National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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No.NEPRA/R/TRF-116/MPL-2008/608-610
February 10, 2009

Subject: **Authority's Decision on the Central Power Purchasing Agency's Request for the Procurement of Power from Mira Power Ltd. – Gulpur Hydropower Project (Case # NEPRA/TRF-116/MPL-2008)**
Intimation of Decision of Tariff pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act (XL of 1997)

Dear Sir,

Please find enclosed the subject Decision of the Authority along with Annexure-I & II (15 pages) in Case No. NEPRA/TRF-116/MPL-2008.

2. The Decision is being intimated to the Federal Government for the purpose of notification of the approved 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).

3. Please note that the Decision of the Authority along with Annexure-I & II (13 pages) needs to be notified in the official gazette.

Enclosure: As above

(Hussnain Zaigham)

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
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The Secretary
Cabinet Division
Government of Pakistan
Cabinet Secretariat
Islamabad

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

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
(NEPRA)
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Case No. NEPRA/TRF-116/MPL-2008

DECISION OF THE AUTHORITY

ON

POWER PROCUREMENT REQUEST

Filed by

Central Power Purchasing Agency (CPPA)

For

Mira Power Limited - Gulpur Hydropower Project

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
(NEPRA)

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Case No. NEPRA/TRF-116/MPL-2008

Petitioner

Central Power Purchasing Agency (CPPA)
for Mira Power Limited - Gulpur Hydropower Project

AUTHORITY

Zafar Ali Khan
Member

4/2/09

Ghiasuddin Ahmed
Member

6/2

Maqbool Ahmad Khawaja
VC/Member

Khalid Saeed
Chairman

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Authority's Decision on the Central Power Purchasing Agency's request for the procurement of power from Mira Power Limited - Gulpur Hydropower project

Central Power Purchasing Agency (CPPA) (hereinafter the "Petitioner") submitted its request for acquisition of power procurement and approval of the negotiated tariff along with the agreed terms and conditions, from Mira Power Limited (MPL) in respect of its Gulpur Hydropower project. The aforesaid generation facility is located in the territory of Azad Jammu and Kashmir (AJ&K), an area where the NEPRA Act is not applicable. The instant request has, therefore, been made under the NEPRA Interim Power Procurement (Procedures and Standards) Regulations 2005 (IPPR).

2. The determination is particularly significant as it requires NEPRA to evaluate CPPA's request and to ascertain the viability of mutually agreed tariff and the terms thereof, for MPL's Project located in the territory of Azad Jammu and Kashmir (hereinafter referred to as the "**AJ&K**") which does not fall under NEPRA's territorial jurisdiction. The determination, inter alia, deals with the following:

(i) CPPA's role as a Power Purchaser/power procurer;
(ii) the scope and extent of NEPRA's review in determining the prudency (or otherwise) of the Negotiated Tariff and evaluation of supporting evidence; and
(iii) facilitation offered to the generation companies located outside NEPRA's territorial jurisdiction

3. CPPA has requested for the approval of a tariff of US cents 5.78/kWh (Rs. 3.47/kWh) at PKR 60 to 1 US Dollar, levelized over thirty (30) years of proposed contract period net of 7.5% Withholding tax together with the terms and conditions of the tariff agreed mutually with MPL ((hereinafter referred to as the "**Negotiated Tariff**").

4. Since CPPA made its procurement request under IPPR, therefore it needs to be recognized that there are two distinct stages for NEPRA's approval of a request. The first stage envisages NEPRA's permission for CPPA to procure power, whereas at the second stage, CPPA is expected to bring a contract including prices and other terms and conditions before the Authority for approval. Ideally CPPA should have negotiated with the sellers once it gets NEPRA's permission. However, based on the feed back received from various stakeholders, the Authority observed that only a permission to CPPA would not be taken favorably by the power sellers located in AJ&K. On one hand the power producers in AJ&K expect such procedural flexibility as available to other generation facilities which are located within NEPRA's jurisdiction, and on the other they need to be assured that their agreed tariff with CPPA has full backing of the regulator. According to them such assurance would enable them to negotiate with the prospective lenders. In addition while considering CPPA's request for approval of negotiated tariff at the feasibility stage, the Authority felt that approval of tariff in advance ('Advance tariff') is one of the various means allowed in the NEPRA Act and the rules, regulations made thereunder. Under Rule 6(d) of the NEPRA (Generation) Rules, 2000, the approval of tariff in advance for a hydropower project has been left at the discretion of the Authority as one of the legally permissible means of determining tariff. The Authority,

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5. As for NEPRA's prudency review of costs, it is to be noted that the negotiated tariff between CPPA and the seller (MPL) is based on feasibility level costs. Although there are various issues which can be considered to ascertain the – reasonability of various cost components and technical parameters, however, at this stage and in order to remain consistent, NEPRA will accord deference to the figures which were considered in the feasibility study and approved by the PPIB's panel of experts. This approach is in line with the NEPRA previous determination in another project namely Suki Kinari Hydropower Project; where it was concluded that though costs are non-firm, no detailed prudence of various project cost components of tariff shall be done at this stage. So as not to discriminate CPPA's procurement request, the Authority also decided not to carryout detailed prudence of costs and other project parameters in the instant case.

6. The aforesaid approach is in accordance with the Mechanism for Tariff Determination for Hydropower Projects (the" Mechanism"); a document circulated by NEPRA to facilitate and streamline tariff handling for hydropower projects. The mechanism envisages that after obtaining a tariff based on feasibility study the sponsors may come to NEPRA, if they wish so, for their tariff determination at the EPC stage. By allowing so the Authority in-fact not only recognized the non-firm nature of costs and other project parameters, it also established that for such projects it would carryout detailed prudence of project parameters at the EPC stage. Therefore CPPA's request will also be considered by the Authority on similar lines.

7. Notwithstanding above, the Authority feels that there are certain principles which have been followed by it while considering tariff applications for other hydropower projects. So as to have a consistent and uniform policy, the Authority considers it necessary to apply the same principles to CPPA's request. While reviewing the request of the Petitioner the Authority observed some inconsistency vis-a-vis, the tariffs determined for other hydropower projects.

8. In this regard the following parameters needed to be treated uniformly, which have been discussed hereunder.

i) Cost of contingencies;
ii) financial charges;
iii) debt servicing specifically relevant to overall length of repayment period;
iv) return on equity;
v) other adjustments/indexation with reference to currency

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9. Cost of Contingencies

CPPA has sought approval of feasibility level EPC cost which includes cost of contingencies in the civil and electro-mechanical works at the rate of 10% and 5% respectively. The Authority considers that the Mechanism emphasizes on high standard of the feasibility study whereby various studies are performed thoroughly and comprehensively in order to evaluate and rely upon the estimates for various project cost components based on firm Bill of Quantities (the **"BOQs"**) for the civil works provided in the feasibility. Apparently, the feasibility study of MPL Project, which was carried out prior to approval of the Mechanism, fail to meet the standard, therefore, the Authority is constrained to reduce it to 5% and 2.5% as cost of contingencies in the civil and electro-mechanical works respectively. Accordingly, US$ 5.567 million has been allowed on account of cost of contingencies in the civil and electro-mechanical works.

10. Financial charges

CPPA has proposed US$ 4.0 million as arrangement fee and US$ 2.4 million as financial charges and other fees. In the case of other hydropower projects, the Authority has allowed up to a maximum of 3% of the total loan amount as financial charges. On the same principle, a US$ 3.491 million is hereby approved as financial charges/arrangement fee for the MPL Project.

11. Based on the aforesaid the approved EPC cost and the total project cost for MPL calculates to US$ 119.011 million and US$ 158.657 million respectively in accordance with the following break-down.

Project cost Component		**US$ Million**
Civil Works excluding Land		79.378
E & M Equipment excluding Custom Duty		34.669
Switch yard		1.464
Engineering and Transportation		3.500
EPC Cost		**119.011**
Land & Rehabilitation costs		7.750
Custom Duty		1.776
Insurance During Construction		2.491
Feasibility/project development/other fees		3.000
Legal & Advisory Fees & Charges		1.500
Construction Period Overheads		1.500
Construction Management/Owner's Engineer		2.500
Debt Arrangement/other financial charges		3.491
O&M Training and Start-up		1.000
Total Capital Expenditure		**144.019**
Interest During Construction		14.638
Total Project Cost		**158.657**

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12. Debt Servicing

The Authority considers it just and fair to expect that the period of debt servicing (repayment of debt) negotiated with the lenders should be proportionate to the useful (contracted) life of the project, so that the benefit of diluted debt servicing in the initial years of plant operation could be passed on to the end consumers. Nevertheless, considering the current market situation, the Authority has decided to base debt servicing for hydropower projects on at least twelve (12) years of operation of the plant after the Commercial Operations Date (the **"COD"**) as done in the case of other hydropower projects. Accordingly, the term for repayment of loans (the **"Debt"**) in the instant case has been changed from bi-annual repayment of Debt spread over eleven (11) years, as proposed by the Petitioner, to quarterly repayment of Debt spread over twelve (12) years period.

13. Return on Equity

The negotiated rate of return of 18% (IRR based) Is higher as compared to the 17% return on equity (IRR based) approved for other hydropower projects, which, it may be clarified, is already 2% more than what is allowed to thermal projects and wind power projects. Accordingly, 17% return on equity (IRR based) inclusive of the project construction period of three and a half (3.5) years has been approved. Since the project is on BOOT basis, therefore, redemption of Equity has been allowed proportionately in the remaining eighteen (18) years of contract life which would begin at the 12th anniversary of actual plant operations from COD.

14. Insurance expense for the plant operational phase

CPPA has proposed annual insurance expense at the rate of @1% of EPC which works out to be US$ 1.190 million and thus approved.

15. Reference currency exchange rate

CPPA has based its working of a negotiated tariff on US$/PKR exchange rate 1:60. The current PKR/US$ exchange rate has changed significantly. It is, therefore, considered necessary that the various components of costs based on foreign currency i.e. USD be reflected in the local currency PKR at the prevailing exchange rate. Accordingly, the current US$/PKR exchange rate of 1:79 has been used as a reference for the calculation of the tariff.

16. Adjustment of cost of reopeners and price escalation

CPPA is entitled to cost adjustments due to geological uncertainties and price escalation in cement, steel labor and fuel in accordance with the procedure laid down in the Mechanism. Since, the Negotiated Tariff is on the basis of feasibility level costs and Bill of Quantities (BOQ) are not yet firm, therefore, are liable to change at the EPC stage. The parties are therefore, advised to pursue further negotiations for the finalization and submission of bilateral contract(s) on the basis of firm EPC cost and BOQ for all the civil works, for the approval of the Authority in accordance with the NEPRA IPPR without

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unreasonable delay. The necessary adjustment in EPC cost shall, however, be allowed, subject to the provision of all the information/data by the CPPA to NEPRA in accordance with the Mechanism.

17. In view of the discussion in the foregoing the Authority approves the Advance Tariff (levelized) of Rs. 4.2785/kWh (US cents 5.4158/kWh) for procurement of power from MPL Project as per component-wise tariff attached herewith as Annex-I.

Order

18. The Authority has approved the following tariff (hereinafter the **"Advance Tariff"**) along with the terms and conditions based on feasibility level costs under the NEPRA IPPR for procurement of power by CPPA from MPL Project for onward sales to the distribution companies.

Advance Tariff

Tariff Components	Year 1-12	Year 13-30	Indexation
Fixed Charges (Rs/kW/Month)			
Fixed O&M Local	186.6409	186.6409	WPI
Insurance	80.7721	80.7721	PKR/US$
Debt Service	1000.3119	-	LIBOR
Return on Equity	457.6382	486.4586	PKR/US$
ROE during Construction	113.7906	113.7906	PKR/US$
Variable Charge (Rs/kWh)			
Variable O&M	0.0900	0.0900	WPI
Water Use Charge	0.1500	0.1500	WPI

i) The Advance Tariff has been calculated on the basis of Net Contracted Capacity of 97 MW and benchmark annual energy production of 465 GWh at net annual plant capacity factor of 54.72%.

ii) Hydrological risk shall be borne by the Power Purchaser in accordance with the 2002 Power Policy.

iii) No adjustment for CERs has been accounted for. Upon actual realization of CERs, the same shall be distributed between the Power Purchaser and MPL Project in accordance with the 2002 Power Policy.

iv) The above tariff is applicable for a period of thirty (30) years on BOOT basis commencing from the date of the COD.

v) Debt service shall be paid in the first twelve (12) years of commercial operation of plant after COD.

vi) Redemption of equity has been allowed after 12 years of commercial operation of the plant and proportionately spread over rest of the contracted life of the project.

vii) The component-wise tariff is indicated at Annex-I. Debt Service Schedule is attached as Annex-II.

viii) CPA is directed to take due notice of the requirements under the 2002 Power Policy about the use of indigenous resources.

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ix) The Petitioner is entitled to adjustment of cost reopeners and cost escalation in the civil works. Such adjustment will be allowed subject to provision of the required information/data in accordance with the Mechanism approved by NEPRA, along with duly certified copies of the EPC contract and the Power Purchase Agreement for approval by the Authority under the NEPRA IPPR.

The following indexations shall be applicable to the reference tariff;

I. One Time Adjustment

(i) Adjustment due to variation in Net Capacity

The tariff for the Capacity Charge has been determined on the basis of net capacity of 97 MW. The fixed tariff components (CPP) shall be adjusted at the time of COD based upon the Initial Dependable Capacity (IDC) test to be carried out for determination of contracted capacity. Adjustment shall not be made if the IDC is established at less than 97 MW. The adjustment will be made according to the formula:

$$CC_{(Adj)} = CC_{(Ref)} \times 97\ MW / NC_{(IDC)}$$

Where;

$CC_{(Adj)}$ = Adjusted relevant capacity charge component of tariff

$CC_{(Ref)}$ = Reference relevant capacity charge component of tariff.

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

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

(ii) Cost of Debt

The total amount of debt has been assumed at 75% of the total project cost. Debt service component of tariff has been based on 100% foreign financing. The principal repayment and the cost of debt shall be adjusted at Financial Closing as per actual borrowing composition i.e. Local and/or Foreign as the case may be.

(iii) Interest During Construction

Interest during Construction (IDC) has been estimated as US$ 14.638 million. This will be adjusted at COD on account of actual variation in interest on the basis of actual drawdown for the period of 3.5 years of project construction. CPPA shall submit relevant documents to NEPRA within fifteen (15) days of COD for adjustment of relevant tariff components.

(iv) Adjustment due to Custom Duty and Taxes

Custom Duty amounting to US$ 1.776 million has been taken as reference. The petitioner shall be allowed adjustment in the relevant components of tariff due to any variation on account of actual payment of custom duties through provision of documentary evidence at the time of COD. The

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Withholding Tax @6% on local services has been included in the project cost. Any variation on the basis of actual Withholding tax shall be adjusted in the cost.

(v) Adjustment for variation in Dollar/Rupee parity

Relevant components of the tariff shall be adjusted at COD on account of actual variation in PKR/US$ parity over the reference PKR/US$ rate of Rs. 79.00.

II. Pass-Through Items

No provision for income tax has been accounted for in the tariff. If the power producer is obligated to pay any tax, the exact amount paid by the company shall be reimbursed by the Power Purchaser to the company on production of original receipts. This payment should be considered as pass-through payment (Rs/kW/M) spread over a twelve (12) months period in addition to fixed charges of the Tariff.

Withholding tax on dividends is also a pass through item just like other taxes as indicated in the government Guidelines. Withholding tax shall be paid @ 7.5% (or the applicable rate) of the reference equity. The Power Purchaser shall make payment on account of withholding tax at the time of actual payment of dividend subject to maximum of 7.5% (or the applicable rate) of 17% equity according to the following formula:

Withholding Tax Payable = $[\{17\% * (E_{(Ref)} - E_{(Red)})\} + ROEDC_{(Ref)}] \times 7.5\%$

Where:

$E_{(Ref)}$ = Adjusted Reference Equity at COD

$E_{(Red)}$ = Equity Redeemed

$ROEDC_{(Ref)}$= Reference Return on Equity During Construction

In case the Company does not declare a dividend in any particular year or only declares a partial dividend, then the difference in the withholding tax amount (between what has been 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 as a pass through item from the Power Purchaser in future on the basis of the total dividend pay out.

III. Hydrological Risk

Hydrological risk will be borne by the Power Purchaser in accordance with the GOP Power generation Policy 2002.

IV. Indexations:

The following indexation shall be applicable to the reference tariff;

(a) Indexation applicable to O&M

The local part of O&M cost will be adjusted on account of Inflation (WPI). Quarterly Adjustment for local inflation and exchange rate variation will be made on 1st July, 1st October, 1st January & 1st

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April respectively on the basis of the latest available information with respect to WPI notified by the Federal Bureau of Statistics. The mode of indexation will be as under:

(i) Fixed O&M

$F\ O\&M_{(LREV)}$ = Rs 186.6409/kW/M * $WPI_{(REV)}$ /137.80

Where:

$F\ O\&M_{(LREV)}$	=	the revised applicable Fixed O&M Local Component of the Fixed Charges indexed with WPI
$WPI_{(REV)}$	=	the Revised wholesale Price Index (manufactures)
$WPI_{(REF)}$	=	137.80 wholesale price index (manufactures) of December 2008 as notified by the Federal Bureau of Statistics

(ii) Variable O&M

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

$V\ O\&M_{(LREV)}$ = Rs 0.0900/kWh * $WPI_{(REV)}$/137.80

Where:

$V\ O\&M_{(LREV)}$	=	The revised variable O&M local component of the variable charge indexed with WPI.
$WPI_{(REV)}$	=	Wholesale Price Index (manufactures) as notified by the Federal Bureau of Statistics.
$WPI_{(REF)}$	=	137.80, Wholesale Price Index (manufactures) of December 2008 as notified by the federal Bureau of Statistics.

(b) Water Use Charge

Water Use Charge will be paid on units delivered basis and will be indexed with Wholesale Price Index (WPI) annually from the date of COD. The first such adjustment shall be due after one year of commercial operation from COD, according to the formula;

$WUC_{(REV)}$ = Rs 0.1500/kWh * $WPI_{(REV)}/WPI_{(REF)}$

Where;

$WUC_{(REV)}$	=	The revised Water Use Charge component indexed with Whole Sale Price Index (WPI)
$WPI_{(REV)}$	=	The Revised wholesale Price Index (manufactures)
$WPI_{(REF)}$	=	Reference wholesale price index (manufactures) of the latest

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available month preceding to the date of COD as notified by the Federal Bureau of Statistics

(c) Insurance

Insurance cost component of tariff, in case of its payment by the company in foreign currency, will be adjusted on account of PKR/US$ exchange rate variation at COD and thereafter on an annual basis at actual subject to the maximum of 1.35% of the EPC cost according to the following formula:

$I_{(REV)}$ = Rs 80.7721/kW/M * $ER_{(REV)}$/79.00

Where;

$I_{(REV)}$ = Revised Insurance cost component of tariff adjusted with the exchange rate variation (PKR/US$)

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

(d) Adjustment for LIBOR variation

The interest part of fixed charge component will remain unchanged throughout the term except for the adjustment due to variation in interest rate as a result of quarterly variation in three (3) month LIBOR, while premium over LIBOR remaining the same i.e 3.0%, according to the following formula:

$\Delta I = P_{(REV)} * (LIBOR_{(REV)} - 4.00\%) / 4$

Where:

ΔI = the variation in interest charges applicable corresponding to variation in three month LIBOR. ΔI can be positive or negative depending upon whether $LIBOR_{(REV)} > \text{or} < 4.00\%$. The interest payment obligation will be enhanced or reduced to the extent of ΔI for each quarter under adjustment applicable on quarterly basis.

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

Note:-

In case of Local borrowing KIBOR adjustment will be made on quarterly basis according to the above mentioned mechanism. The maximum limit of the premium over KIBOR shall be 3% (300 basis points over KIBOR).

(e) Return on Equity

Return on equity (ROE) as well as Return on Equity during Construction (ROEDC) component of tariff shall be adjusted for variation in PKR/US$ exchange rate. Such adjustment will be allowed at

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the end of every year after the commercial operation date (COD) according to the following formula;

$ROE_{(REV)}$ = $ROE_{(REF)}$ * $ER_{(REV)}$/ $ER_{(REF)}$

$ROEDC_{(REV)}$ = $ROEDC_{(REF)}$ * $ER_{(REV)}$/ $ER_{(REF)}$

Where;

$ROE_{(REV)}$ = Revised Return on Equity component of tariff expressed in Rs/kW/Month adjusted with exchange rate variation (PKR/US$).

$ROEDC_{(REV)}$ = Revised Return on equity during construction component of tariff in Rs/kW/Month adjusted with exchange rate variation (PKR/US$).

$ROE_{(REF)}$ = Reference ROE component of tariff expressed in Rs/kW/Month as adjusted at COD.

$ROEDC_{(REF)}$ = Reference ROEDC component of tariff expressed in RS/kW/Month as adjusted at COD.

$ER_{(REF)}$ = Reference TT&OD selling rate (PKR/US$) available at the time of COD.

$ER_{(REV)}$ = Revised TT and OD selling rate (PKR/US$) as notified by the National Bank of Pakistan for the latest available month.

Note:-

Adjustment on account of inflation, exchange rate variation and LIBOR/KIBOR variation will be approved and announced by the Authority within seven working days after receipt of CPPA's request for adjustment in accordance with the requisite indexation mechanism stipulated hereinabove.

V. Other Terms and Conditions of Tariff:

Design & Manufacturing Standards:

Hydropower Generation system shall be designed, manufactured and tested in accordance with the latest IEC standards or other equivalent standards. All plant and equipment shall be new and of standard quality.

Power Curve of the Hydel Power Complex:

The power curve of the Hydropower plant shall be verified by the Power Purchaser, as part of the Commissioning tests according to the latest IEC standards and shall be used to measure the performance of the hydro generating units.

Delivery Point:

The power producer shall deliver power at 132 kV/220 kV or any other voltage level, as agreed with the power purchaser, at the door step of its generating facility. Up-gradation of generation voltage up to 132 kV or 220 kV will be the responsibility of MPL.

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Emissions Trading/Carbon Credits:

MPL would process and obtain emissions/carbon credits expeditiously and credit the proceeds to the Power Purchaser as per the policy issued by the Federal Government and agreed terms between the generator and the purchaser.

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Annex-I

MIRA POWER LIMITED (Gulpur Hydropower Project)
ADVANCE TARIFF

Year	Variable O&M	Water Use Charge	Fixed O&M	Insurance	Return on Equity	ROE During Construction	Withholding Tax @7.5%	Loan Repayment	Interest Charges	Total Tariff
	Rs./kWh	Rs./kWh	Rs. / kW/M	Rs. / kW/M	Rs. / kW/M	Rs. / kW/M	Rs. / kW/M	Rs. / kW/M	Rs./kW/M	Rs. / kWh
1	0.0900	0.1500	186.6409	80.7721	457.6382	113.7906	42.8572	446.5465	553.7654	4.9511
2	0.0900	0.1500	186.6409	80.7721	457.6382	113.7906	42.8572	478.6349	521.6770	4.9511
3	0.0900	0.1500	186.6409	80.7721	457.6382	113.7906	42.8572	513.0291	487.2828	4.9511
4	0.0900	0.1500	186.6409	80.7721	457.6382	113.7906	42.8572	549.8949	450.4170	4.9511
5	0.0900	0.1500	186.6409	80.7721	457.6382	113.7906	42.8572	589.4098	410.9021	4.9511
6	0.0900	0.1500	186.6409	80.7721	457.6382	113.7906	42.8572	631.7643	368.5476	4.9511
7	0.0900	0.1500	186.6409	80.7721	457.6382	113.7906	42.8572	677.1622	323.1497	4.9511
8	0.0900	0.1500	186.6409	80.7721	457.6382	113.7906	42.8572	725.8224	274.4895	4.9511
9	0.0900	0.1500	186.6409	80.7721	457.6382	113.7906	42.8572	777.9793	222.3326	4.9511
10	0.0900	0.1500	186.6409	80.7721	457.6382	113.7906	42.8572	833.8842	166.4277	4.9511
11	0.0900	0.1500	186.6409	80.7721	457.6382	113.7906	42.8572	893.8063	106.5056	4.9511
12	0.0900	0.1500	186.6409	80.7721	457.6382	113.7906	42.8572	958.0344	42.2775	4.9511
13	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
14	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
15	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
16	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
17	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
18	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
19	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
20	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
21	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
22	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
23	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
24	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
25	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
26	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
27	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
28	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
29	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
30	0.0900	0.1500	186.6409	80.7721	486.4586	113.7906	45.0187	-	-	2.5246
Levelized Tariff	**0.0900**	**0.1500**	**186.6409**	**80.7721**	**465.6275**	**113.7906**	**43.4564**	**449.9038**	**273.1130**	**4.2785**

Levelized Tariff (1-30 years) discounted at 10% per annum = US Cents 5.4158/kWh at reference exchange rate of 1US$=Rupees 79.00.

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Annex-II

MIRA POWER LIMITED (Gulpur Hydropower Project)
Debt Servicing Schedule

Foreign Debt						Annual Principal Repayment Rs./kW/Month	Annual Interest Rs./kW/Month	Annual Debt Servicing Rs./kW/Month
Period	Principal Million $	Repayment Million $	Mark-Up Million $	Balance Million $	Debt Service Millin $			
	118.99	1.60	2.08	117.39	3.6847			
	117.39	1.63	2.05	115.76	3.6847			
	115.76	1.66	2.03	114.10	3.6847			
	114.10	1.69	2.00	112.41	3.6847			
1	118.99	6.58	8.16	112.41	14.7388	446.5465	553.7654	1,000.3119
	112.41	1.72	1.97	110.70	3.6847			
	110.70	1.75	1.94	108.95	3.6847			
	108.95	1.78	1.91	107.17	3.6847			
	107.17	1.81	1.88	105.36	3.6847			
2	112.41	7.05	7.69	105.36	14.7388	478.6349	521.6770	1,000.3119
	105.36	1.84	1.84	103.52	3.6847			
	103.52	1.87	1.81	101.65	3.6847			
	101.65	1.91	1.78	99.74	3.6847			
	99.74	1.94	1.75	97.80	3.6847			
3	105.36	7.56	7.18	97.80	14.7388	513.0291	487.2828	1,000.3119
	97.80	1.97	1.71	95.83	3.6847			
	95.83	2.01	1.68	93.82	3.6847			
	93.82	2.04	1.64	91.78	3.6847			
	91.78	2.08	1.61	89.70	3.6847			
4	97.80	8.10	6.64	89.70	14.7388	549.8949	450.4170	1,000.3119
	89.70	2.11	1.57	87.58	3.6847			
	87.58	2.15	1.53	85.43	3.6847			
	85.43	2.19	1.50	83.24	3.6847			
	83.24	2.23	1.46	81.02	3.6847			
5	89.70	8.68	6.05	81.02	14.7388	589.4098	410.9021	1,000.3119
	81.02	2.27	1.42	78.75	3.6847			
	78.75	2.31	1.38	76.44	3.6847			
	76.44	2.35	1.34	74.09	3.6847			
	74.09	2.39	1.30	71.71	3.6847			
6	81.02	9.31	5.43	71.71	14.7388	631.7643	368.5476	1,000.3119
	71.71	2.43	1.25	69.28	3.6847			
	69.28	2.47	1.21	66.80	3.6847			
	66.80	2.52	1.17	64.29	3.6847			
	64.29	2.56	1.13	61.73	3.6847			
7	71.71	9.98	4.76	61.73	14.7388	677.1622	323.1497	1,000.3119
	61.73	2.60	1.08	59.12	3.6847			
	59.12	2.65	1.03	56.47	3.6847			
	56.47	2.70	0.99	53.78	3.6847			
	53.78	2.74	0.94	51.03	3.6847			
8	61.73	10.69	4.04	51.03	14.7388	725.8224	274.4895	1,000.3119
	51.03	2.79	0.89	48.24	3.6847			
	48.24	2.84	0.84	45.40	3.6847			
	45.40	2.89	0.79	42.51	3.6847			
	42.51	2.94	0.74	39.57	3.6847			
9	51.03	11.46	3.28	39.57	14.7388	777.9793	222.3326	1,000.3119
	39.57	2.99	0.69	36.58	3.6847			
	36.58	3.04	0.64	33.54	3.6847			
	33.54	3.10	0.59	30.44	3.6847			
	30.44	3.15	0.53	27.29	3.6847			
10	39.57	12.29	2.45	27.29	14.7388	833.8842	166.4277	1,000.3119
	27.29	3.21	0.48	24.08	3.6847			
	24.08	3.26	0.42	20.81	3.6847			
	20.81	3.32	0.36	17.49	3.6847			
	17.49	3.38	0.31	14.12	3.6847			
11	27.29	13.17	1.57	14.12	14.7388	893.8063	106.5056	1,000.3119
	14.12	3.44	0.25	10.68	3.6847			
	10.68	3.50	0.19	7.18	3.6847			
	7.18	3.56	0.13	3.62	3.6847			
	3.62	3.62	0.06	0.00	3.6847			
12	14.12	14.12	0.62	0.00	14.7388	958.0344	42.2775	1,000.3119

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