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PART II

**Statutory Notifications (S. R. O.)**

GOVERNMENT OF PAKISTAN
**MINISTRY OF ENERGY**
**(Power Division)**

NOTIFICATION

*Islamabad, the 6th December, 2019*

**S. R. O. 1537(I)/2019.—** In pursuance of sub-section (7) of section 31 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 and in supersession Notification No. S. R. O. 1068(I)/2018, dated 13th August, 2018, the Federal Government is pleased to notify as under the National Electric Power Regulatory negotiated power acquisition contract for import of 7007 MW from Azad Pattan Hydro Power Project Located in the Azad Jammu and Kashmir (AJK) on the tariff proposal submitted by Central Power Purchasing Authority (CPPA-G), namely:—



*Price: Rs. 40.00*

[1933(2019)/Ex. Gaz.]

| Tariff Components | Year 1-12 | Year 13-30 | Indexation |
|---|---|---|---|
| **Variable Charge (Rs/kWh)** | | | |
| Variable O&M — Local | 0.1032 | 0.1032 | Pakistan CPI |
| Water Use Charge | 0.4250 | 0.4250 | |
| **Fixed Charge (Rs/kW/M)** | | | |
| Fixed O&M — Local | 109.8811 | 109.8811 | Pakistan CPI |
| Fixed O&M — Foreign | 164.8217 | 106.8217 | PKR/US$, US CPI |
| Insurance | 95.6998 | 95.6998 | PKR/US$ |
| Debt Service (Local) | | | KIBOR |
| Debt Service (Foreign) | 1,467.7894 | | LIBOR, PKR/US$ |
| Return on Equity (ROE) | 722.7703 | 768.2878 | PKR/US$ |
| ROE During Construction | 491.8689 | 491.8689 | PKR/US$ |

i. The reference tariff has been calculated on the basis of net contracted capacity of 693.70 MW and net annual energy production of 3,265.81 GWh.

ii. 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 APPL in accordance with the GOP Policy for Power Generation Projects 2002 as amended from time of time.

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 12 years of commercial operation of plant after COD.

V. Redemption of equity has been allowed after 12 years of commercial operations of the plant.

vi. Sinosure Fee on debt component of tariff for 12 years period after COD is allowed at per annum rate of 0.6% (calculated on semi-annual basis) and is given in the tariff table attached herewith as Annex-III.

vii. The reference PKR/Dollar rate has been assumed at 1 US$ = 104.827 PKR.

viii. The component wise tariff is indicated at Annex-III.

ix. Debt Servicing Schedules are attached as Annex-IV

## I. One-Time Adjustments

a. The Principal repayment and the cost of debt will be adjusted at COD as per the actual borrowing composition, LIBOR and KIBOR at the relevant date.

b. Interest During Construction (IDC) will be adjusted at COD on the basis of actual debt composition, debt drawdown of loan (not exceeding the amount allowed by the Authority) and applicable 6-months LIBOR & KIBOR during the actual project construction period (not exceeding the construction period allowed by the Authority). In case of any savings resulting from reduction in construction period, IDC shall accordingly be adjusted in tariff. The increase due to delay in construction shall however, not be allowed.

c. The specific items of project cost to be paid in foreign currency will be adjusted at COD on account of actual variation in exchange rate over the reference PKR/US$ exchange rate of Rs. 104.827 on production of verifiable documentary evidence to the satisfaction of the Authority.

d. Duties and/or taxes, not being of refundable nature, imposed on the Project Company up to the commencement of its commercial operations for the import of its plant, machinery and equipment will be adjusted on actual basis at COD, as against reference allowed amount of US$ 17.05 Million, upon production of verifiable documentary evidence to the satisfaction of the Authority.

e. Civil works cost will be adjusted on account of variation in the price of construction material (Cement, Steel, Labour and Fuel) during the project construction period based on mechanism attached herewith as Annex-I.

f. The prices of tunnels will be adjusted due to variation in rock type/classification in accordance with the mechanism attached herewith as Annex-II. However, the total quantities shall not be varied and remained fixed as on signing of the Contract.

g. Cost of land and resettlement will be adjusted in accordance with the Hydropower Mechanism based on authentic documentary evidence at COD.

h. Insurance during construction will be adjusted at COD based on actual subject to the maximum of 2% of the adjusted and approved EPC cost upon production of verifiable documentary evidence to the satisfaction of the Authority.

i. Financial charges will be adjusted at COD on the basis of actual subject to the maximum of 2.5% of the total debt (excluding the impact of interest during construction, Sinosure fees and financial charges) allowed on production of authentic documentary evidence.

j. Return on Equity (ROE) and Return on Equity During Construction (ROEDC) will be calculated at COD on the basis of actual equity injections and PKR/US$ exchange rate variation (within the overall equity allowed by the Authority at COD) over the construction period of 69 months allowed by the Authority.

k. In case, the spreads on LIBOR and KIBOR are agreed at lower than 410 basis points and 275 basis points respectively, the benefit of such reduction in rate will be adjusted in proportion of 40% to the Project Company and 60% to the consumer through necessary adjustment in tariff.

l. The adjustment for Special Return on Equity in tariff for the 30-month period will be allowed at COD on the basis of actual equity injections prior to the financial close date on the basis of audited accounts and verifiable documentary evidence to be provided by APPL.

m. The amount of Sinosure Fee in project cost based on applicable foreign debt for the project construction period (69 months) and Sinosure component based on applicable foreign debt component for operational period after COD (12 years) will be adjusted at COD on the basis of variation in PKR/US$ exchange rate and based on finalized terms with insurance provider subject to the maximum rate of 0.6% per annum on production of reliable documentary evidence to the satisfaction of the Authority. The reference tariff table for each year of applicable Sinosure Fee will be revised accordingly.

n. The reference tariff table shall be revised at COD while taking in to account the above adjustments. APPL shall submit its request to the Authority within 90 days of COD for necessary adjustments in tariff.

II. **<u>Pass-Through Items</u>**

No provision for income tax has been accounted for in the tariff. If the power producer is obligated to pay any such tax, the exact amount paid by the power producer (the Project Company) shall be reimbursed by the Power Purchaser to the Project 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 in the Reference Tariff.

Withholding tax shall be paid @ 7.5% of the return on equity (including return on equity during construction). The Power Purchaser shall make payment on account of withholding tax at the time of actual payment of dividend subject to maximum of 7.5% of 17% 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

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

In case the Project 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 Project 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 payout.

**III. Hydrological Risk**

Hydrological Risk shall be borne by the Power Purchaser in accordance with the GoP Policy for Power Generation Projects, 2002.

**IV. Indexation**

The following indexation shall be applicable to the reference tariff:

(i) Indexation applicable to O&M

The Variable O&M cost is based on 100% local. The Fixed O&M cost is based on 40% local and 60% foreign expense. The local part of O&M will be adjusted on account of Inflation (CPI General), whereas the foreign part of O&M will be adjusted on account of Rupee/Dollar exchange rate variation and US CPI. Quarterly adjustment for local inflation, foreign inflation and exchange rate variation will be made on 1st July, 1st October, 1st January & 1st April respectively on the basis of the latest available information with respect to WPI (or alternative index as determined by the Authority), US CPI (notified 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:

a. Fixed O&M

$FO\&M_{(LREV)}$ = $FO\&M_{(LREF)}$ * $CPI_{(REV)}$ / $CPI_{(REF)}$

$FO\&M_{(FREV)}$ = $FO\&M_{(FREF)}$ * $USCPI_{(REV)}$ / $USCPI_{(REV)}$ $ER_{REV)}$ / *$ER_{(REF)}$

Where:

| | | |
|---|---|---|
| $FO\&M_{(LREV)}$ | = | The revised applicable Fixed O&M local component of tariff indexed with Pakistan CPI (General). |
| $FO\&M_{(FREV)}$ | = | The revised applicable Fixed O&M foreign component of tariff indexed with US CPI and exchange rate variation. |
| $FO\&M_{(LREF)}$ | = | The reference fixed O&M local component of tariff for the relevant period. |
| $FO\&M_{(FREF)}$ | = | The reference fixed O&M foreign component of tariff for the relevant period. |
| $CPI_{(REV)}$ | = | The Revised Pakistan CPI (General) as notified by the Pakistan Bureau of Statistics for the relevant month. |
| $CPI_{(REF)}$ | = | The Reference Pakistan CPI (General) of June 2017 as notified by the Pakistan Bureau of Statistics. |
| US $CPI_{(REV)}$ | = | The Revised US Consumer Price Index (All Urban Consumers) notified by the Bureau of Labor Statistics. |

$US\ CPI_{(REF)}$ = Reference US CPI (All Urban Consumers) notified by the Bureau of Labor Statistics for the month of June 2017.

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

$ER_{(REF)}$ = The reference TT and OD selling rate of US dollar of 104.827

b. Variable O&M

$VO\&M_{(LREV)} = VO\&M_{(LREF)} * CPI_{(REV)} / CPI_{(REF)}$

$VO\&M_{(FREV)} = VO\&M_{(FREF)} * USCPI_{(REV)} / USCPI_{(REV)} * ER_{(REV)} / ER_{(REF)}$

Where:

$VO\&M_{(LREV)}$ = The revised applicable Variable O&M local component of indexed with Pakistan CPI (General).

$VO\&M_{(FREV)}$ = The revised applicable Variable O&M foreign component of tariff indexed with US CPI and exchange rate variation.

$VO\&M_{(LREF)}$ = The reference variable O&M local component of tariff for the relevant period.

$VO\&M_{(FREF)}$ = The reference variable O&M foreign component of tariff for the relevant period.

$CPI_{(REV)}$ = The Revised Pakistan CPI (General) as notified by the Pakistan Bureau of Statistics for the relevant month.

$CPI_{(REF)}$ = The Reference Pakistan CPI (General) of June 2017 as notified by the Pakistan Bureau of Statistics.

$US\ CPI_{(REV)}$ = The Revised US Consumer Price Index (All Urban Consumers) notified by the Bureau of Labor Statistics.

| | | |
|---|---|---|
| $\text{US CPI}_{(REF)}$ | = | Reference US CPI (All Urban Consumers) notified by the Bureau of Labor Statistics for the month of June 2017. |
| $\text{ER}_{(REV)}$ | = | The revised TT and OD selling rate of US dollar as notified by the National Bank of Pakistan. |
| $\text{ER}_{(REF)}$ | = | The reference TT and OD selling rate of US dollar of 104.827 |

(ii) Water Use Charges

Water Use Charge will be paid on units delivered basis and revised/ indexed as per government policy.

(iii) Insurance

Insurance cost component of tariff, in case insurance is denominated 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% of the EPC cost on production of Authentic documentary evidence by APPL, according to the following formula:

$$\text{Ins}_{(REV)} = \text{Ins}_{(REF)} * \text{ER}_{(REV)} / \text{ER}_{(REF)}$$

Where;

| | | |
|---|---|---|
| $\text{Ins}_{(REV)}$ | = | Revised Insurance cost component of tariff adjusted with the exchange rate variation (PKR/US$) |
| $\text{Ins}_{(REF)}$ | = | Reference insurance cost component of tariff for the relevant period. |
| $\text{ER}_{(REV)}$ | = | The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan. |
| $\text{ER}_{(REF)}$ | = | The reference TT &OD selling rate of US dollar as notified by the National Bank of Pakistan. |

(iv) Adjustment for LIBOR variation

The interest part of fixed charge component will remain un-changed throughout the term except for the adjustment due to exchange rate variation and variation in 6 months LIBOR, while spread of 4.10% on LIBOR remaining the same, according to the following formula:

$\Delta I = P_{(REV)} * (LIBOR_{(REV)} — 1.42239\%) / 2$

Where;

$\Delta I$ = the variation in interest charges applicable corresponding to variation in six-month LIBOR. $\Delta$ I can be positive or negative depending upon whether LIBOR $_{(REV)}$ > or < 1.42239%. The interest payment obligation will be enhanced or reduced to the extent of $\Delta$ I for each period under adjustment applicable on bi-annual basis.

$P_{(REV)}$ = the outstanding principal (as indicated in the attached debt service schedule to this order at Annex-IV) on a semi-annual basis at the relevant calculations dates.

(v) Adjustment for KIBOR Variation

The interest part of fixed charge component will remain un-changed throughout the term except for the adjustment due to variation in 6 months KIBOR, while spread of 2.75% on KIBOR remaining the same, according to the following formula:

$\Delta I = P_{(REV)} * (KIBOR_{(REV)} — 6.15\%) / 2$

Where;

$\Delta I$ = the variation in interest charges applicable corresponding to variation in six-month LIBOR. $\Delta$ I can be positive or negative depending upon whether KIBOR $_{(REV)}$ > or < 6.15%. The interest payment obligation will be enhanced or reduced to the extent of $\Delta$ I for each period under adjustment applicable on bi-annual basis.

$P_{(REV)}$ = the outstanding principal on a semi-annual basis at the relevant calculations dates.

(vi) Return on Equity

Return on equity (ROE) as well as Return on Equity during Construction (ROEDC) components of tariff shall be adjusted for variation in PKR/US$ exchange rate 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/M adjusted with exchange rate variation. |
| $ROEDC_{(REV)}$ | = | Revised Return on Equity during Construction component of tariff in Rs/kW/M adjusted with exchange rate variation. |
| $ROE_{(REF)}$ | = | Reference Return on Equity component of tariff expressed in Rs/kW/M for the relevant period. |
| $ROEDC_{(REF)}$ | = | Reference Return on Equity during Construction component of tariff expressed in Rs/kW/M for the relevant period. |
| $ER_{(REV)}$ | = | Revised TT and OD selling rate of US dollar as notified by the National Bank of Pakistan. |
| $ER_{(REF)}$ | = | Reference TT and OD selling rate of US dollar. |

*Note*:—

Adjustment on account of inflation, foreign exchange rate variation and LIBOR/KIBOR variation will be approved by the Authority within fifteen working days after receipt of APPL's request for adjustment in tariff in accordance with the requisite indexation mechanism stipulated herein-above.

V. **Other Terms and Conditions of Tariff**

Design & Manufacturing Standards:

Hydel Power 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 Hydel Power 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 hydel generating units.

Emissions Trading/Carbon Credits:

The Project Company shall process and obtain emissions/carbon credits expeditiously and credit the proceeds to the Power Purchaser as per the policy issued by the Federal Government.

Annex I

**One-Time Adjustment in Reference EPC Cost for Civil Works cost escalation**

The cost of civil works will be adjusted due to variation in the prices/indices of a selected number of cost elements. The method is set out hereunder for adjusting the Contract Price for changes in costs for cement, fuel, re-inforcement and labour obtained and utilized by the Contractor in Pakistan.

The changes in costs shall only be adjusted in local currency portion on the basis of "rise and fall" of the prices of the above specified materials and labour.

The formula by which the indexations are applied is given below:

$$Pn = Vn \times [(Cn - Co)/Co] + Wn \times [(Sn - So)/So] + Yn \times [(Fn - Fo)/Fo] + Zn \times [(Ln - Lo)/Lo]$$

$$Tfn = Tn + Pn$$

Where:

"Pn" is the adjustment factor to be applied to the estimated value of the work carried out in month "n"

"Vn", "Wn", "Yn", and "Zn" are the reference values for the relevant month "n" based on the co-efficients representing the estimated proportion of each cost element – cement, re-inforcing steel, fuel and labor respectively, in the works;

"Lo", "Fo", "Co", and "So" are the base cost indices or reference prices corresponding to the above cost elements;

"Ln", "Fn", "Cn", and "Sn" are the cost indices or prices corresponding to the above cost elements in month "n";

Tfn is the Total Final Amount for the relevant month n, after adding the Escalated Amount (Pn to the Total Reference Amount Tn) as given in Table 1.

Tn is the Total Reference Amount for the relevant month "n" from Construction Start Date.

The reference indices of the specified input cost items as agreed and incorporated in the EPC contract are as under:

| **Cost Element** | **Reference Index** | **Remarks** |
|---|---|---|
| Labor (L) | 230.48 | Applicable index of "Construction Wage Rates" of consumer Price Index Number by Major Groups and selected Commodities of the published in Monthly Bulletin of Statistics of November 2016 by Pakistan Bureau of Statistics (PBS) |
| Fuel (F) | 144.34 | Applicable index of "Diesel Oil" of Index Numbers of Wholesale Prices by Commodities of published in Monthly Bulletin of Statistics of November 2016 by PBS |
| Cement (C) | 212.72 | Applicable index of "Cement" of Index Numbers of Wholesale Prices by Commodities of published in Monthly Bulletin of Statistics of November 2016 by PBS |
| Re-inforcing Steel (S) | 120.20 | Applicable index of "Steel Bars & Sheets" of Index Numbers of Wholesale Prices by Commodities of published in Monthly Bulletin of Statistics of November 2016 by PBS |

*Material Cost Escalation Table-I*

| Month | Amounts (PKR) | | | | | | Coefficients | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fixed (Z) | Cement | Steel (W) | Fuel (Y) | Labor (V) | Total | Fixed | Cement | Steel | Fuel | Labor |
| | PKR | PKR | PKR | PKR | PKR | PKR | A | B | C | d | e |
| 1 | 567,177,594.26 | 185,362,180.27 | 148,667,312.00 | 165,185,902.22 | 113,506,312.81 | 1,179,899,301.56 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 3 | 133,817,645.85 | 43,733,622.14 | 35,075,979.57 | 38,973,310.63 | 26,780,232.02 | 278,380,790.20 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 5 | 1,021,133,213.81 | 333,721,713.94 | 267,657,135.30 | 297,396,817.00 | 204,354,098.54 | 2,124,262,978.60 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 7 | 278,382,514.14 | 90,979,598.44 | 72,968,996.84 | 81,076,663.16 | 55,711,249.97 | 579,119,022.55 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 9 | 432,334,754.71 | 141,293,509.39 | 113,322,610.97 | 125,914,012.19 | 86,520,914.09 | 899,385,801.35 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 10 | 714,484,850.21 | 233,504,410.17 | 187,279,157.74 | 208,087,953.05 | 142,986,150.59 | 1,486,342,521.76 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 13 | 2,366,780,616.83 | 773,499,552.54 | 620,375,198.09 | 689,305,775.65 | 473,651,540.13 | 4,923,612,683.24 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 14 | 1,880,647,000.55 | 614,623,764.90 | 492,950,950.84 | 547,723,278.71 | 376,364,138.66 | 3,912,309,133.66 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 15 | 222,303,827.50 | 72,652,239.03 | 58,269,777.96 | 64,744,197.73 | 44,488,513.01 | 462,458,555.24 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 16 | 1,102,883,405.73 | 360,438,907.93 | 289,085,311.26 | 321,205,901.40 | 220,714,340.82 | 2,294,327,867.14 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 21 | 994,308,278.83 | 324,954,921.17 | 260,625,843.84 | 289,584,270.93 | 198,985,763.31 | 2,068,459,078.07 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 22 | 1,790,078,281.41 | 585,024,543.39 | 469,211,282.42 | 521,345,869.35 | 358,239,090.23 | 3,723,899,066.79 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 24 | 356,688,431.24 | 116,571,151.55 | 93,494,367.25 | 103,882,630.28 | 71,382,207.38 | 742,018,787.68 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 25 | 726,333,574.55 | 237,376,751.74 | 190,384,918.65 | 211,538,798.50 | 145,357,374.40 | 1,510,991,417.84 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 26 | 995,591,705.43 | 325,374,364.31 | 260,962,252.72 | 289,958,058.58 | 199,242,608.82 | 2,071,128,989.86 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 27 | 871,631,234.69 | 284,862,215.46 | 228,470,013.67 | 253,855,570.74 | 174,435,042.18 | 1,813,254,076.74 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 32 | 448,377,707.57 | 146,536,588.02 | 117,527,753.60 | 130,586,392.89 | 89,731,507.11 | 932,759,949.18 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 33 | 919,199,106.54 | 300,408,112.42 | 240,938,396.97 | 267,709,329.97 | 183,954,553.88 | 1,912,209,499.78 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 37 | 335,514,970.56 | 109,651,345.69 | 87,944,427.48 | 97,716,030.54 | 67,144,872.41 | 697,971,646.68 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 38 | 847,389,170.55 | 276,939,543.78 | 222,115,738.49 | 246,795,264.98 | 169,583,603.51 | 1,762,823,321.31 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 39 | 811,357,889.24 | 265,163,978.37 | 212,671,300.28 | 236,301,444.76 | 162,372,849.90 | 1,687,867,462.54 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 40 | 602,329,276.63 | 196,850,279.50 | 157,881,191.71 | 175,423,546.34 | 120,541,036.84 | 1,253,025,331.03 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 42 | 798,966,911.71 | 261,114,420.28 | 209,423,405.19 | 232,692,672.43 | 159,893,107.77 | 1,662,090,517.39 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 43 | 685,981,726.02 | 224,189,159.89 | 179,807,983.10 | 199,786,647.89 | 137,281,968.05 | 1,427,047,484.96 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 44 | 453,108,607.87 | 148,082,717.49 | 118,767,806.51 | 131,964,229.46 | 90,678,277.67 | 942,601,639.00 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 48 | 222,903,949.04 | 72,848,367.79 | 58,427,080.46 | 64,918,978.29 | 44,608,612.23 | 463,706,987.81 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 49 | 1,991,345,359.03 | 650,801,655.72 | 521,966,954.93 | 579,963,283.26 | 398,517,627.50 | 4,142,594,880.44 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 50 | 1,129,295,024.75 | 369,070,622.82 | 296,008,265.28 | 328,898,072.53 | 225,999,961.27 | 2,349,271,946.63 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 52 | 827,636,103.71 | 270,483,944.03 | 216,938,109.15 | 241,042,343.50 | 165,630,524.60 | 1,721,731,024.99 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 54 | 102,878,776.87 | 33,622,333.78 | 26,966,353.00 | 29,962,614.44 | 20,588,596.49 | 214,018,674.58 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 55 | 237,375,270.94 | 77,577,813.74 | 62,220,270.73 | 69,133,634.14 | 47,504,682.89 | 493,811,672.43 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 56 | 104,210,621.53 | 34,057,600.67 | 27,315,453.12 | 30,350,503.46 | 20,855,131.66 | 216,789,310.44 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 57 | 1,120,919,081.66 | 366,333,238.46 | 293,812,781.96 | 326,458,646.62 | 224,323,727.18 | 2,331,847,475.89 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 63 | 1,168,921,143.12 | 382,021,035.12 | 306,394,974.06 | 340,438,860.07 | 233,930,130.99 | 2,431,706,143.37 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 65 | 250,361,797.80 | 81,822,006.31 | 65,624,269.86 | 72,915,855.40 | 50,103,609.21 | 520,827,538.60 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 67 | 1,275,982,375.38 | 417,010,258.31 | 334,457,622.84 | 371,619,580.93 | 255,355,740.61 | 2,654,425,578.07 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| 69 | 508,660,014.76 | 166,237,753.94 | 133,328,816.02 | 148,143,128.91 | 101,795,492.87 | 1,058,165,206.50 | 48.07% | 15.71% | 12.60% | 14.00% | 9.62% |
| Note | 4,776,846,887.22 | - | - | - | - | 4,776,846,887.22 | 100.00% | - | - | - | - |
| **TOTAL** | **34,074,138,702.24** | **9,574,796,222.47** | **7,679,340,063.85** | **8,532,600,070.94** | **5,863,115,191.61** | **65,723,990,251.11** | **51.84%** | **14.57%** | **11.68%** | **12.98%** | **8.92%** |

Note: **This pertains to design cost of US$ 45,586,860 which is part of the fixed cost component of the Civil Works Cost under Construction Contract.**

Annex-II

**Adjustment in the cost of Tunneling Works due to Geological Conditions**

a. Subject to the verification of the Re-opener Verifier, cost variation due to geological conditions related to underground tunneling works will be allowed at Commercial Operation Date.

b. The cost of the Tunneling 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 in Table 1, 2 & 3 of this Annex.

Table 1 - Diversion Tunnels Geological Cost Variation

| Diversion Tunnels | | | |
|---|---|---|---|
| Rock Class | RMR | Price PKR per meter | Length of Tunnel (m) |
| Very Good Rock | >80 | 6,547,216 | 0 |
| Good Rock | 61-80 | 6,633,927 | 91 |
| Fair Rock | 41-60 | 6,782,310 | 360 |
| Poor Rock | 21-40 | 7,682,569 | 360 |
| Very Poor | 0-20 | 7,988,273 | 90 |
| | | Total Price | **6,523,354,440** |

Table 2 - Upstream Waterway Penstock Tunnels Geological Cost Variation

| **Upstream Waterway Penstock Tunnels** | | | |
|---|---|---|---|
| **Rock Class** | **RMR** | **Price PKR per meter** | **Length of Tunnel (m)** |
| Very Good Rock | >80 | 2,015,097 | 0 |
| Good Rock | 61-80 | 2,071,956 | 65 |
| Fair Rock | 41-60 | 3,091,004 | 260 |
| Poor Rock | 21-40 | 3,356,806 | 260 |
| Very Poor | 0-20 | 3,511,503 | 65 |
| | | **Total Price** | **2,039,355,435** |

Table 3 - Downstream Waterway Tunnels Cost Variation

| Downstream Waterway Tunnels | | | |
|---|---|---|---|
| Rock Class | RMR | Price PKR per meter | Length of Tunnel (m) |
| Very Good Rock | >80 | 4,965,371 | 0 |
| Good Rock | 61-80 | 5,139,488 | 78 |
| Fair Rock | 41-60 | 5,608,324 | 312 |
| Poor Rock | 21-40 | 5,714,761 | 312 |
| Very Poor | 0-20 | 6,266,236 | 78 |
| | | **Total Price** | **4,422,448,992** |

**Annex-III**

**AZAD PATTAN HYDROPOWER PROJECT**
**REFERENCE TARIFF TABLE**

| Period | Water Use Charge | Variable O&M Local | Total EPP | Fixed O&M | | Insurance | ROEDC | ROE | Sinosure Fee | Debt Servicing | | Total CPP | Total PKR/Kwh | Total US$ Cents/Kwh |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Foreign | Local | | | | | Principal | Interest | | | |
| 1 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 722.7703 | 80.6916 | 773.9610 | 693.8284 | 3,133.52 | 8.5154 | 8.1233 |
| 2 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 722.7703 | 75.7878 | 817.2922 | 650.4971 | 3,128.62 | 8.5029 | 8.1114 |
| 3 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 722.7703 | 70.6095 | 863.0494 | 604.7400 | 3,123.44 | 8.4898 | 8.0988 |
| 4 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 722.7703 | 65.1413 | 911.3684 | 556.4210 | 3,117.97 | 8.4758 | 8.0855 |
| 5 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 722.7703 | 59.3670 | 962.3926 | 505.3968 | 3,112.20 | 8.4611 | 8.0715 |
| 6 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 722.7703 | 53.2693 | 1,016.2734 | 451.5160 | 3,106.10 | 8.4456 | 8.0567 |
| 7 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 722.7703 | 46.8303 | 1,073.1708 | 394.6186 | 3,099.66 | 8.4291 | 8.0410 |
| 8 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 722.7703 | 40.0308 | 1,133.2537 | 334.5357 | 3,092.86 | 8.4118 | 8.0245 |
| 9 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 722.7703 | 32.8506 | 1,196.7004 | 271.0890 | 3,085.68 | 8.3935 | 8.0070 |
| 10 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 722.7703 | 25.2684 | 1,263.6992 | 204.0902 | 3,078.10 | 8.3742 | 7.9886 |
| 11 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 722.7703 | 17.2617 | 1,334.4491 | 133.3403 | 3,070.09 | 8.3538 | 7.9691 |
| 12 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 722.7703 | 8.8067 | 1,409.1600 | 58.6294 | 3,061.64 | 8.3322 | 7.9485 |
| 13 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 14 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 15 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 16 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 17 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 18 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 19 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 20 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 21 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 22 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 23 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 24 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 25 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 26 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 27 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 28 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 29 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| 30 | 0.4250 | 0.1032 | 0.5282 | 164.8217 | 109.8811 | 95.6998 | 491.8689 | 768.2878 | | | | 1,630.56 | 4.6845 | 4.4688 |
| **Levelized Tariff** | **0.4250** | **0.1032** | **0.5282** | **164.8217** | **109.8811** | **95.6998** | **491.8689** | **735.3882** | **39.8540** | **722.6120** | **338.2934** | **2,698.4191** | **7.4064** | **7.0653** |

*Withholding Tax on Dividend and Special Return on Equity have an additional estimated impact of US Cents/kWh 0.2283 & US Cents/kWh 0.0596 respectively on the levelized tariff.

**Azad Pattan Hydropower Project**

**Debt Service Schedule for Foreign Debt (in US$)**

**Annex-IV**

| Semi-Annual Period | Opening Balance | Interest | Principal | Debt Service | Closing Balance | Annual Principal Repayment | Annual Interest Repayment | Annual Debt Servicing |
|---|---|---|---|---|---|---|---|---|
| | US$ | US$ | US$ | US$ | US$ | Rs. /KW/M | Rs./KW/M | Rs./KW/M |
| 1 | 1,012,866,990 | 27,967,233 | 30,311,961 | 58,279,193 | 982,555,029 | | | |
| 2 | 982,555,029 | 27,130,260 | 31,148,933 | 58,279,193 | 951,406,096 | 773.9610 | 693.8284 | 1,467.7894 |
| 3 | 951,406,096 | 26,270,178 | 32,009,016 | 58,279,193 | 919,397,080 | | | |
| 4 | 919,397,080 | 25,386,346 | 32,892,847 | 58,279,193 | 886,504,233 | 817.2922 | 650.4971 | 1,467.7894 |
| 5 | 886,504,233 | 24,478,111 | 33,801,083 | 58,279,193 | 852,703,151 | | | |
| 6 | 852,703,151 | 23,544,797 | 34,734,396 | 58,279,193 | 817,968,754 | 863.0494 | 604.7400 | 1,467.7894 |
| 7 | 817,968,754 | 22,585,712 | 35,693,481 | 58,279,193 | 782,275,273 | | | |
| 8 | 782,275,273 | 21,600,146 | 36,679,048 | 58,279,193 | 745,596,226 | 911.3684 | 556.4210 | 1,467.7894 |
| 9 | 745,596,226 | 20,587,366 | 37,691,828 | 58,279,193 | 707,904,398 | | | |
| 10 | 707,904,398 | 19,546,621 | 38,732,572 | 58,279,193 | 669,171,826 | 962.3926 | 505.3968 | 1,467.7894 |
| 11 | 669,171,826 | 18,477,139 | 39,802,054 | 58,279,193 | 629,369,772 | | | |
| 12 | 629,369,772 | 17,378,127 | 40,901,067 | 58,279,193 | 588,468,705 | 1,016.2734 | 451.5160 | 1,467.7894 |
| 13 | 588,468,705 | 16,248,768 | 42,030,425 | 58,279,193 | 546,438,280 | | | |
| 14 | 546,438,280 | 15,088,226 | 43,190,967 | 58,279,193 | 503,247,313 | 1,073.1708 | 394.6186 | 1,467.7894 |
| 15 | 503,247,313 | 13,895,640 | 44,383,554 | 58,279,193 | 458,863,760 | | | |
| 16 | 458,863,760 | 12,670,123 | 45,609,070 | 58,279,193 | 413,254,690 | 1,133.2537 | 334.5357 | 1,467.7894 |
| 17 | 413,254,690 | 11,410,768 | 46,868,425 | 58,279,193 | 366,386,264 | | | |
| 18 | 366,386,264 | 10,116,639 | 48,162,554 | 58,279,193 | 318,223,710 | 1,196.7004 | 271.0890 | 1,467.7894 |
| 19 | 318,223,710 | 8,786,777 | 49,492,416 | 58,279,193 | 268,731,294 | | | |
| 20 | 268,731,294 | 7,420,195 | 50,858,998 | 58,279,193 | 217,872,296 | 1,263.6992 | 204.0902 | 1,467.7894 |
| 21 | 217,872,296 | 6,015,879 | 52,263,314 | 58,279,193 | 165,608,982 | | | |
| 22 | 165,608,982 | 4,572,787 | 53,706,406 | 58,279,193 | 111,902,575 | 1,334.4491 | 133.3403 | 1,467.7894 |
| 23 | 111,902,575 | 3,089,848 | 55,189,345 | 58,279,193 | 56,713,230 | | | |
| 24 | 56,713,230 | 1,565,963 | 56,713,230 | 58,279,193 | (0) | 1,409.1600 | 58.6294 | 1,467.7894 |

[No. Tariff/AHP/2014.]

SYED MATEEN AHMED,
*Section Officer (Tariff).*

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