC contractor during equipment erection including safety, workmanship, compliance with agreed standards and regulations; supervise the EPC contractor during plant startup and commissioning and monitor compliance with agreed procedures; administer reliability run for successful completion in accordance with agreed procedures; provide technical expertise during performance testing and monitor compliance with agreed procedures and methods; compile list of defects to be corrected by the EPC contractor prior to final acceptance, progress and expedite the EPC contractor during clearance of defects; and provide a presence on site and assist the Owner with respect to any warranty or similar issues. The Petitioner submitted that the scope of the Owner's engineer have no resemblance with cost for technical consultancy, technical advisory, O&M Engineer and independent engineer under the head of project development. The Petitioner further submitted that the technical consultancies and advisories under the Project Development budget will come to a close as of Financial Close.

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According to the Petitioner, they will furnish the actual Owner's Engineer invoices at COD. The Petitioner in support of its claim also provided the quote from Mott MacDonald.

7.2 The Authority on the basis of petitioner's argument and additional evidence provided in the shape of quote from Mott MacDonald, is convinced that the petitioner's request for reconsideration is justified. Accordingly the Authority has decided to allow maximum of US$ 5.854 million on this account subject to production of the actual invoices from the Owner's Engineer (Mot MacDonald) at the time of COD.

8 LTSA Spares

8.1 The Petitioner requested the Authority to allow US$ 4.945 million on account of initial spares as part of the project cost instead of allowing as part of variable O&M. The Petitioner while justifying its request stated that the Long Term Service Agreement (LTSA) payments include purchase of spare parts, repair and technical services and it has to pay for these spare parts upfront for the execution of first scheduled outage to be carried out at the end of first year of commercial operations. The petitioner also provided letter from the LTSA contractor (GE) in support of its claim containing list of spares and confirms that the same are not covered under the EPC warranty.

8.2 Having considered the Petitioner's argument and evidence, the Authority has decided to exclude an amount of US$ 4.6 million from the O&M and include the same as part of the project cost.

9 Residential Colony

9.1 The Petitioner submitted that the Authority disallowed US$ 6.143 million on account of residential colony. According to the Petitioner, it carried out extensive negotiations with the Contractor (Descon) with a view to minimize the scope and cost of residential colony and revised the residential colony cost as US$ 8 million. The Petitioner stated that after further discussion with the Contractor it managed to further reduce the cost to US$ 6.85 million based on the construction rate of Rs 3,500 per square ft (taking into account the location factor and associated higher transportation rates for the raw material). The petitioner submitted that considering the geographical location of the site, the cost may be allowed on the basis of on Rs. 3500/sq. ft subject to submission of final agreement with the construction contractor.

9.2 Based on the Petitioner's submission the Authority has decided to reconsider its earlier decision. The Authority has accordingly reassessed the cost of residential colony as US$ 5.08 million on the basis of construction cost of Rs. 3,500 per sq. ft for villas, mosque and mess while Rs. 3,000 per sq. ft for apartments, barracks, club house and mess. This cost also

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includes cost of 2 kM long road, foot path on sides of the road, walkways for the pedestrian, soft landscape, typical boundary wall as in Uch-I and interfacing & furnishing cost. Considering this cost as maximum ceiling shall be subject to adjustment at the time of COD substantiated by documentary evidence.

10 Financing Cost

10.1 The Petitioner stated that certain assumptions have not been clearly mentioned in the Order/Determination. The Petitioner has, therefore, requested to clearly mention the approval of the following in the Order/Determination;

a) The tariff to be adjusted at COD on the basis of actual 'Cost of Funds' to be charged by the lenders;
b) Allow hedging LIBOR/EURIBOR at fixed interest rate of 3.82% during Construction period to be adjusted on actual basis at COD;
c) The relevant component of Capacity Payment to be indexed with PKR/Euro indexation for repayment of Euro denominated loan;

10.2 In addition to above the Petition also requested:

v) To allow the Debt Service Reserve Letter of Credit cost and Lenders' Advisors fees during operational period
vi) To remove the cap of 3% on financing fee and allow for all financing costs on actual basis at COD.
vii) Allow Cost of arrangement/ commitment fees on standby debt during Pre-COD period.

10.3 During the review hearing, the Authority sought clarifications/rational/basis for the Petitioner's request with respect to cost of funds. In response, the Petitioner's Financial Advisor (Standard Chartered Bank) explained that recently executed financing documents in international markets included a market disruption clause which gives lenders a right to charge an additional liquidity premium in case their Cost of Funds exceeds LIBOR / EURIBOR. The Authority directed the SCB to substantiate its contention with evidence. The Petitioner has submitted the SCB's explanation as desired by the Authority.

10.4 The Authority agrees with the Petitioner's submissions and evidence put-forth regarding higher financial costs due to global financial scenario and the risk associated with prevailing situation. In view of the aforementioned the Authority has decided to accept the Petitioner's request at Para 9.1 (a)(b)&(c) above to be adjusted as per the actual at the time of COD as substantiated by proper documentary evidence.

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10.5 The Authority has considered the Petitioner's request regarding removal of cap on financing fee to cover the arrangement fee, commitment fee and upfront fee etc. In the Authority's opinion keeping in view of the present International Financial Market Conditions, the size of the project, the amount of borrowing and geographical location, the Petitioner's request does merit reconsideration. The Authority has accordingly decided to allow the financing fee and charges on actual basis to be approved by the Authority before the Financial Close on the basis of proper documentary evidence. For claiming the debt arrangement fee and other cost of debt, the lenders should be International Reputable Banks, Import Export Banks (e.g. Exim Bank) and multilateral financial institutions (e.g. World Bank, Asian Development Bank, International Finance Corporation).

10.6 The Authority has considered the Petitioner's request for allowing Debt Service Reserve Letter of Credit cost and Lenders' Advisors fees during operational period. The Authority has not allowed this cost to any other IPP; therefore, the Petitioner's request in this regard is not accepted.

11 Assumptions Requiring Clarification

11.1 The Petitioner submitted that there are number of assumptions that do not reflect the updated position. Some other assumptions, as mentioned in the Petitioner original Tariff Petition, need to be incorporated in the tariff determination. The Petitioner pointed out certain anomalies in the assumptions of the determined tariff which are given hereunder:-

11.2 Assumption no. 15.7

11.2.1 The petitioner requested the heat rate degradation allowance in order to recover the fuel cost at the anniversary of the COD and based on manufacturer's correction curves.

11.2.2 The Authority has considered the petitioner's request and decided to replace the assumption 15.7 with "the heat rate degradation shall be allowed based on the manufacturer's correction curve as agreed by the Power Purchaser and approved by the Authority."

11.3 Assumption no. 15.8

11.3.1 The petitioner stated that the stable generation at 40% load is not possible with Uch gas (having unique specification) because switching over from HSD to gas is done at approximately 60% loading. The petitioner requested that minimum loading of 60% may be allowed subject to GT manufacturer confirmation.

11.3.2 The Authority has considered the petitioner's request and decided to replace the assumption 15.8 with "Minimum loading of Combined Cycle operation of the Complex will be at 60% load of GT base load."

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11.4 **Assumption no. 15.11**

11.4.1 The petitioner stated that the HSD shall be used for the start-up only therefore the gas turbines start-up cannot be free of cost. The petitioner further stated that the Authority inadvertently mentioned the following maximum number of free start-ups:

- Hot Starts 52
- Warm Starts 24
- Cold Starts 5

11.4.2 The petitioner requested to refer to assumption No. 10 of the petition where it indicated free 10 hot, 10 warm and 3 cold starts.

11.4.3 The Authority considers that the issue relates to PPA and should be dealt with by the Power Purchaser on the basis of already signed PPAs for the similar technology.

12 Summary

12.1 Based on the above discussion, the financial parameters have been determined as follows:

Plant Capacity (Gross)	386.20 MW
Auxiliary	11.00 MW
Plant Capacity (Net)	375.20 MW
EPC cost –Euro portion	€ 96.223 million
- USD portion	US$ 240.517 million
	(Equivalent US$ 370.253 million)
Non-EPC cost	US$ 42.889 Million
Customs duties & taxes	US$ 18.600 Million
Financing fees and charges	US$ 22.055 Million
Interest during construction	US$ 40.091 Million
Total Project Cost	**US$ 493.888 Million**
Capital Structure	75:25
Loan	US$ 370.416 Million
Equity	US$ 123.472 Million
Reference Exchange Rates:	Rs 80.45/USD
	Rs.108.47/Euro
Reference WPI (manufactures)	138.38 February 2009
Reference US CPI (all urban):	212.193 February 2009
IRR (net of Withholding tax):	15%

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Construction Period:	30 months
HHV/LHV Adjustment Factor	1.109
Reference Thermal Efficiency (Net LHV)	49.551%
Reference Conditions:	
• Ambient temperature	27.3° C
• Relative humidity	48.5%
• Atmospheric pressure	1006 mbar

13 The Authority's earlier determination dated April 24, 2009 has been modified to the extent of the decisions made above. In light of the aforementioned decisions, the revised tariff of the Petitioner in the instant case has been set out in the following order;

FINAL ORDER

Pursuant to Rule 16(11) of the NEPRA Licensing (Generation) Rules, Uch-II Power (Pvt.) Limited (Uch-II) is allowed to charge, subject to adjustment of Capacity Purchase Price on account of net dependable capacity and net thermal efficiency as determined by test jointly carried out by the Central Power Purchasing Agency (CPPA) of the National Transmission and Dispatch Company (NTDC) and the Petitioner in the presence of NEPRA representative , the following is approved as specified tariff for Uch-II for delivery of electricity to the CPPA of the NTDC for procurement on behalf of Ex-WAPDA Distribution Companies:

REFERENCE SPECIFIED TARIFF

Tariff Components	Year 1 to 10	Year 11 to 14	Year 15 to 25	Indexation
Capacity Charge PKR/kW/Hour				
O&M Foreign	0.1285	0.1285	0.1285	US$ /PKR & US CPI
O&M Local	0.0621	0. 0621	0. 0621	WPI
Insurance	0.0852	0.0852	0.0852	US$ /PKR
Debt Service	1.3085	0.1191	-	LIBOR/EuriBOR/KIBOR
Return on Equity	0.4533	0.4533	0.4533	US$/PKR
ROE during Construction	0.0929	0.0929	0.0929	US$ /PKR
Total Capacity Charge	**2.1407**	**0.9411**	**0.8220**	

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Energy Charge on Operation on Gas Rs./kWh				
Fuel Cost Component	3.0780	3.0780	3.0780	Fuel Price
Variable O&M - Foreign	0.1173	0.1173	0.1173	US$ /PKR & US CPI
Local	0.0221	0.0221	0.0221	WPI

Note:

viii) The levelized tariff over the life of 25 years at a notional 60% plant factor and 10% discount rate has been determined as Rs. 6.1510/kWh.

ix) The applicable component wise tariff is indicated at Annex-I.

x) Debt Servicing Schedule is attached as Annex-II.

xi) The Annex I&II are the inherent part of this Order.

xii) Debt Service component will be adjusted for exchange rate variation for currencies in which the borrowing is taken permissible GOP policy.

The following adjustments /indexations shall be applicable to reference tariff;

I. <u>One Time Adjustments</u>

I.(i) <u>Adjustment in EPC Cost</u>

The Authority has assessed EPC cost as US$ 370.253 million out of which US$ 318.753 million (Offshore-I US$ 235.938 million and Offshore-II US$ 82.815 million) is Off-shore and US$ 51.5 million is as onshore. Since the exact timing of payment to EPC contractor is not known at this point of time, therefore, an adjustment for foreign currency fluctuation for the portion paid in the relevant foreign currency will be made. In this regard, the sponsor will be required to provide all the necessary relevant details along with documentary evidence. Based upon such information the relevant currency of EPC cost components shall be established and applied to the corresponding EPC cost components. The relevant tariff components i.e. Insurance, ROE, ROEDC, Principal Repayment and Interest Charges shall be adjusted only for currency fluctuation against the reference parity values.

I.(ii) <u>Adjustment due to Variation in Net Capacity</u>

The reference tariff has been determined on the basis of minimum net capacity of 375.20 MW at delivery point, at following reference site conditions;

- Ambient temperature 27.3° C
- Relative humidity 48.5%
- Atmospheric pressure 1006 mbara

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All the relevant tariff components shall be adjusted at the time of COD based upon the Initial Dependable Capacity (IDC) to be carried out for determination of contracted capacity. Adjustments shall be made according to the following formula:

$$CC_{(Adj)} = CC_{(Ref)} \times 375.20 \text{ MW} / NC_{(IDC)}$$

No Adjustment shall be made if IDC is established at less than the net capacity of 375.20 MW at reference site conditions.

Note: Above formula shall be applicable to all the individual relevant components of Capacity Charges.

Where;

$CC_{(Adj)}$	=	Adjusted relevant Capacity Charge components of tariff
$CC_{(Ref)}$	=	Reference relevant Capacity Charge components of tariff
$NC_{(IDC)}$	=	Net Capacity at reference site conditions established at the time of IDC test

Note:- Reference capacity charge components of Tariff i.e. Revised O&M Foreign, Revised O&M Local, Insurance, Debt Servicing, Return on Equity and ROEDC to be adjusted as per IDC test.

I.(iii) Adjustment due to variation in Net Efficiency

The reference tariff has been determined on the basis of minimum net efficiency of 49.551%. However the fuel cost component shall not be adjusted if the net thermal efficiency is established less than efficiency of 49.551%. Based upon the heat rate test of the complex to be carried out jointly by the CPPA and the Petitioner at the time of COD, the reference fuel cost component of tariff shall be adjusted in case the net efficiency is established at higher than 49.551%. The adjustment shall be made according to the following formula;

$$FC_{(Adj)} = \text{Rs. } 3.0780 \text{ per kWh} / 6886 \times HR_{(T)}$$

Where;

$FC_{(Adj)}$	=	Adjusted fuel cost component at the time of heat rate test at COD
$HR_{(T)}$	=	Net Efficiency in Btu per kWh established after Heat Rate Test at the time of COD

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I.(iv) **Adjustment Based on Actual Interest During Construction & Financing Fees**

Debt Service, ROE and ROEDC shall be adjusted on account of actual variation in drawdown and Interest During Construction & Financing Fees with reference to the estimated figure of US$ 40.09 million and US$ 22.05 million respectively. Adjustment on account of financing fees is restricted to the extent of 4% of total financing except ECA premium.

I. (v) **Adjustment due to Custom Duties & Taxes**

Debt Service, Return on Equity and ROE during construction shall be adjusted on account of actual variation in custom duties and withholding taxes with reference to the estimated figure of US$ 18.600 million.

I.(vi) **Adjustment for variation in Dollar/Rupee parity**

Relevant reference tariff components shall be adjusted at COD on account of variation in Dollar/Rupee parity.

II. **Adjustment in Insurance as per actual**

The actual insurance cost for the minimum cover required under contractual obligations with the Power Purchaser, not exceeding 1.35% of the EPC cost, will be treated as pass-through. Insurance component of reference tariff shall be adjusted as per actual on yearly basis upon the production of authentic documentary evidence by Uch-II according to the following formula;

$$\text{Insurance}_{(Adj.)} = AIC / P_{(Ref)} * P_{(Act)} / 80.45 * ER_{(Rev)}$$

Where;

AIC	=	Adjusted Insurance Component (Rs. kW/hr) as per IDC Test
$P_{(Ref)}$	=	Reference Premium US$ 3.4801 million
$P_{(Act)}$	=	Actual Premium or 1.35% of the adjusted EPC whichever is lower
$ER_{(Rev)}$	=	The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan at Invoice date

III. **Adjustment in Return on Equity (ROE)**

The Petitioner also requested to allow quarterly adjustment on account of US$/PKR exchange rate based on the revised TT &OD selling rate of US dollar notified by the National Bank of Pakistan (NBP). The Petitioner request is inline with the decision of the Economic

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Coordination Committee (ECC) and is, therefore, being allowed subject to adjustment on account of exchange rate variation according to the following formula;

$ROE_{(Rev)} = ROE_{(Ref)} * ER_{(Rev)}/ ER_{(Ref)}$

Where:

$ROE_{(Rev)}$	=	The revised ROE component of the Capacity Purchase Price
$ROE_{(Ref)}$	=	The reference ROE component of the Capacity Purchase Price determined at the time of COD
$ER_{(Rev)}$	=	The revised TT & OD selling rate of US$ as notified by the National Bank of Pakistan
$ER_{(Ref)}$	=	The reference exchanges rate of PKR 80.45 = 1 US$.

IV. Adjustment on Return on Equity during Construction (ROEDC)

ROEOC component of tariff will be adjusted subject to exchange rate variation according to the following formula;

$ROEDC_{(Rev)} = ROEDC_{(Ref)} * ER_{(Rev)}/ ER_{(Ref)}$

Where:

$ROEDC_{(Rev)}$	=	The revised ROEDC component of the Capacity Purchase Price
$ROEDC_{(Ref)}$	=	The reference ROEDC component of the Capacity Purchase Price determined at the time of COD
$ER_{(Rev)}$	=	The revised TT & OD selling rate of US$ as notified by the National Bank of Pakistan
$ER_{(Ref)}$	=	The reference exchanges rate of PKR 80.45 = 1 US$.

V. Adjustment of Withholding Tax

Withholding tax will be adjusted on account of exchange rate variation according to the following formula:

$WT\ (Rev) = WT_{(Ref)} * ER_{(Rev)}/80.45$

Where;

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$WT_{(Rev)}$	=	Revised Withholding tax
$WT_{(Ref)}$	=	Reference Withholding tax
$ER_{(Rev)}$	=	The revised TT&OD selling rate of US dollar as notified by the National Bank of Pakistan

VI. Pass-Through Items

No provision for income tax, workers' profit participation fund and workers' welfare fund, any other tax, excise duty or other duty, levy, charge, surcharge or other governmental impositions, payable on the generation sales, has been accounted for in the tariff. If Uch-II is obligated to pay any tax on the income purely generated from its operation i.e. Electricity Generation of power producer, the exact amount should be reimbursed by CPPA on production of original receipts. This payment may be considered as pass-through (Rs./kW/hr) payment spread over a 12 months period in addition to the capacity purchase price in the Reference Tariff. Furthermore, in such a scenario, Uch-II may also submit to the CPPA details of any tax shield savings and the CPPA will deduct the amount of these savings from its payment to Uch-II on account of taxation.

Withholding tax on dividend is a pass-through item, which is allowed in accordance with the "Government Guidelines for determination of tariff for new IPPs". In a reference tariff table, withholding tax number is indicated as reference and CPPA (NTDC) shall make payment on account of withholding tax at the time of actual payment of dividend subject to maximum of 7.5% of 15% equity at the time of hourly payment (Rs./kW/hour) spread over a 12 months period according to the following formula:

Withholding Tax Payable = $[\{15\% * (E_{(Ref)} - E_{(Red)}\} + ROEDC_{(Ref)}] * 7.5\% * ER_{(Rev)} / 80.45$

Where:

$E_{(Ref)}$	=	Adjusted Reference Equity at COD
$E_{(Red)}$	=	Equity Redeemed
$ROEDC_{(Ref)}$	=	Reference Return on Equity During Construction
$ER_{(Rev)}$	=	The revised IT & OD selling rate of US dollar as notified by the National Bank of Pakistan

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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) would be carried forward and accumulated so that the Company is able to recover the same in hourly payments spread over 12 months period as a pass through from the Power Purchaser in future on the basis of the total dividend payout.

VII. Indexations:

The following indexation shall be applicable to the reference tariff as follows;

a) Indexation applicable to O&M

The Fixed O&M local component of Capacity Charge will be adjusted on account of Inflation (WPI) and Fixed O&M foreign component on account of variation in US CPI and dollar/Rupee exchange rate. Quarterly adjustment for local inflation, foreign inflation and exchange rate variation will be made on 1st July, 1st October, 1st January and 1st April based on the latest available information with respect to WPI notified by the Federal Bureau of Statistics (FBS), US CPI issued by US Bureau of Labor Statistics and revised TT & OD selling rate of US Dollar notified by the National Bank of Pakistan. The mode of indexation will be as under:

i) Fixed O&M

$F\ O\&M_{(FREV)}$ = Rs. 0.1285 / kW / Hour * $US\ CPI_{(REV)}$/ 212.193 * $ER_{(REV)}$ / 80.45

$F\ O\&M_{(LREV)}$ = Rs. 0.0621 / kW / Hour * $WPI_{(REV)}$ /138.38

Where:

$F\ O\&M_{(FREV)}$	=	the revised foreign Fixed O&M Foreign Component of tariff
$F\ O\&M_{(LREV)}$	=	the revised local Fixed O&M Local Component of tariff
$WPI_{(REV)}$	=	the revised Wholesale Price Index (manufactures)
$WPI_{(REF)}$	=	The reference WPI (manufactures) of 138.38 of February 2009
$US\ CPI_{(REV)}$	=	the revised US CPI (All Urban Consumers)
$US\ CPI_{(REF)}$	=	Reference US CPI of 212.193 for February 2009
$ER_{(REV)}$	=	the Revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

Note: The reference numbers indicated above shall be replaced by the revised numbers after incorporating the required adjustments at COD.

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ii) **Variable O&M**

The formula for indexation of variable O&M component will be as under:

$V\ O\&M_{(FREV)}$ = Rs. 0. 1173/kWh * $US\ CPI_{(REV)}$/ 212.193 * $ER_{(REV)}$/ 80.45

$V\ O\&M_{(LREV)}$ = Rs. 0.0221/kWh * $WPI_{(REV)}$ /138.38

Where:

$V\ O\&M_{(FREV)}$	=	the revised foreign Variable O&M Foreign Component of tariff
$V\ O\&M_{(LREV)}$	=	the revised local variable O&M Local Component of tariff
$WPI_{(REV)}$	=	the revised Wholesale Price Index (manufactures)
$WPI_{(Ref)}$	=	Reference WPI (manufactures) of 138.38 of February 2009
$US\ CPI_{(REV)}$	=	the revised US CPI (All Urban Consumers)
$US\ CPI_{(REF)}$	=	Reference US CPI of 212.193 for February 2009
$ER_{(REV)}$	=	the Revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan

Note: The reference Variable O&M indicated above shall be replaced with the revised number at COD after incorporating the required adjustment based upon the IDC Test.

iii) **Adjustment for KIBOR and LIBOR variation**

The interest part of fixed charge component will remain unchanged throughout the term except for the adjustment due to variations in interest rate as a result of variation in quarterly KIBOR and LIBOR according to the following formula;

Δ I(L)	=	$P_{(LREV)}$ * ($KIBOR_{(REV)}$ – 12.81%) / 4
Δ II(Foreign Debt-US$)	=	$P_{(FREV)}$ * ($LIBOR_{(REV)}$ – 4%) / 4
Δ III (Foreign Debt-Euro)	=	$P_{(FREV)}$ * ($EURIBOR_{(REV)}$ - 4%) / 4

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Where:

Δ I(local debt) = the variation in interest charges applicable corresponding to variation in quarterly KIBOR. Δ I can be positive or negative depending upon whether KIBOR$_{(REV)}$ > or < 12.81%. The interest payment obligation will be enhanced or reduced to the extent of ΔI for each quarter under adjustment applicable on quarterly basis.

Δ II(US$ debt) = the variation in interest charges applicable corresponding to variation in quarterly LIBOR. Δ II can be positive or negative depending upon whether LIBOR $_{(REV)}$ > or < 4%. The interest payment obligation will be enhanced or reduced to the extent of ΔII for each quarter under adjustment applicable on quarterly basis.

Δ III(Euro debt) = the variation in interest charges applicable corresponding to variation in quarterly EURIBOR. Δ III can be positive or negative depending upon whether EURIBOR $_{(REV)}$ > or < 4%. The interest payment obligation will be enhanced or reduced to the extent of ΔIII for each quarter under adjustment applicable on quarterly basis.

$P_{(REV)}$ = is the outstanding principal (as indicated in the attached debt service schedule to this order) on a quarterly basis on the relevant quarterly calculations date. Period I shall commence on the date on which the 1st installment is due after availing the grace period.

iv) <u>Fuel Price Variation</u>

The Variable Charge Part of the tariff relating to fuel cost shall be adjusted on account of the fuel price variations as agreed between OGDCL and the petitioner and approved by the competent Authority. In this regard, the fuel cost component of tariff shall be revised according to the following formula:

$FC_{(Rev)} = FC_{(Adj)}$ per kWh * $FP_{(Rev)} / FP_{(Ref)}$

Where:

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$FC_{(Rev)}$	=	The revised fuel cost component of Variable Charge on low BTU gas.
$FP_{(Rev)}$	=	The new price of gas as agreed between OGDCL and the petitioner and approved by the competent Authority
$FP_{(Ref)}$	=	The reference price of gas as indicated by the petitioner of US$ 5.0102 / MMBTU adjusted for HHV-LHV factor of 1.109 and exchange rate of Rs. 80.45/US$.
$FC_{(Adj)}$	=	Adjusted fuel cost component subsequent to heat rate test at COD

Adjustment on account of local inflation, foreign inflation, foreign exchange variation, KIBOR, LIBOR and EURIBOR variation and fuel price variation will be approved and announced by the Authority for immediate application within seven working days after receipt of Uch-II request for adjustment in accordance with the requisite indexation mechanism stipulated herein.

For one time adjustment of relevant tariff components at COD according to the mechanism laid down in this order, Uch-II shall submit the relevant documents to NEPRA within 30 days of COD for adjustment.

VIII. Terms and Conditions of Tariff:

i) Capacity Charge (Rs./kW/hour) applicable to dependable capacity at the delivery point.

ii) The tariff is applicable for a period of 25 years commencing from the date of the Commercial Operation.

iii) Use of Low BTU Gas is allowed as single fuel for operation of the plant.

iv) All new equipment will be installed and the plant will be of standard configuration.

v) The plant availability shall be 90%.

vi) Dispatch criterion will be based on the Energy Charge.

vii) Scheduled Outage periods per annum shall be in accordance with the 2006 standardized PPA.

viii) NTDC/CPPA will be responsible for constructing the interconnection to the grid.

ix) All invoicing and payment terms are assumed to be in accordance with the 2006 standardized PPA.

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x) Tolerance in Dispatch shall be in accordance with the 2006 standardized PPA.

xi) If there is any change in any assumption that may lead to change in the tariff shall be referred to NEPRA for approval.

xii) No corporate income tax and no minimum turnover tax have been assumed.

The above tariff and terms and conditions are to be incorporated in the PPA between Uch-II and CPPA.

AUTHORITY

(Zafar Ali Khan)
Member
24/6/09

(Ghiasuddin Ahmed)
Member
24/6

* My Note of dissent is enclosed -
(Shaukat Ali Kundi)
Member

(Maqbool Ahmed Khawaja)
Member/Vice Chairman

(Khalid Saeed)
Chairman
25/6

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Annexure - I

UCH II Power (Private) Limited

Reference Tariff Schedule Based on Gas Operation

Year	Energy Charge (PKR/kWh)				Capacity Charge (PKR/kW/Hr)									Capacity Charge at 60% PF	Tariff
	Fuel	Variable O&M Local	Variable O&M Foreign	Total	Fixed O&M-Local	Fixed O&M-Foreign	Insurance	Return on Equity	Return on Equity during Construction	Withholding Tax @7.5%	Loan Repayment	Interest Charges	Total	PKR per kWh	PKR per kWh
1	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.5748	0.7440	2.1817	3.6362	6.8536
2	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.6243	0.6944	2.1817	3.6362	6.8536
3	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.6784	0.6404	2.1817	3.6362	6.8536
4	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.7375	0.5813	2.1817	3.6362	6.8536
5	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.8021	0.5166	2.1817	3.6362	6.8536
6	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.8728	0.4459	2.1817	3.6362	6.8536
7	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.9503	0.3684	2.1817	3.6362	6.8536
8	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	1.0352	0.2836	2.1817	3.6362	6.8536
9	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	1.1282	0.1905	2.1817	3.6362	6.8536
10	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	1.2304	0.0884	2.1817	3.6362	6.8536
11	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.1009	0.0182	0.9820	1.6367	4.8541
12	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.1056	0.0135	0.9820	1.6367	4.8541
13	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.1105	0.0085	0.9820	1.6367	4.8541
14	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	0.1157	0.0033	0.9820	1.6367	4.8541
15	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
16	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
17	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
18	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
19	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
20	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
21	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
22	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
23	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
24	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
25	3.0780	0.0221	0.1173	3.2174	0.0621	0.1285	0.0852	0.4533	0.0929	0.0410	-	-	0.8630	1.4383	4.6557
Levellized Tariff (1-25 Years)				**3.2174**	**0.0621**	**0.1285**	**0.0852**	**0.4533**	**0.0929**	**0.0410**	**0.5616**	**0.3471**	**1.7717**	**2.9528**	**6.1702**

Net Capacity	375.2000	
Reference Exchange Rate	PKR 80.45 / US$	PKR 108.47 / Euro
Reference US CPI	212.193 for February 2009 as notified by the US Labour Bureau of Labor Statistics	
Reference WPI (Manufacturer)	138.38 for February 2009 as notified by the Federal Bureau of Statistics	
Efficiency	49.551%	
Levelized Tariff (at 60% plant factor) per kWh	US Cents 7.6696	

For calculating levellized tariff notional 60% load factor has been used which is an indicative number.

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UCH II Power (Private) Limited
Debt Servicing Schedule

Period	Foreign Debt-USD Commercial Facility					Foreign Debt-DFI USD					Annual Principal Repayment Rs./kW/ hr.	Annual Interest Rs./kW/ hr.	Annual Debt Servicing Rs./kW/ hr.
	Principal Million $	Repayment Million $	Mark-Up Million $	Balance Million $	Debt Service Millin $	Principal Million $	Repayment Million $	Mark-Up Million $	Balance Million $	Debt Service Millin $			
	84.90	1.29	2.02	83.61	$3.31	86.21	1.43	1.72	84.78	3.15			
	83.61	1.33	1.99	82.28	3.31	84.78	1.46	1.70	83.33	3.15			
	82.28	1.36	1.95	80.93	3.31	83.33	1.48	1.67	81.84	3.15			
	80.93	1.39	1.92	79.54	3.31	81.84	1.51	1.64	80.33	3.15			
1	**84.90**	**5.37**	**7.88**	**79.54**	**13.25**	**86.21**	**5.88**	**6.72**	**80.33**	**12.61**	**0.2754**	**0.3574**	**0.6328**
	79.54	1.42	1.89	78.11	3.31	80.33	1.54	1.61	78.78	3.15			
	78.11	1.46	1.86	76.66	3.31	78.78	1.58	1.58	77.21	3.15			
	76.66	1.49	1.82	75.17	3.31	77.21	1.61	1.54	75.60	3.15			
	75.17	1.53	1.79	73.64	3.31	75.60	1.64	1.51	73.96	3.15			
2	**79.54**	**5.90**	**7.35**	**73.64**	**13.25**	**80.33**	**6.37**	**6.24**	**73.96**	**12.61**	**0.3002**	**0.3326**	**0.6328**
	73.64	1.56	1.75	72.08	3.31	73.96	1.67	1.48	72.29	3.15			
	72.08	1.60	1.71	70.48	3.31	72.29	1.71	1.45	70.58	3.15			
	70.48	1.64	1.67	68.84	3.31	70.58	1.74	1.41	68.84	3.15			
	68.84	1.68	1.63	67.16	3.31	68.84	1.77	1.38	67.07	3.15			
3	**73.64**	**6.48**	**6.77**	**67.16**	**13.25**	**73.96**	**6.89**	**5.71**	**67.07**	**12.61**	**0.3272**	**0.3056**	**0.6328**
	67.16	1.72	1.60	65.45	3.31	67.07	1.81	1.34	65.26	3.15			
	65.45	1.76	1.55	63.69	3.31	65.26	1.85	1.31	63.41	3.15			
	63.69	1.80	1.51	61.89	3.31	63.41	1.88	1.27	61.53	3.15			
	61.89	1.84	1.47	60.05	3.31	61.53	1.92	1.23	59.61	3.15			
4	**67.16**	**7.11**	**6.13**	**60.05**	**13.25**	**67.07**	**7.46**	**5.15**	**59.61**	**12.61**	**0.3567**	**0.2760**	**0.6328**
	60.05	1.89	1.43	58.17	3.31	59.61	1.96	1.19	57.65	3.15			
	58.17	1.93	1.38	56.24	3.31	57.65	2.00	1.15	55.65	3.15			
	56.24	1.98	1.34	54.26	3.31	55.65	2.04	1.11	53.61	3.15			
	54.26	2.02	1.29	52.24	3.31	53.61	2.08	1.07	51.53	3.15			
5	**60.05**	**7.81**	**5.43**	**52.24**	**13.25**	**59.61**	**8.08**	**4.53**	**51.53**	**12.61**	**0.3889**	**0.2438**	**0.6328**
	52.24	2.07	1.24	50.17	3.31	51.53	2.12	1.03	49.41	3.15			
	50.17	2.12	1.19	48.05	3.31	49.41	2.16	0.99	47.25	3.15			
	48.05	2.17	1.14	45.88	3.31	47.25	2.21	0.94	45.04	3.15			
	45.88	2.22	1.09	43.65	3.31	45.04	2.25	0.90	42.79	3.15			
6	**52.24**	**8.58**	**4.66**	**43.65**	**13.25**	**51.53**	**8.74**	**3.86**	**42.79**	**12.61**	**0.4241**	**0.2087**	**0.6328**
	43.65	2.27	1.04	41.38	3.31	42.79	2.30	0.86	40.50	3.15			
	41.38	2.33	0.98	39.05	3.31	40.50	2.34	0.81	38.15	3.15			
	39.05	2.38	0.93	36.67	3.31	38.15	2.39	0.76	35.76	3.15			
	36.67	2.44	0.87	34.23	3.31	35.76	2.44	0.72	33.33	3.15			
7	**43.65**	**9.43**	**3.82**	**34.23**	**13.25**	**42.79**	**9.46**	**3.14**	**33.33**	**12.61**	**0.4624**	**0.1704**	**0.6328**
	34.23	2.50	0.81	31.73	3.31	33.33	2.48	0.67	30.84	3.15			
	31.73	2.56	0.75	29.17	3.31	30.84	2.53	0.62	28.31	3.15			
	29.17	2.62	0.69	26.55	3.31	28.31	2.59	0.57	25.72	3.15			
	26.55	2.68	0.63	23.87	3.31	25.72	2.64	0.51	23.09	3.15			
8	**34.23**	**10.36**	**2.89**	**23.87**	**13.25**	**33.33**	**10.24**	**2.36**	**23.09**	**12.61**	**0.5042**	**0.1286**	**0.6328**
	23.87	2.74	0.57	21.13	3.31	23.09	2.69	0.46	20.40	3.15			
	21.13	2.81	0.50	18.32	3.31	20.40	2.74	0.41	17.65	3.15			
	18.32	2.88	0.44	15.44	3.31	17.65	2.80	0.35	14.85	3.15			
	15.44	2.94	0.37	12.50	3.31	14.85	2.85	0.30	12.00	3.15			
9	**23.87**	**11.38**	**1.87**	**12.50**	**13.25**	**23.09**	**11.09**	**1.52**	**12.00**	**12.61**	**0.5498**	**0.0830**	**0.6328**
	12.50	3.01	0.30	9.48	3.31	12.00	2.91	0.24	9.09	3.15			
	9.48	3.09	0.23	6.39	3.31	9.09	2.97	0.18	6.12	3.15			
	6.39	3.16	0.15	3.23	3.31	6.12	3.03	0.12	3.09	3.15			
	3.23	3.23	0.08	(0.00)	3.31	3.09	3.09	0.06	0.00	3.15			
10	**12.50**	**12.50**	**0.75**	**(0.00)**	**13.25**	**12.00**	**12.00**	**0.61**	**0.00**	**12.61**	**0.5996**	**0.0332**	**0.6328**

UCH II Power (Private) Limited
Debt Servicing Schedule

Period	Foreign Debt-DFI Euro					Local Debt					Annual Principal Repayment Rs./kW/ hr.	Annual Interest Rs./kW/ hr.	Annual Debt Servicing Rs./kW/ hr.
	Principal Million €	Repayment Million €	Mark-Up Million €	Balance Million €	Debt Service Million €	Principal Million Rs.	Repayment Million Rs.	Mark-up Million Rs.	Balance Million Rs.	Debt Service Millin Rs.			
	92.62	1.53	1.85	91.09	3.39	1,964.73	20.91	77.66	1,943.82	98.56			
	91.09	1.56	1.82	89.52	3.39	1,943.82	21.73	76.83	1,922.08	98.56			
	89.52	1.60	1.79	87.93	3.39	1,922.08	22.59	75.97	1,899.49	98.56			
	87.93	1.63	1.76	86.30	3.39	1,899.49	23.49	75.08	1,876.00	98.56			
1	**92.62**	**6.32**	**7.22**	**86.30**	**13.54**	**1,964.73**	**88.72**	**305.53**	**1,876.00**	**394.26**	**0.2356**	**0.3313**	**0.5669**
	86.30	1.66	1.73	84.64	3.39	1,876.00	24.42	74.15	1,851.59	98.56			
	84.64	1.69	1.69	82.95	3.39	1,851.59	25.38	73.18	1,826.21	98.56			
	82.95	1.73	1.66	81.22	3.39	1,826.21	26.38	72.18	1,799.82	98.56			
	81.22	1.76	1.62	79.46	3.39	1,799.82	27.43	71.14	1,772.40	98.56			
2	**86.30**	**6.84**	**6.70**	**79.46**	**13.54**	**1,876.00**	**103.61**	**290.65**	**1,772.40**	**394.26**	**0.2573**	**0.3096**	**0.5669**
	79.46	1.80	1.59	77.66	3.39	1,772.40	28.51	70.05	1,743.89	98.56			
	77.66	1.83	1.55	75.83	3.39	1,743.89	29.64	68.93	1,714.25	98.56			
	75.83	1.87	1.52	73.96	3.39	1,714.25	30.81	67.76	1,683.44	98.56			
	73.96	1.91	1.48	72.05	3.39	1,683.44	32.03	66.54	1,651.42	98.56			
3	**79.46**	**7.40**	**6.14**	**72.05**	**13.54**	**1,772.40**	**120.98**	**273.27**	**1,651.42**	**394.26**	**0.2812**	**0.2857**	**0.5669**
	72.05	1.94	1.44	70.11	3.39	1,651.42	33.29	65.27	1,618.12	98.56			
	70.11	1.98	1.40	68.13	3.39	1,618.12	34.61	63.96	1,583.52	98.56			
	68.13	2.02	1.36	66.10	3.39	1,583.52	35.98	62.59	1,547.54	98.56			
	66.10	2.06	1.32	64.04	3.39	1,547.54	37.40	61.17	1,510.14	98.56			
4	**72.05**	**8.02**	**5.53**	**64.04**	**13.54**	**1,651.42**	**141.27**	**252.98**	**1,510.14**	**394.26**	**0.3075**	**0.2594**	**0.5669**
	64.04	2.11	1.28	61.93	3.39	1,510.14	38.88	59.69	1,471.27	98.56			
	61.93	2.15	1.24	59.79	3.39	1,471.27	40.41	58.15	1,430.85	98.56			
	59.79	2.19	1.20	57.60	3.39	1,430.85	42.01	56.55	1,388.84	98.56			
	57.60	2.23	1.15	55.36	3.39	1,388.84	43.67	54.89	1,345.17	98.56			
5	**64.04**	**8.68**	**4.87**	**55.36**	**13.54**	**1,510.14**	**164.97**	**229.29**	**1,345.17**	**394.26**	**0.3365**	**0.2304**	**0.5669**
	55.36	2.28	1.11	53.08	3.39	1,345.17	45.40	53.17	1,299.78	98.56			
	53.08	2.32	1.06	50.76	3.39	1,299.78	47.19	51.37	1,252.59	98.56			
	50.76	2.37	1.02	48.39	3.39	1,252.59	49.06	49.51	1,203.53	98.56			
	48.39	2.42	0.97	45.97	3.39	1,203.53	50.99	47.57	1,152.54	98.56			
6	**55.36**	**9.39**	**4.15**	**45.97**	**13.54**	**1,345.17**	**192.64**	**201.62**	**1,152.54**	**394.26**	**0.3685**	**0.1984**	**0.5669**
	45.97	2.47	0.92	43.50	3.39	1,152.54	53.01	45.55	1,099.53	98.56			
	43.50	2.52	0.87	40.99	3.39	1,099.53	55.11	43.46	1,044.42	98.56			
	40.99	2.57	0.82	38.42	3.39	1,044.42	57.28	41.28	987.14	98.56			
	38.42	2.62	0.77	35.81	3.39	987.14	59.55	39.02	927.59	98.56			
7	**45.97**	**10.17**	**3.38**	**35.81**	**13.54**	**1,152.54**	**224.95**	**169.31**	**927.59**	**394.26**	**0.4039**	**0.1630**	**0.5669**
	35.81	2.67	0.72	33.14	3.39	927.59	61.90	36.66	865.69	98.56			
	33.14	2.72	0.66	30.41	3.39	865.69	64.35	34.22	801.34	98.56			
	30.41	2.78	0.61	27.64	3.39	801.34	66.89	31.67	734.45	98.56			
	27.64	2.83	0.55	24.80	3.39	734.45	69.54	29.03	664.91	98.56			
8	**35.81**	**11.00**	**2.54**	**24.80**	**13.54**	**927.59**	**262.68**	**131.58**	**664.91**	**394.26**	**0.4431**	**0.1239**	**0.5669**
	24.80	2.89	0.50	21.91	3.39	664.91	72.28	26.28	592.63	98.56			
	21.91	2.95	0.44	18.97	3.39	592.63	75.14	23.42	517.49	98.56			
	18.97	3.01	0.38	15.96	3.39	517.49	78.11	20.45	439.38	98.56			
	15.96	3.07	0.32	12.89	3.39	439.38	81.20	17.37	358.18	98.56			
9	**24.80**	**11.91**	**1.63**	**12.89**	**13.54**	**664.91**	**306.73**	**87.52**	**358.18**	**394.26**	**0.4864**	**0.0805**	**0.5669**
	12.89	3.13	0.26	9.76	3.39	358.18	84.41	14.16	273.77	98.56			
	9.76	3.19	0.20	6.57	3.39	273.77	87.74	10.82	186.03	98.56			
	6.57	3.25	0.13	3.32	3.39	186.03	91.21	7.35	94.82	98.56			
	3.32	3.32	0.07	(0.00)	3.39	94.82	94.82	3.75	0.00	98.56			
10	**12.89**	**12.89**	**0.65**	**(0.00)**	**13.54**	**358.18**	**358.18**	**36.08**	**0.00**	**394.26**	**0.5344**	**0.0325**	**0.5669**

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

UCH II Power (Private) Limited
Debt Servicing Schedule

Period	Foreign Debt-ECA Facility USD					Annual Principal Repayment Rs./kW/ hr.	Annual Interest Rs./kW/ hr.	Annual Debt Servicing Rs./kW/ hr.	Total for 5 Loan Facilites		
	Principal Million $	Repayment Million $	Mark-Up Million $	Balance Million $	Debt Service Millin $				Annual Principal Repayment Rs./kW/hr.	Annual Interest Rs./kW/hr.	Annual Debt Servicing Rs./kW/hr.
	50.00	0.64	0.58	49.36	1.22						
	49.36	0.65	0.57	48.71	1.22						
	48.71	0.66	0.56	48.05	1.22						
	48.05	0.66	0.55	47.39	1.22						
1	**50.00**	**2.61**	**2.26**	**47.39**	**4.86**	**0.0638**	**0.0552**	**0.1191**	**0.5748**	**0.7440**	**1.3187**
	47.39	0.67	0.55	46.72	1.22						
	46.72	0.68	0.54	46.04	1.22						
	46.04	0.69	0.53	45.36	1.22						
	45.36	0.69	0.52	44.66	1.22						
2	**47.39**	**2.73**	**2.13**	**44.66**	**4.86**	**0.0668**	**0.0522**	**0.1191**	**0.6243**	**0.6944**	**1.3187**
	44.66	0.70	0.51	43.96	1.22						
	43.96	0.71	0.51	43.25	1.22						
	43.25	0.72	0.50	42.53	1.22						
	42.53	0.73	0.49	41.80	1.22						
3	**44.66**	**2.86**	**2.01**	**41.80**	**4.86**	**0.0700**	**0.0491**	**0.1191**	**0.6784**	**0.6404**	**1.3187**
	41.80	0.74	0.48	41.07	1.22						
	41.07	0.74	0.47	40.32	1.22						
	40.32	0.75	0.46	39.57	1.22						
	39.57	0.76	0.46	38.81	1.22						
4	**41.80**	**2.99**	**1.87**	**38.81**	**4.86**	**0.0732**	**0.0458**	**0.1191**	**0.7375**	**0.5813**	**1.3187**
	38.81	0.77	0.45	38.04	1.22						
	38.04	0.78	0.44	37.26	1.22						
	37.26	0.79	0.43	36.48	1.22						
	36.48	0.80	0.42	35.68	1.22						
5	**38.81**	**3.13**	**1.73**	**35.68**	**4.86**	**0.0767**	**0.0424**	**0.1191**	**0.8021**	**0.5166**	**1.3187**
	35.68	0.81	0.41	34.87	1.22						
	34.87	0.81	0.40	34.06	1.22						
	34.06	0.82	0.39	33.23	1.22						
	33.23	0.83	0.38	32.40	1.22						
6	**35.68**	**3.28**	**1.59**	**32.40**	**4.86**	**0.0803**	**0.0388**	**0.1191**	**0.8728**	**0.4459**	**1.3187**
	32.40	0.84	0.37	31.56	1.22						
	31.56	0.85	0.36	30.70	1.22						
	30.70	0.86	0.35	29.84	1.22						
	29.84	0.87	0.34	28.97	1.22						
7	**32.40**	**3.43**	**1.43**	**28.97**	**4.86**	**0.0840**	**0.0350**	**0.1191**	**0.9503**	**0.3684**	**1.3187**
	28.97	0.88	0.33	28.09	1.22						
	28.09	0.89	0.32	27.19	1.22						
	27.19	0.90	0.31	26.29	1.22						
	26.29	0.91	0.30	25.38	1.22						
8	**28.97**	**3.59**	**1.27**	**25.38**	**4.86**	**0.0879**	**0.0311**	**0.1191**	**1.0352**	**0.2836**	**1.3187**
	25.38	0.92	0.29	24.45	1.22						
	24.45	0.93	0.28	23.52	1.22						
	23.52	0.95	0.27	22.57	1.22						
	22.57	0.96	0.26	21.61	1.22						
9	**25.38**	**3.76**	**1.10**	**21.61**	**4.86**	**0.0921**	**0.0270**	**0.1191**	**1.1282**	**0.1905**	**1.3187**
	21.61	0.97	0.25	20.65	1.22						
	20.65	0.98	0.24	19.67	1.22						
	19.67	0.99	0.23	18.68	1.22						
	18.68	1.00	0.21	17.68	1.22						
10	**21.61**	**3.94**	**0.93**	**17.68**	**4.86**	**0.0964**	**0.0227**	**0.1191**	**1.2304**	**0.0884**	**1.3187**
	17.68	1.01	0.20	16.67	1.22						
	16.67	1.02	0.19	15.64	1.22						
	15.64	1.04	0.18	14.60	1.22						
	14.60	1.05	0.17	13.56	1.22						
11	**17.68**	**4.12**	**0.74**	**13.56**	**4.86**	**0.1009**	**0.0182**	**0.1191**	**0.1009**	**0.0182**	**0.1191**
	13.56	1.06	0.16	12.50	1.22						
	12.50	1.07	0.14	11.42	1.22						
	11.42	1.08	0.13	10.34	1.22						
	10.34	1.10	0.12	9.24	1.22						
12	**13.56**	**4.31**	**0.55**	**9.24**	**4.86**	**0.1056**	**0.0135**	**0.1191**	**0.1056**	**0.0135**	**0.1191**
	9.24	1.11	0.11	8.13	1.22						
	8.13	1.12	0.09	7.01	1.22						
	7.01	1.14	0.08	5.88	1.22						
	5.88	1.15	0.07	4.73	1.22						
13	**9.24**	**4.52**	**0.35**	**4.73**	**4.86**	**0.1105**	**0.0085**	**0.1191**	**0.1105**	**0.0085**	**0.1191**
	4.73	1.16	0.05	3.57	1.22						
	3.57	1.17	0.04	2.39	1.22						
	2.39	1.19	0.03	1.20	1.22						
	1.20	1.20	0.01	0.00	1.22						
14	**4.73**	**4.73**	**0.14**	**0.00**	**4.86**	**0.1157**	**0.0033**	**0.1191**	**0.1157**	**0.0033**	**0.1191**