



National Electric Power Regulatory Authority
Islamic Republic of Pakistan

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No. NEPRA/TRF-451/MHPPL-2018/16222-16224
October 22, 2018

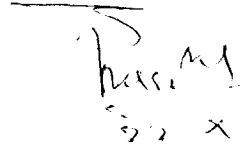
Subject: **Decision of the Authority in the matter of Approval of Tariff for Master Hydro Power (Private) Ltd. for its 99 MW Hydroelectric Power Plant at District Chitral, KPK [Case # NEPRA/TRF-451/MHPPL-2018]**

Dear Sir,

Please find enclosed herewith the subject Decision of the Authority along with Annexure-I, II/A, II/B, III/A, III/B, IV & V (20 pages) in Case No. NEPRA/TRF-451/MHPPL-2018.

2. The Decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

Enclosure: As above


(Syed Safer Hussain)

Secretary
Ministry of Energy (Power Division)
'A' Block, Pak Secretariat
Islamabad

CC:

1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.

**National Electric Power Regulatory Authority
(NEPRA)**

Decision of the Authority

In the matter of Approval of Tariff for Master Hydro Power (Private) Limited for
its 99 MW Hydroelectric Power Plant at District Chitral, KPK

October 22, 2018

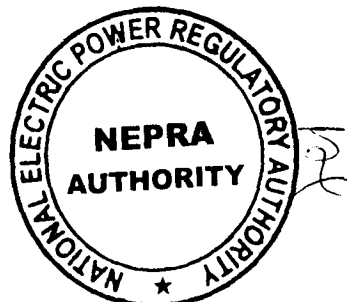
BACKGROUND

1. The Government of Khyber Pakhtunkhwa (the “GoKP”) through the Pakhtunkhwa Energy Development Organization (hereinafter referred to as “PEDO” or the “Relevant Agency”) intends to implement the 99 MW Arkari Gol Hydropower Project (HPP) (the “Project”) under the KP Hydropower Policy 2016 (the “Policy”). The Project is to be developed as an Independent Power Producer (“IPP”) on a Build-Own- Operate-Transfer (BOOT) basis. The Project is located in District Chitral, Khyber Pakhtunkhwa (KP) province.
2. The project history provided by PEDO has highlighted that comprehensive inventory studies for identification of hydropower potential in the mountainous areas of KP have been carried out by the GoKP, represented by the then Pakhtunkhwa Hydel Development Organization (PHYDO), for the Chitral Valley. This initiative was supported by the Ministry of Water and Power and the Government of Pakistan (now Ministry of Energy), both in collaboration with the German Agency for Technical Cooperation (GTZ).
3. Under the initiative, the Project and 5 other sites were identified by PEDO for the development of hydropower projects. These projects will contribute 518 MW in total to the national grid. Accordingly, PEDO simultaneously processed these projects for award of tariff through competitive bidding. On 12th February 2016, PEDO’s BoD decided to advertise the following Six (6) Solicited Hydropower Projects for development in Private Sector on BOOT basis as per KP Hydropower Policy 2016:

. Description	MW	Location
1 NARAN	188	Kunhar River Kaghan Naran
2 SHIGO KAS	102	Panjkora River, Distirct Lower Dir
3 ARKARI GOL	99	Arakari, District Chitral
4 BATAKUNDI	96	Batakundi, District Mansehra
5 GHORBAND	20.6	Ghorband, District Shangla
6 NANDIHAR	12.3	Nandihar Khawar, District Battagram
Total	518	

4. PEDO proceeded to develop a generic Request For Proposal (RFP) applicable for all six of the above projects, and submitted the same for approval to the Authority. Approval of the RFP, with certain amendments, was granted by the Authority, on 26-10-2016, under the National Electric Power Regulatory Authority Competitive Bidding Tariff (Approval Procedure) Regulations, 2014 (the “CBTR 2014”). Subsequently, vide letter dated 14-11-2016 and 03-04-2017, the Authority further approved amendments to the RFP on the subjects of sharing of spread (in case of lower negotiated spreads with lenders) and assessment of custom duties and cess. Further clarifications were also provided to PEDO on other matters, including geological risk mitigation through reopeners.
5. The Authority, thereby, approved PEDO’s RFP to undertake competitive bidding of the above-mentioned six hydropower projects in accordance with the provisions of the CBTR 2014. The Authority did not issue a Benchmark tariff on the condition that NEPRA reserved the right to reject PEDO’s recommended successful bidder where the quoted rate is found to be imprudent or unreasonable, as provided under Regulation 5 of the CBTR 2014.
6. PEDO then proceeded with the competitive bidding process and called for bids of all six projects. Upon receiving and processing of all bids, PEDO proceeded to submit the Bid Evaluation Reports

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to the Authority for approval, including the Bid Evaluation Report for the Project on 19-10-2017. Further information and documents-in-support were sought by the Authority, vide letter dated 08-12-2017. In response thereof revised documents were sent by PEDO on 26-12-2017.

7. As per the information submitted, PEDO advertised the above mentioned Hydropower Projects in two international and one local newspaper from 18th March 2016 to April 11, 2016. In response to the advertisement, eight (08) registrations were made who later purchased Pre-Qualification Documents (PQDs) from PEDO. Afterwards, six (06) Proposals/Statement of Qualifications (SOQs) were submitted by the private sponsors.
8. PEDO hired an independent consultant for the evaluation of proposals namely Baker Tilly Mehmmod Idrees Qamar. After a detailed evaluation as per the criteria laid down in the PQDs, four (04) out of six (06) applicants were pre-qualified for the said Hydropower Project.
9. Following is the list of firms as provided by PEDO who registered for the site and who were later pre-qualified:

Investor Details		Registration and Pre-Qualification Details				
	Company / Firm Name	Date of Registration	Date of Purchase of PQDs	Last Date for Submission of SOQs	Date of Submission of SOQs	Pre-Qualified or Not
1.	M/s Siddiquesons	21-Mar-2016	18-Mar-2016	14-Jun-2016	14-Jun-2016	Yes
2.	Sinotec Company Ltd	31-Mar-2016	31-Mar-2016	14-Jun-2016	No Submission	N/a
3.	Saif Power Limited	1-Apr-2016	1-Apr-2016	14-Jun-2016	No Submission	N/a
4.	Act 2 Wind Pvt Ltd	5-Apr-2016	4-Apr-2016	14-Jun-2016	14-Jun-2016	No
5.	M/s Master Textile Mills Limited	11-Apr-2016	11-Apr-2016	14-Jun-2016	14-Jun-2016	Yes
6.	Army Welfare Trust	3-Jun-2016	3-Jun-2016	14-Jun-2016	14-Jun-2016	Yes
7.	Engro Powergen Limited	13-Jun-2016	10-Jun-2016	14-Jun-2016	14-Jun-2016	No
8.	Fatima Group	13-Jun-2016	13-Jun-2016	14-Jun-2016	14-Jun-2016	Yes

10. PEDO carried out ICB by adopting single stage two envelop process. Out of Four (04) pre-qualified applicants three (03) purchased RFP. Subsequently, the following two (02) Bids (Envelop-I & Envelop-II) were submitted against the purchased RFPs, on 25th April, 2017;
 - a. M/s Master Textile Mills Limited
 - b. Fatima Group
11. According to PEDO, as per RFP clause 3.3.1, Envelope-I (Technical Proposal) was opened by the Evaluation Committee of PEDO. The content of this envelop was evaluated by PEDO in view of the responsive test laid down in the RFP and accordingly technical qualification was done.



12. The bidders provided the breakdown of Project Cost as per the format given in the Proforma XI "Project Cost Summary" of their financial bids. The following illustrates the values furnished by PEDO in comparison to feasibility estimates:-

Bidders	Local Portion	Foreign Portion	Total Cost @ Rs. 104.7	Cost / MW
	Millions PKR	Millions USD Equ.	Millions USD	Millions USD
Master Textiles	14,907	81.38	223.76	2.26
Fatima Group	3,855	246.84	283.65	2.87
Feasibility Study estimate @ Rs. 99/US\$	-	201	201	2.03

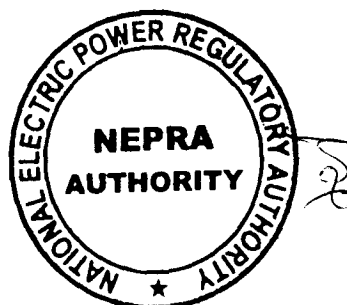
Bidders	Debt	Equity	Financing Period	Financing		Foreign Financing	
				(Rate, %)	Source	(Rate, %)	Source
Master Textiles	75%	25%	13 Years	3M KIBOR + 2.50% = 8.52%	Bank Al Habib Limited	3M LIBOR + 4.75% = 5.62%	Asian Developme nt Bank
Fatima Group	80%	20%	12 Years	9.02%	United Bank Ltd.	-	-

	Unit	Master Textiles	Fatima Group	Feasibility Study
Total Annual O&M Cost	US\$/Annum	3,356,356	5,544,040	7,760,000
	% of Proj. Cost	1.50%	1.95%	3.86%
Variable O&M Cost	%	0	17	13
	US\$/Annum	-	942,487	260,000
Fixed O&M Cost	%	100	83	97
	US\$/Annum	3,356,356	4,601,553	7,500,000

	Unit	Master Textiles	Fatima Group	Feasibility Study
Project Cost	US\$ (Million)	223.76	283.65	201
EPC Cost	US\$ (Million)	155	190.47	157.83
Insurance Cost	% of EPC Cost	1.00%	0.91%	1.00%
	US\$/Annum	1,550,000	1,726,474	1,578,300

Conclusions & Recommendations by PEDO

13. PEDO has asserted that the bid received from M/s Master Textile Mills Limited & Huadong Engineering Corporation Ltd. Joint Ventures is substantially responsive with respect to its completeness, competitiveness and reasonableness, and has the lowest rank due to the following reasons:

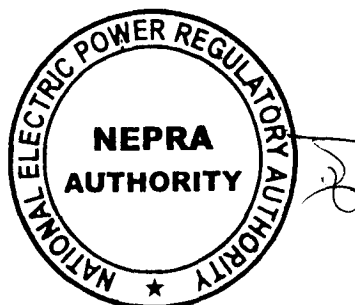


- i. Total Project Cost quoted by Master Textiles as US\$ 223.76 Million (US\$ M 2.26 / MW) is lowest among all bidders and is 11.32% higher than the estimated feasibility study total project cost of US\$ 201 Million (US\$ M 2.03 / MW).
 - ii. Total EPC Cost quoted by Master Textiles as US\$ 155 Million is lowest among the bidders and is just 5.83% higher than the estimated feasibility study total project cost of US\$ 146.46 Million.
 - iii. Total Annual O&M Cost quoted by Master Textiles as US\$ 3.36 Million is lowest among bidders and is considerably lower than the feasibility O&M cost estimate of US\$ 7.76 Million by 56.75%. Fatima Group proposed annual O&M cost of US\$ 5.54 Million, which is 28.55% lower than the feasibility O&M cost.
 - iv. Master Textiles has availed cheaper financing @ 8.52% local financing and 5.62% foreign financing as compared to 9.02% local financing arranged by the other bidder Fatima Group.
 - v. Interest during Construction proposed by Master Textiles is US\$ 23.44 Million which is lowest among the bidders and is just 3.4% higher than the estimated feasibility IDC of US\$ 22.65 Million. IDC proposed by the other bidder Fatima Group is 78.63% higher than the estimated feasibility study IDC.
 - vi. Insurance cost and Non-EPC Cost quoted by Master Textiles is also lowest among the bidders.
14. PEDO concluded that the bid received from M/s Master Textile Mills Limited & Huadong Engineering Corporation Ltd. Joint Ventures was lower compared to other bidders, since it offered the lowest investment cost, the lowest annual O&M cost and attractive and competitive terms of financing. The quoted tariff @ 8.9823 Rs/kWh (or 8.5791 Cents/kWh) was calculated by PEDO using the tariff model provided by the lowest bidder (i.e. Master Textiles) and was evaluated on the basis of benchmark assumptions as 8.8908 Rs/kWh or 8.5776 Cents/kWh.
15. The final calculated bid rate for both bidders is as follows:-

Bidder	Bid Rate		Evaluated Rate		Bids Ranking	Levelized Tariff
	US c/KWh	Rs/KWh	US c/KWh	Rs/KWh		
Master Textiles	8.5791	8.9823	8.5776	8.8908	1st Ranked	Lowest
Fatima Energy	12.8845	13.4900	12.5609	13.1513	2nd Ranked	2nd Lowest

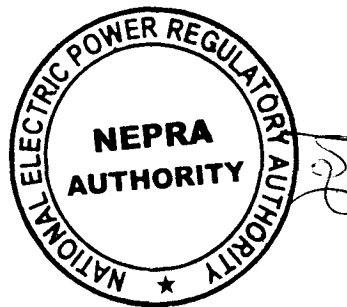
16. The Authority noted numerous inconsistencies and deficiencies in the document submitted by PEDO including PEDO's evaluation of the bidder's tariff. It was found that the bid evaluation report was not strictly in the format as prescribed in the RFP and deviations therefrom were not rationalized or explained in the PEDO's report. It was noted by the Authority that PEDO materially complied with the criteria and provisions prescribed in the RFP approved by the Authority. In compliance to the approved RFP's assumptions, Master's Textile bid was evaluated to be the lowest with evaluated tariff of Rs 8.9391 per kWh. The Authority reviewed the Bid Evaluation Report submitted by PEDO and, vide order dated February 19,2018, determined the lowest evaluated bid submitted by Master Textile for the Arkari Gol Project to be unreasonable and imprudent. Master Textile's quoted rate was accordingly rejected.

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17. Subsequently PEDO on behalf of the project sponsors filed a review motion on 19-03-2018 under Regulation 3(2) of the National Electric Power Regulatory Authority (Review Procedure) Regulations (the “**Review Regulations**”), 2009 against the Authority’s Order dated 19-02-2018. In the Review motion PEDO on behalf of the project sponsors offered a voluntary reduction in tariff from the previously evaluated Rs. 8.9391 per kWh rate to Rs. 8.2896 per kWh. The Authority accordingly found the quoted and evaluated revised rate of Rs. 8.2896 per kWh to be reasonable and prudent. The review motion was accepted and Master Textiles was notified as the successful bidder for the Arkari Gol Project, and (4) Master Textiles vide Decision dated 21.06.2018
18. Subsequent to the notification, the successful bidder informed that it has incorporated a Special Purpose Vehicle with name of Master Hydro Power (Private) Limited (“MHPL”) to develop, build, own and operation the subject project. Accordingly MHPL (hereinafter referred as “the Petitioner”) filed an Application for approval of tariff under Regulation 6 of the CBTR 2014 vide letter dated July 05, 2018. PEDO acknowledgment of the SPV with the name of Master Hydro Power (private) Limited was pending which was submitted by the Petitioner on August 10, 2018. Accordingly, the application was admitted by the Authority on August 29, 2018.
19. The approved MHPL bid tariff was based on the following project cost:

Description	Local	Foreign	Total
	Millions Rs	Millions US\$	Equivalent Millions US\$
EPC Cost			
Onshore	9,423	0	90
Offshore	0	60	60
Custom Duty of Equipment Cost not Manufactured in Pakistan	380	0	3.63
Non EPC Cost			
Project Development Cost	2,039	0	19.48
Land & Resettlement Costs	997	0	9.52
Insurance	0	1.5	1.5
Other Costs			
Financial Charges	122	2.37	3.53
Lenders Advisors		3.8	3.8
Reimbursement of Feasibility Study	214	0	2.04
Interest During Construction	1,196	9.63	21.06
Total Project Cost	14,370	77.3	214.55



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20. The Petitioner provided the following sources of funds;

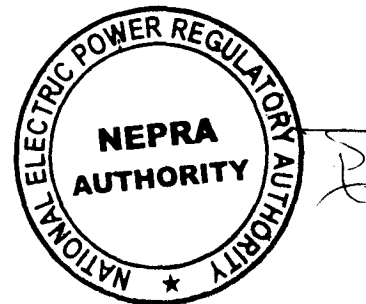
SUMMARY OF FINANCING PLAN

Source of Funding	Percentage	Amount (USD)
Equity	25%	53.64
Debt	75%	160.91
Total	100%	214.55

SUMMARY OF DEBT FINANCING TERMS

Term	Unit	Foreign Financing	Local Financing
Amount	Millions US\$	95.885	65.029
Currency	-	USD	PKR
Repayment Period	Years	13	13
Grace Period	Years from FC	04	04
Principal Repayments	-	Quarterly	Quarterly
Interest Rate (Pre-COD)	%	3M LIBOR + 4.00%	3M KIBOR + 2.50%
Interest Rate (Post-COD)	%	3M LIBOR + 4.00%	3M KIBOR + 2.00%
Upfront Fees	%	1.50%	1.50%
Commitment Fees	%	0.50%	0.15%

21. The Application was admitted by the Authority under Regulation 12 of the NEPRA Competitive Bidding Tariff (Approval Procedure) Regulations, 2014, read with Section 31 (4) of Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.



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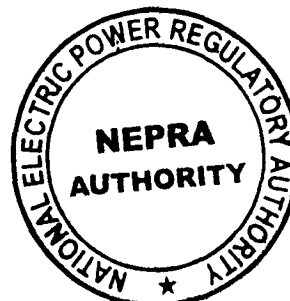
ORDER:

22. The Authority hereby approves the following generation tariff along-with adjustment/ indexations for the 97.515 MW (net capacity) hydroelectric power plant to be established by Master Hydro Power (Private) limited (“MHPL” or the “Petitioner”) at district Chitral, KPK for delivery of electricity to Power Purchaser.

Tariff Components	1 – 13	14 – 30	Adjustment/ Indexation
	Years	Years	
Capacity Charge (Rs./kW/M)			
Fixed O&M (Foreign)	230.3613	230.3613	Rs./ US\$ & US CPI
Fixed O&M (Local)	57.5903	57.5903	CPI (General)
Insurance	134.2101	134.2101	Rs./US\$ (if any)
ROE	860.6558	860.6558	Rs./ US\$
Debt Servicing (Local)	724.8045	0.0000	KIBOR
Debt Servicing (Foreign)	894.7004	0.0000	LIBOR & Rs./ US\$
Total	2902.3223	1282.8175	
Variable Charge (Rs/kWh)			
Water Use Charge	0.425	0.425	As per Policy

23. The reference tariff has been calculated on the basis of net contracted capacity of 97.515 MW (net) and net annual energy production of 372.4449 GWh.

- i. In the above tariff, no adjustment for Carbon Emission Reduction receipts (CERs) has been accounted for. However, upon actual realization of CERs, the same shall be distributed between the Power Purchaser and MHPL in accordance with the GOP Policy for Power Generation Projects 2002 as amended from time of time.
- ii. The Hydrological Risk shall be borne by the Power Purchaser
- iii. The above tariff is applicable for a period of thirty (30) years on BOOT basis commencing from Commercial Operation Date (COD).
- iv. Debt service will be paid in the first 13 years of commercial operation of plant after COD.
- v. The reference PKR/Dollar rate has been assumed at 1 USD = 104.7 PKR.
- vi. The component wise tariff is indicated at Annex-I.
- vii. Debt Servicing Schedule is attached as Annex-II
- viii. The IDC Schedule is attached as Annex- III
- ix. The prices of tunnels will be adjusted due to variation in rock type/classification in accordance with the mechanism attached herewith as Annex-IV. However, the total quantities including the unit rates in m³ of tunneling shall remain fixed.



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I. One-Time Adjustments at COD

a. Adjustment in EPC Cost at the Commercial Operations Date:

The MHPL shall be required to provide all relevant details along with documentary evidences to NEPRA for the adjustments. The onetime adjustment mechanism at the COD shall be as under (reference values attached as Annex-V):

- a) 40% of the EPC cost will be adjusted over the construction months of a maximum period of 48 months from the date of financial close of the project for USD/PKR exchange rate variation.
- b) 60% of the EPC cost converted at reference USD/PKR exchange rate of Reference Date (7th October 2016 as defined in the RFP) will be adjusted over construction months of a maximum period of 48 months starting from the date of financial close of the project according to the formula below:

$$P_n = 0.51 + 0.10*(C_n/C_o) + 0.09*(S_n/S_o) + 0.15*(F_n/F_o) + 0.15*(L_n/L_o)$$

Where;

P_n is the adjustment factor to be applied for civil works;

C_n is the index value for the relevant month for Cement as given in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

S_n is the index value for the relevant month for Steel Bar & Sheets as given in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

F_n is the index value for the relevant month for Diesel Oil as given in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

L_n is the index value for the relevant month for Mason (Raj) for Rawalpindi as per the Wage Rates published in the Monthly Bulletin of Statistics published by the Pakistan Bureau of Statistics;

C_o, S_o, F_o and L_o are the reference values of the price indices for Cement, Steel Bar & Sheets, Diesel Oil and Mason (Raj) respectively as available at the time of financial close of the project.

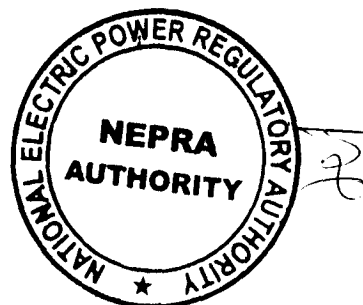
The One Time Adjustment of Civil Works will not be applied on items priced in foreign currency.

b. Adjustment in Interest During Construction:

Wherever applicable, Interest during construction, the schedule of which is attached as Annex-III shall be re-established at COD by applying 3 months LIBOR of last day of the preceding quarter (plus spread of 4.00% thereon) and 3 months KIBOR of the last day of the preceding quarter (plus spread of 2.50% thereon). The Debt-Equity Ratio and draw-down / phasing schedule, shall not be allowed to change at COD. In addition, the phasing of Civil Works Cost should also be in conformity with the draw-down / phasing schedule shown for calculation of Interest During Construction.

c. Adjustment due to Custom Duties and Cess:

The custom duties and cess directly imposed on the project company shall be adjusted to the extent of the variation in the custom duties and cess rate only. No Adjustment on this account shall be allowed in case the principal amount on which the custom duties have been assumed is more than what has been quoted in the tariff.



d. Adjustment due to Variation in Net Capacity:

The reference tariff has to be quoted on the basis of net capacity. All the tariff components of capacity charge shall be adjusted at the time of COD based upon the Capacity tests to be carried out for determination of contracted capacity. Adjustment shall not be made if the net output is established less than the installed capacity minus auxiliary consumption established for the project under and in accordance with the terms of the PPA.

e. Adjustment in Insurance:

The insurance cost for the minimum cover required under contractual obligations with the Power Purchaser not exceeding 1% of the EPC cost shall be treated as pass through.

II. Indexations:

Following indexations shall be applicable to the reference tariff:

i- Return on Equity (ROE):

After COD, ROE component of tariff will be quarterly indexed on account of variation in PKR/US\$ parity according to the following formula:

$$\begin{aligned} \text{ROE(Rev)} &= \text{ROE(Ref)} * \text{ER(Rev)} / \text{ER(Ref)} \\ \text{Where;} \\ \text{ROE(Rev)} &= \text{Revised ROE Component of Tariff} \\ \text{ROE(Ref)} &= \text{ROE Component of Tariff established at the time of COD} \\ \text{ER(Rev)} &= \text{The revised TT \& OD selling rate of US dollar as notified by} \\ &\quad \text{the National Bank of Pakistan} \\ \text{ER(Ref)} &= \text{The reference TT \& OD selling rate at Reference Date} \\ &\quad \text{(October 07, 2016 as defined in the RFP)} \end{aligned}$$

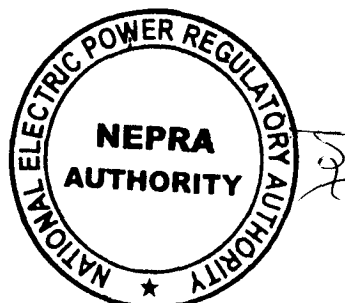
ii- Indexation applicable to O&M:

The O&M component of tariff will be adjusted on account of local Inflation (CPI) and foreign inflation (US CPI) and exchange rate quarterly on 1st July, 1st October, 1st January and 1st April based on the latest available information with respect to CPI notified by the Pakistan Bureau of Statistics (PBS), 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 as per the following mechanism

$$\begin{aligned} \text{FV. O\&M(Rev)} &= \text{F V. O\&M (Ref)} * \text{US CPI(Rev)} / \text{US CPI} \\ &\quad \text{(Ref)*ER(Rev)/ER(Ref)} \\ \text{L F. O\&M(Rev)} &= \text{L F. O\&M (Ref)} * \text{CPI (Rev)} / \text{CPI (Ref)} \\ \text{F F. O\&M(Rev)} &= \text{F F. O\&M (Ref)} * \text{US CPI(Rev)} / \text{US CPI(Ref)*ER(Rev)/} \\ &\quad \text{ER (Ref)} \end{aligned}$$

Where:

$$\begin{aligned} \text{FV. O\&M(Rev)} &= \text{The revised Variable O\&M Foreign Component of tariff} \\ \text{L F. O\&M(Rev)} &= \text{The revised Fixed O\&M Local Component of tariff} \\ \text{F F. O\&M(Rev)} &= \text{The revised Fixed O\&M Foreign Component of tariff} \\ \text{F V. O\&M(Ref)} &= \text{The reference Variable O\&M Foreign Component of tariff} \\ \text{L F. O\&M(Ref)} &= \text{The reference Fixed O\&M Local Component of tariff} \\ \text{F F. O\&M(Ref)} &= \text{The reference Fixed O\&M Foreign Component of tariff} \\ \text{CPI(Rev)} &= \text{The revised CPI (General)} \end{aligned}$$



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CPI(Ref)	=	The reference CPI (General) for the month of October 2016
US CPI(Rev)	=	The revised US CPI (All Urban Consumers)
US CPI(Ref)	=	The reference US CPI (All Urban Consumers) for the month of October 2016
ER(Rev)	=	The revised TT & OD selling rate of US dollar
ER(Ref)	=	The reference TT & OD selling rate at Reference Date (October 07, 2016 as defined in the RFP)

iii- Indexation for LIBOR/KIBOR variation

The interest part of capacity charge component will remain unchanged throughout the term except for the adjustment due to variation in interest rate as a result of variation in 3 months LIBOR and KIBOR according to the following formula:

Foreign Loan

ΔI	=	$P(Rev) * (LIBOR(Rev) - 0.8716\% / 4)$
Where:		
ΔI	=	the variation in interest charges applicable corresponding to variation in 3 months LIBOR. ΔI can be positive or negative depending upon whether $LIBOR_{(REV)}$ is $>$ or $<$ $[0.8716\%]$. 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) on a quarterly basis on the relevant quarterly calculation date. Period 1 shall commence on the date on which the 1st installment is due after availing the grace period.

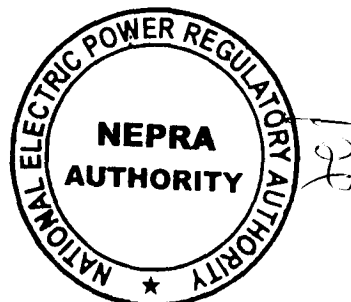
Local Loan

ΔI	=	$P(Rev) * (KIBOR(Rev) - 6.02\% / 4)$
Where:		
ΔI	=	the variation in interest charges applicable corresponding to variation in 3 months KIBOR. ΔI can be positive or negative depending upon whether $KIBOR_{(REV)}$ is $>$ or $<$ $[6.02\%]$. 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) on a quarterly basis on the relevant quarterly calculation date. Period 1 shall commence on the date on which the 1st installment is due after availing the grace period.

iv- Water Use Charge:

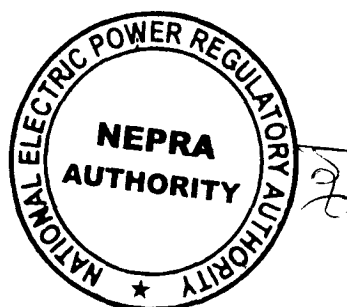
The Water Use Charge at the rate of Rs. 0.425 per kWh shall be paid by the MHPL to the GOKP as per GOP Policy, amended from time to time.

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III. Other Terms and Conditions of Tariff

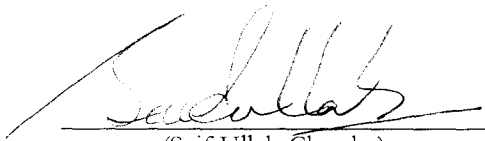
- i- All assets, equipment, machinery etc. of the plant shall be unused and new and shall be designed, manufactured, tested, procured and installed in accordance with relevant and prescribed standards, codes and guidelines.
- ii- The verification of the new machinery will be done by the independent engineer at the time of the commissioning of the plant duly verified by the power purchaser.
- iii- Income tax, worker profit participation, worker welfare funds and other taxes, levies, charges, surcharges and government levies, apart from custom duty and cess, have been accounted for in tariff. In case MHPL is required to pay any tax the sum will be reimbursed by the power purchaser subject to provision of original filling documents. Notwithstanding the above, withholding tax on dividend will not be passed through under this tariff.
- iv- No corporate income tax and no minimum turnover tax have been assumed.
- v- The plant availability will be not less than 93% for the first two years from the COD and 95% for the term of the Project.
- vi- The offered tariff shall be applicable for the term of 30 years from the date of commercial operation (COD).
- vii- No adjustment shall be allowed in this tariff to account for financial impact of any delay in project construction. However, the failure of the Sponsors to complete construction within the stipulated time will not invalidate the tariff granted to it.
- viii- The point of delivery will be the inter-connection point as per the PPA.
- ix- The grid interconnection study shall be approved by the power purchaser/NTDC.
- x- The dispatch shall be at appropriate voltage level mutually agreed between the power purchaser and the power producer.
- xi- The land shall be purchased / leased by the MHPL, cost of which is already included in the tariff and which shall not be subject to adjustment
- xii- This tariff has been determined on the basis of financial plans submitted by MHPL. MHPL shall not change, replace or remove any of their lenders without prior approval from PEDO/PPIB and where such change, replacement or removal will have an adverse impact on financing terms, tariff, GoP/Power Purchaser obligations or the project implementation schedule. The debt-equity ratio and draw-down/phasing schedule approved by NEPRA shall not be revised at COD.
- xiii- In case the negotiated spread over LIBOR/KIBOR by the MHPL is less than that proposed at the time of bidding, the saving in the spread over LI BOR/KIBOR shall be shared by the power purchaser and the power producer in the ratio of 60:40 respectively. The MHPL/power producer shall submit relevant authentic documentary evidences to NEPRA, for the aforesaid adjustment within 15 days of COD.
- xiv- No adjustment for duties and/or taxes imposed either on the MHPL or on third parties such as contractors, suppliers, etc. of the Project shall be allowed at COD.
- xv- The Contract Capacity for the purpose of calculation of Reference Tariff is the net capacity as committed by the MHPL in its application at the Reference Hydrological Conditions.



- xvi- NTDC shall responsible for constructing, financing, operating and maintaining all assets relating to interconnectivity to the grid, unless agreed otherwise between the parties in accordance with applicable rules and regulations.
- xvii- General assumptions, which are not covered in this RFP and NEPRA's applicable documents may be dealt with as per the standard terms of the PPA.

The Authority, in exercise of powers conferred under Section 31 of the Regulation of Generation, Transmission and Distribution of Electric Power Act 1997 (XL of 1997) read with Regulation 12 of the NEPRA Competitive Bidding Tariff (Approval Procedure) Regulations 2014, hereby issues this decision.

AUTHORITY

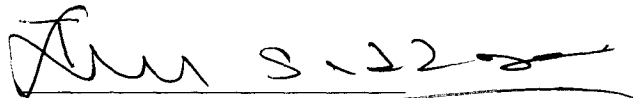


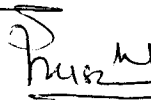
(Saif Ullah Chattha)
Member

22.X.2018



(Rehmatullah Baloch)
Vice Chairman


(Brig. (R) Tariq Saddozai)
Chairman


22 X 18

Master Hydro Power (Private) Limited
Reference Tariff

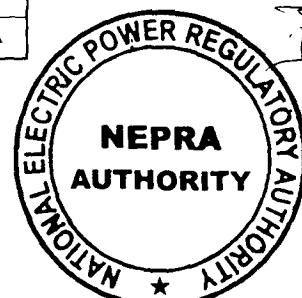
Year	Energy Purchase Price (Rs/kWh)	Capacity Purchase Price (Rs/kW/Month)							Total Tariff @ 43.6% PF Rs/kWh	Total Tariff @ 43.6% PF US Cent/kWh
	Water Use Charge	Fixed O&M Local	Fixed O&M Foreign	Insurance	Return on Equity (ROE)	Debt Servicing (Local)	Debt Servicing (Foreign)	Total Capacity		
1	0.4250	57.5903	230.3613	134.2101	860.6558	724.8045	894.7004	2,902.3223	9.5438	9.1153
2	0.4250	57.5903	230.3613	134.2101	860.6558	724.8045	894.7004	2,902.3223	9.5438	9.1153
3	0.4250	57.5903	230.3613	134.2101	860.6558	724.8045	894.7004	2,902.3223	9.5438	9.1153
4	0.4250	57.5903	230.3613	134.2101	860.6558	724.8045	894.7004	2,902.3223	9.5438	9.1153
5	0.4250	57.5903	230.3613	134.2101	860.6558	724.8045	894.7004	2,902.3223	9.5438	9.1153
6	0.4250	57.5903	230.3613	134.2101	860.6558	724.8045	894.7004	2,902.3223	9.5438	9.1153
7	0.4250	57.5903	230.3613	134.2101	860.6558	724.8045	894.7004	2,902.3223	9.5438	9.1153
8	0.4250	57.5903	230.3613	134.2101	860.6558	724.8045	894.7004	2,902.3223	9.5438	9.1153
9	0.4250	57.5903	230.3613	134.2101	860.6558	724.8045	894.7004	2,902.3223	9.5438	9.1153
10	0.4250	57.5903	230.3613	134.2101	860.6558	724.8045	894.7004	2,902.3223	9.5438	9.1153
11	0.4250	57.5903	230.3613	134.2101	860.6558	724.8045	894.7004	2,902.3223	9.5438	9.1153
12	0.4250	57.5903	230.3613	134.2101	860.6558	724.8045	894.7004	2,902.3223	9.5438	9.1153
13	0.4250	57.5903	230.3613	134.2101	860.6558	724.8045	894.7004	2,902.3223	9.5438	9.1153
14	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
15	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
16	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
17	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
18	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
19	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
20	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
21	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
22	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
23	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
24	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
25	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
26	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
27	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
28	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
29	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
30	0.4250	57.5903	230.3613	134.2101	860.6558			1,282.8175	4.4555	4.2555
Levelized Tariff	0.4250	57.5903	230.3613	134.2101	860.6558	546.1537	674.1735	2,503.1447	8.2896	7.9175
Average 1-13 years	0.4250	57.5903	230.3613	134.2101	860.6558	724.8045	894.7004	2,902.3223	9.5438	9.1153
Average 14-30 years	0.4250	57.5903	230.3613	134.2101	860.6558	-	-	1,282.8175	4.4555	4.2555
Average 1-30 years	0.4250	57.5903	230.3613	134.2101	860.6558	724.8045	894.7004	1,984.6029	6.6604	6.3614



Debt Servicing Schedule

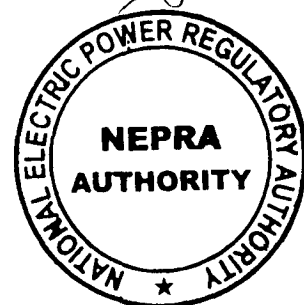
Annex-II/A

Period	Local Currency Debt				Total Debt Service	Principal Repayment	Interest	Total Debt Service
	Principal	Principal Repayment	Interest	Balance				
	Million Rs.	Million Rs.	Million Rs.	Million Rs.	Rs./kW/M	Rs./kW/M	Rs./kW/M	
Q1	6,808.56	75.53	136.51	6,733.04	212.04			
Q2	6,733.04	77.04	135.00	6,656.00	212.04			
Q3	6,656.00	78.59	133.45	6,577.41	212.04			
Q4	6,577.41	80.16	131.88	6,497.25	212.04			
Total of 1st Year (Sum Q1 to Q4)	6,808.56	311.31	536.84	6,497.25	848.15	266.0383	458.7662	724.8045
Q1	6,497.25	81.77	130.27	6,415.48	212.04			
Q2	6,415.48	83.41	128.63	6,332.08	212.04			
Q3	6,332.08	85.08	126.96	6,247.00	212.04			
Q4	6,247.00	86.79	125.25	6,160.21	212.04			
Total of 2nd Year (Sum Q1 to Q4)	6,497.25	337.04	511.11	6,160.21	848.15	288.0248	436.7796	724.8045
Q1	6,160.21	88.53	123.51	6,071.69	212.04			
Q2	6,071.69	90.30	121.74	5,981.39	212.04			
Q3	5,981.39	92.11	119.93	5,889.27	212.04			
Q4	5,889.27	93.96	118.08	5,795.32	212.04			
Total of 3rd Year (Sum Q1 to Q4)	6,160.21	364.90	483.26	5,795.32	848.15	311.8285	412.9760	724.8045
Q1	5,795.32	95.84	116.20	5,699.47	212.04			
Q2	5,699.47	97.76	114.27	5,601.71	212.04			
Q3	5,601.71	99.72	112.31	5,501.99	212.04			
Q4	5,501.99	101.72	110.31	5,400.26	212.04			
Total of 4th Year (Sum Q1 to Q4)	5,795.32	395.05	453.10	5,400.26	848.15	337.5994	387.2051	724.8045
Q1	5,400.26	103.76	108.28	5,296.50	212.04			
Q2	5,296.50	105.84	106.19	5,190.66	212.04			
Q3	5,190.66	107.97	104.07	5,082.69	212.04			
Q4	5,082.69	110.13	101.91	4,972.56	212.04			
Total of 5th Year (Sum Q1 to Q4)	5,400.26	427.70	420.45	4,972.56	848.15	365.5001	359.3044	724.8045
Q1	4,972.56	112.34	99.70	4,860.23	212.04			
Q2	4,860.23	114.59	97.45	4,745.63	212.04			
Q3	4,745.63	116.89	95.15	4,628.75	212.04			
Q4	4,628.75	119.23	92.81	4,509.52	212.04			
Total of 6th Year (Sum Q1 to Q4)	4,972.56	463.05	385.10	4,509.52	848.15	395.7066	329.0979	724.8045
Q1	4,509.52	121.62	90.42	4,387.89	212.04			
Q2	4,387.89	124.06	87.98	4,263.83	212.04			
Q3	4,263.83	126.55	85.49	4,137.28	212.04			
Q4	4,137.28	129.09	82.95	4,008.20	212.04			
Total of 7th Year (Sum Q1 to Q4)	4,509.52	501.32	346.84	4,008.20	848.15	428.4095	296.3949	724.8045
Q1	4,008.20	131.67	80.36	3,876.53	212.04			
Q2	3,876.53	134.31	77.72	3,742.21	212.04			
Q3	3,742.21	137.01	75.03	3,605.21	212.04			
Q4	3,605.21	139.75	72.28	3,465.45	212.04			
Total of 8th Year (Sum Q1 to Q4)	4,008.20	542.75	305.40	3,465.45	848.15	463.8152	260.9893	724.8045
Q1	3,465.45	142.56	69.48	3,322.90	212.04			
Q2	3,322.90	145.41	66.62	3,177.48	212.04			
Q3	3,177.48	148.33	63.71	3,029.15	212.04			
Q4	3,029.15	151.30	60.73	2,877.85	212.04			
Total of 9th Year (Sum Q1 to Q4)	3,465.45	587.60	260.55	2,877.85	848.15	502.1469	222.6575	724.8045
Q1	2,877.85	154.34	57.70	2,723.51	212.04			
Q2	2,723.51	157.43	54.61	2,566.08	212.04			
Q3	2,566.08	160.59	51.45	2,405.49	212.04			
Q4	2,405.49	163.81	48.23	2,241.68	212.04			
Total of 10th Year (Sum Q1 to Q4)	2,877.85	636.16	211.99	2,241.68	848.15	543.6466	181.1579	724.8045
Q1	2,241.68	167.09	44.95	2,074.59	212.04			
Q2	2,074.59	170.44	41.60	1,904.15	212.04			
Q3	1,904.15	173.86	38.18	1,730.29	212.04			
Q4	1,730.29	177.35	34.69	1,552.95	212.04			
Total of 11th Year (Sum Q1 to Q4)	2,241.68	688.74	159.41	1,552.95	848.15	588.5759	136.2285	724.8045
Q1	1,552.95	180.90	31.14	1,372.04	212.04			
Q2	1,372.04	184.53	27.51	1,187.52	212.04			
Q3	1,187.52	188.23	23.81	999.29	212.04			
Q4	999.29	192.00	20.04	807.28	212.04			
Total of 12th Year (Sum Q1 to Q4)	1,552.95	745.66	102.49	807.28	848.15	637.2184	87.5860	724.8045
Q1	807.28	195.85	16.19	611.43	212.04			
Q2	611.43	199.78	12.26	411.65	212.04			
Q3	411.65	203.78	8.25	207.87	212.04			
Q4	207.87	207.87	4.17	(0.00)	212.04			
Total of 13th Year (Sum Q1 to Q4)	807.28	807.28	40.87	(0.00)	848.15	689.8810	34.9235	724.8045
Total of 1 to 13th Year	6,808.56	6,808.56	4,217.41	(0.00)	11,025.97	N/A	N/A	N/A



Period	Foreign Currency Debt							
	Principal	Principal Repayment	Interest	Balance	Total Debt Service	Principal Repayment	Interest	Total Debt Service
	Million \$	Million \$	Million \$	Million \$	Million \$	Rs./\$W/M	Rs./\$W/M	Rs./KW/M
Q1	95.89	1.33	1.17	94.55	2.50			
Q2	94.55	1.35	1.15	93.20	2.50			
Q3	93.20	1.36	1.14	91.84	2.50			
Q4	91.84	1.38	1.12	90.46	2.50			
Total of 1st Year (Sum Q1 to Q4)	90.46	5.43	4.57	90.46	10.00	485.5373	409.1631	894.7004
Q1	90.46	1.40	1.10	89.06	2.50			
Q2	93.20	1.36	1.14	91.84	2.50			
Q3	91.84	1.38	1.12	90.46	2.50			
Q4	90.46	1.40	1.10	89.06	2.50			
Total of 2nd Year (Sum Q1 to Q4)	90.46	#### #	#### #	89.06	10.00	495.9124	398.7880	894.7004
Q1	89.06	1.42	1.08	87.65	2.50			
Q2	91.84	1.38	1.12	90.46	2.50			
Q3	90.46	1.40	1.10	89.06	2.50			
Q4	90.46	1.40	1.10	89.06	2.50			
Total of 3rd Year (Sum Q1 to Q4)	89.06	#### #	#### #	89.06	10.00	500.4285	394.2719	894.7004
Q1	89.06	1.42	1.08	87.65	2.50			
Q2	90.46	1.40	1.10	89.06	2.50			
Q3	90.46	1.40	1.10	89.06	2.50			
Q4	89.06	1.42	1.08	87.65	2.50			
Total of 4th Year (Sum Q1 to Q4)	89.06	#### #	#### #	87.65	10.00	503.4574	391.2429	894.7004
Q1	87.65	1.43	1.07	86.21	2.50			
Q2	90.46	1.40	1.10	89.06	2.50			
Q3	89.06	1.42	1.08	87.65	2.50			
Q4	89.06	1.42	1.08	87.65	2.50			
Total of 5th Year (Sum Q1 to Q4)	87.65	#### #	#### #	87.65	10.00	506.5232	388.1771	894.7004
Q1	87.65	1.43	1.07	86.21	2.50			
Q2	89.06	1.42	1.08	87.65	2.50			
Q3	89.06	1.42	1.08	87.65	2.50			
Q4	87.65	1.43	1.07	86.21	2.50			
Total of 6th Year (Sum Q1 to Q4)	87.65	#### #	#### #	86.21	10.00	509.5890	385.1113	894.7004
Q1	86.21	1.45	1.05	84.76	2.50			
Q2	89.06	1.42	1.08	87.65	2.50			
Q3	87.65	1.43	1.07	86.21	2.50			
Q4	87.65	1.43	1.07	86.21	2.50			
Total of 7th Year (Sum Q1 to Q4)	86.21	#### #	#### #	86.21	10.00	512.6922	382.0082	894.7004
Q1	86.21	1.45	1.05	84.76	2.50			
Q2	87.65	1.43	1.07	86.21	2.50			
Q3	87.65	1.43	1.07	86.21	2.50			
Q4	86.21	1.45	1.05	84.76	2.50			
Total of 8th Year (Sum Q1 to Q4)	86.21	#### #	#### #	84.76	10.00	515.7953	378.9051	894.7004
Q1	84.76	1.47	1.03	83.30	2.50			
Q2	87.65	1.43	1.07	86.21	2.50			
Q3	86.21	1.45	1.05	84.76	2.50			
Q4	86.21	1.45	1.05	84.76	2.50			
Total of 9th Year (Sum Q1 to Q4)	84.76	#### #	#### #	84.76	10.00	518.9363	375.7641	894.7004
Q1	84.76	1.47	1.03	83.30	2.50			
Q2	86.21	1.45	1.05	84.76	2.50			
Q3	86.21	1.45	1.05	84.76	2.50			
Q4	84.76	1.47	1.03	83.30	2.50			
Total of 10th Year (Sum Q1 to Q4)	84.76	#### #	#### #	83.30	10.00	522.0772	372.6232	894.7004
Q1	83.30	1.49	1.01	81.81	2.50			
Q2	86.21	1.45	1.05	84.76	2.50			
Q3	84.76	1.47	1.03	83.30	2.50			
Q4	84.76	1.47	1.03	83.30	2.50			
Total of 11th Year (Sum Q1 to Q4)	83.30	#### #	#### #	83.30	10.00	525.2564	369.4440	894.7004
Q1	83.30	1.49	1.01	81.81	2.50			
Q2	84.76	1.47	1.03	83.30	2.50			
Q3	84.76	1.47	1.03	83.30	2.50			
Q4	83.30	1.49	1.01	81.81	2.50			
Total of 12th Year (Sum Q1 to Q4)	83.30	#### #	#### #	81.81	10.00	528.4356	366.2648	894.7004
Q1	81.81	1.50	1.00	80.31	2.50			
Q2	84.76	1.47	1.03	83.30	2.50			
Q3	83.30	1.49	1.01	81.81	2.50			
Q4	83.30	1.49	1.01	81.81	2.50			
Total of 13th Year (Sum Q1 to Q4)	81.81	#### #	#### #	81.81	10.00	531.6535	363.0469	894.7004
Total of 1 to 13th Year	95.89	74.39	55.60	81.81	130.00	N/A	N/A	N/A

16



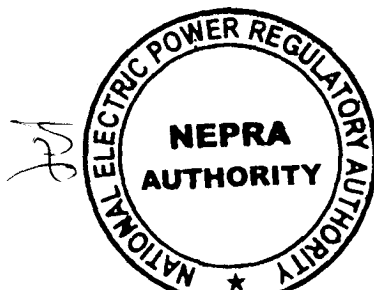
Summary of Disbursement Schedule and IDC

Annex-III/A

Annex-III/B

Local Currency					
Year	Quarter	Expenditure		Interest Rate Quarterly	IDC
		Currency	Amount		
1	Q1	PKR	1,040,227,875	2.13%	20,079,535
	Q2	PKR	184,787,205	2.13%	24,769,207
	Q3	PKR	249,372,427	2.13%	29,699,496
	Q4	PKR	223,385,710	2.13%	35,135,195
	Total of 1st Year (Sum Q1 to Q4)	PKR	1,697,773,218	8.52%	109,683,433
2	Q1	PKR	123,730,473	2.13%	38,018,157
	Q2	PKR	327,476,307	2.13%	43,142,324
	Q3	PKR	510,960,316	2.13%	53,100,072
	Q4	PKR	483,879,748	2.13%	63,975,681
	Total of 2nd Year (Sum Q1 to Q4)	PKR	1,446,046,844	8.52%	198,236,234
3	Q1	PKR	310,632,464	2.13%	71,591,606
	Q2	PKR	543,605,004	2.13%	81,074,973
	Q3	PKR	795,136,002	2.13%	96,933,531
	Q4	PKR	643,805,311	2.13%	112,478,363
	Total of 3rd Year (Sum Q1 to Q4)	PKR	2,293,178,781	8.52%	362,078,474
4	Q1	PKR	309,255,849	2.13%	121,061,259
	Q2	PKR	345,068,497	2.13%	127,604,492
	Q3	PKR	361,493,688	2.13%	135,590,678
	Q4	PKR	355,748,056	2.13%	141,878,095
	Total of 4th Year (Sum Q1 to Q4)	PKR	1,371,566,090	8.52%	526,134,525
Total Year 1 to 4	PKR	6,808,564,934		1,196,132,665	

Foreign Currency					
Year	Quarter	Expenditure		Interest Rate Quarterly	IDC
		Currency	Amount		
1	Q1	USD	14,649,579	1.22%	161,690
	Q2	USD	2,602,367	1.22%	199,453
	Q3	USD	3,511,924	1.22%	239,154
	Q4	USD	3,145,952	1.22%	282,925
	Total of 1st Year (Sum Q1 to Q4)	USD	23,909,822	4.87%	883,222
2	Q1	USD	1,742,502	1.22%	306,140
	Q2	USD	4,611,865	1.22%	347,402
	Q3	USD	7,195,879	1.22%	427,586
	Q4	USD	6,814,502	1.22%	515,162
	Total of 2nd Year (Sum Q1 to Q4)	USD	20,364,747	4.87%	1,596,290
3	Q1	USD	4,374,652	1.22%	576,489
	Q2	USD	7,655,615	1.22%	652,853
	Q3	USD	11,197,939	1.22%	780,554
	Q4	USD	9,066,741	1.22%	905,728
	Total of 3rd Year (Sum Q1 to Q4)	USD	32,294,947	4.87%	2,915,623
4	Q1	USD	4,355,265	1.22%	974,841
	Q2	USD	4,859,616	1.22%	1,027,530
	Q3	USD	5,090,933	1.22%	1,091,839
	Q4	USD	5,010,017	1.22%	1,142,468
	Total of 4th Year (Sum Q1 to Q4)	USD	19,315,831	4.87%	4,236,678
Total Year 1 to 4	USD	95,885,348		9,631,813	

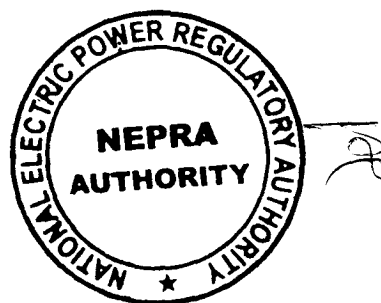


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Adjustment in the cost of Tunnelling Works due to Geological Conditions

- Subject to the verification of the Re-opener Verifier, cost variation due to geological conditions related to underground tunnelling works will be allowed at Commercial Operation Date.
- The cost of the Tunnelling Work shall be allowed to vary depending on the category of rock encountered during construction of tunnels. The increase or decrease in the cost shall be subject to the baseline conditions given below.

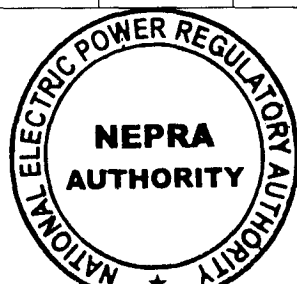
Sr.no	Rock	Rock Class		Tunnel Segment Length in Percentage %	RMR	Quantity in m3	Unit Rate Rs./m3	Total Cost of Construction Rs	Total Cost of Construction US\$
	Classification								
1	Category A	R1	Very Good	28%	> 81 - 100	60,139	9,201	553,321,775	5,284,831
2	Category B	R2	Good	26%	61 - 80	56,252	9,434	530,671,382	5,068,495
3	Category C	R3	Fair	24%	41 - 60	50,994	13,285	677,451,560	6,470,406
4	Category D	R4	Poor	16%	21 - 40	34,611	39,062	1,351,979,439	12,912,889
5	Category E	R5	Very Poor	5%	<20	10,945	46,046	503,980,532	4,813,568
Total						212,942		3,617,404,688	34,550,188



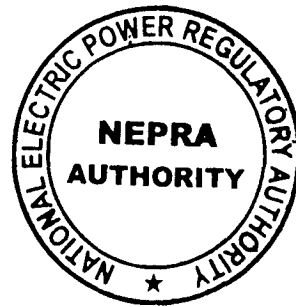
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Adjustments in EPC Cost (Reference values)

Month after Commencement date	Pak Rupees							
	Fixed	Cement	Steel	Fuel	Labour	Total Reference Amount	Escalated Amount	Total Final Amount
	U	W	X	Y	Z	Tn	Pn	Tfn=Tn+Pn
1	7,208,595	1,413,450	1,272,105	2,120,175	2,120,175	14,134,501		
2	14,417,190	2,826,900	2,544,210	4,240,350	4,240,350	28,268,999		
3	31,237,245	6,124,950	5,512,455	9,187,425	9,187,425	61,249,500		
4	26,431,515	5,182,650	4,664,385	7,773,975	7,773,975	51,826,500		
5	36,042,975	7,067,250	6,360,525	10,600,875	10,600,875	70,672,499		
6	19,222,920	3,769,200	3,392,280	5,653,800	5,653,800	37,691,999		
7	43,251,570	8,480,700	7,632,630	12,721,050	12,721,050	84,807,001		
8	72,085,950	14,134,500	12,721,050	21,201,750	21,201,750	141,344,999		
9	81,697,409	16,019,100	14,417,190	24,028,650	24,028,650	160,191,000		
10	67,280,220	13,192,200	11,872,980	19,788,300	19,788,300	131,922,000		
11	75,449,961	14,794,110	13,314,699	22,191,165	22,191,165	147,941,100		
12	57,668,760	11,307,600	10,176,840	16,961,400	16,961,400	113,076,000		
13	92,750,589	18,186,390	16,367,751	27,279,585	27,279,585	181,863,899		
14	129,754,710	25,442,100	22,897,890	38,163,150	38,163,150	254,421,002		
15	105,726,060	20,730,600	18,657,540	31,095,900	31,095,900	207,305,999		
16	134,560,440	26,384,400	23,745,960	39,576,600	39,576,600	263,844,000		
17	115,337,520	22,615,200	20,353,680	33,922,800	33,922,800	226,152,000		
18	96,114,599	18,846,000	16,961,400	28,269,000	28,269,000	188,460,000		
19	144,171,900	28,269,000	25,442,100	42,403,500	42,403,500	282,690,001		
20	168,200,550	32,980,500	29,682,450	49,470,750	49,470,750	329,804,999		
21	182,617,740	35,807,400	32,226,660	53,711,100	53,711,100	358,074,000		
22	201,840,660	39,576,600	35,618,940	59,364,900	59,364,900	395,766,000		
23	190,787,481	37,409,310	33,668,379	56,113,965	56,113,965	374,093,099		
24	148,977,630	29,211,300	26,290,170	43,816,950	43,816,950	292,113,000		
25	201,840,660	39,576,600	35,618,940	59,364,900	59,364,900	395,766,000		
26	216,257,850	42,403,500	38,163,150	63,605,250	63,605,250	424,035,000		
27	230,675,039	45,230,400	40,707,360	67,845,600	67,845,600	452,304,000		
28	184,059,458	36,090,090	32,481,081	54,135,135	54,135,135	360,900,899		
29	177,812,010	34,865,100	31,378,590	52,297,650	52,297,650	348,651,001		
30	192,229,200	37,692,000	33,922,800	56,538,000	56,538,000	376,920,000		
31	139,366,170	27,326,700	24,594,030	40,990,050	40,990,050	273,267,000		
32	133,599,294	26,195,940	23,576,346	39,293,910	39,293,910	261,959,401		
33	120,143,250	23,557,500	21,201,750	35,336,250	35,336,250	235,574,998		
34	129,754,710	25,442,100	22,897,890	38,163,150	38,163,150	254,421,002		
35	158,589,090	31,095,900	27,986,310	46,643,850	46,643,850	310,959,000		
36	105,726,060	20,730,600	18,657,540	31,095,900	31,095,900	207,305,999		
37	93,231,162	18,280,620	16,452,558	27,420,930	27,420,930	182,806,200		
38	52,863,030	10,365,300	9,328,770	15,547,950	15,547,950	103,653,001		
39	85,061,421	16,678,710	15,010,839	25,018,065	25,018,065	166,787,100		
40	80,736,264	15,830,640	14,247,576	23,745,960	23,745,960	158,306,400		



Month after Commencement date	Pak Rupees							
	Fixed	Cement	Steel	Fuel	Labour	Total Reference Amount	Escalated Amount	Total Final Amount
	<i>U</i>	<i>W</i>	<i>X</i>	<i>Y</i>	<i>Z</i>	<i>Tn</i>	<i>Pn</i>	<i>Tfn=Tn+Pn</i>
41	79,294,545	15,547,950	13,993,155	23,321,925	23,321,925	155,479,499		
42	86,503,140	16,961,400	15,265,260	25,442,100	25,442,100	169,614,000		
43	35,081,829	6,878,790	6,190,911	10,318,185	10,318,185	68,787,899		
44	15,378,336	3,015,360	2,713,824	4,523,040	4,523,040	30,153,600		
45	21,625,785	4,240,350	3,816,315	6,360,525	6,360,525	42,403,500		
46	12,014,325	2,355,750	2,120,175	3,533,625	3,533,625	23,557,501		
47	5,766,876	1,130,760	1,017,684	1,696,140	1,696,140	11,307,600		
48	5,286,303	1,036,530	932,877	1,554,795	1,554,795	10,365,300		
Total	4,805,729,998	942,300,001	848,070,000	1,413,450,000	1,413,450,000	9,423,000,000		



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