



National Electric Power Regulatory Authority
Islamic Republic of Pakistan

NEPRA Tower, Attaturk Avenue (East), G-5/1, Islamabad.
Ph: +92-51-9206500, Fax: +92-51-2600026
Web: www.nepra.org.pk, E-mail: registrar@nepra.org.pk

No. NEPRA/TRF-408/PTPL-2017/8922-8924
June 7, 2018

Subject: Decision of the Authority in the matter of Motion for Leave for Review filed by Punjab Thermal Power (Private) Limited against Authority's Decision dated December 26, 2017 [Case No. NEPRA/TRF-408/PTPL-2017]

Dear Sir,

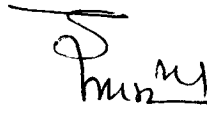
This is in continuation of this office letter No. NEPRA/TRF-408/PTPL-2017/20789-20791 dated December 26, 2017 whereby Determination of the Authority in the matter of Tariff Petition filed by Punjab Thermal Power (Private) Limited for Determination of Generation Tariff for 1,263.2 MW Power Project on RLNG/HSD at Jhang was communicated to the Federal Government for notification in the official Gazette.

2. Please find enclosed herewith the subject decision of the Authority along with Annex-I, II, III & IV (13 pages) in the matter of Motion for Leave for Review filed by Punjab Thermal Power (Private) Limited against Authority's Determination dated December 26, 2017 in Case No. NEPRA/TRF-408/PTPL-2017.

3. 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.

4. Order of the Authority's Decision along with Annex-I, II, III & IV needs to be notified in the official gazette.

Enclosure: As above


07 06 18
(Syed Safeer 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.



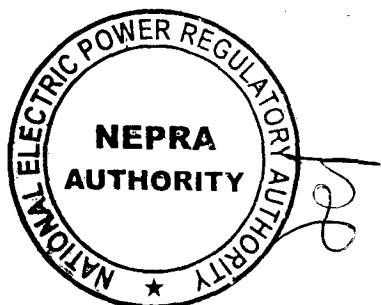
**DECISION IN THE MATTER OF MOTION FOR LEAVE FOR REVIEW FILED BY PUNJAB
THERMAL POWER (PRIVATE) LIMITED AGAINST AUTHORITY'S DECISION DATED
DECEMBER 26, 2017**

1. BACKGROUND

- 1.1. Punjab Thermal Power (Private) Limited (PTPL) is wholly owned company of the Government of Punjab (GoPb) incorporated under the Companies Act, 2017 to act as an IPP to set up a combined cycle power project of 1,263.20 MW (net 1,242.70 MW) on Re-gasified Liquefied Natural Gas (RLNG) as the primary fuel and High-Speed Diesel (HSD) as back-up fuel at District Jhang, Punjab. PTPL vide letter dated September 13, 2017, filed petition for determination of generation tariff for its subject project.
- 1.2. The Authority, in exercise of the powers conferred under Section 7(3) (a) read with Section 31 of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997, Tariff Standards and Procedure Rules, 1998 issued determination on December 26, 2017 (hereinafter referred as "Determination"), in the matter of generation tariff for PTPL.

2. FILING OF REVIEW MOTION

- 2.1. PTPL, being aggrieved of the determination of the Authority, filed a motion for leave for review dated January 5, 2018 (hereinafter referred as "Review Motion"). The PTPL sought review on the following grounds:
- i) Construction Period of 26 months
 - ii) Early Commissioning Bonus
 - iii) Administrative Expenses
 - iv) O&M Mobilization
 - v) One Month LNG Escrow Account
 - vi) Financing Fee & Charges
 - vii) Interest During Construction
 - viii) ROE
 - ix) Pass-Through Items
 - x) Output degradation and part load adjustment on variable O&M component
 - xi) Facility arrangement and related fee and charges
 - xii) Recovery of prudently incurred costs
 - xiii) Unequal treatment of the Petitioner
 - xiv) Legitimate expectations
- 2.2. The Authority admitted the Review Motion on January 24, 2018. In order to consider the Review Motion, the Authority decided to provide an opportunity of hearing to the parties to the proceedings before making a decision. Accordingly, invitation letters were sent to the stakeholders on February



2

7

8



9, 2018. Hearing in the matter was held on February 20, 2018 at NEPRA Tower, which was attended by the Petitioner and CPPA.

3. DECISION OF THE AUTHORITY

- 3.1. The Authority is of the view that in terms of Regulation 3(2) of the NEPRA (Review Procedure) Regulations, 2009, a motion seeking review of any order or decision of the Authority is competent only upon discovery of new and important matter of evidence or on account of some mistake or error apparent on the face of record or for any other sufficient reasons.
- 3.2. After hearing the Petitioner and carefully going through the record, the Authority is of the view that the Petitioner did not provide any new documentary evidence in support of its request or pointed out any mistake or error apparent on the face of record except in the case of Early Commissioning Bonus and sufficient reasons for considering Pre-NTP (Notice to Proceed) administrative costs and advertisement expenses relating to tenders, recruitment etc.
- 3.3. In the case of early commissioning bonus, PTPL submitted that there is no provision of the same in the EPC Agreement at all and accordingly it was never requested in the Petition. Therefore, the reference to early completion bonus and related discussion is not relevant. However, the Authority noted that vide Para 10.5 of the Petition, the Petitioner requested provision of early commissioning bonus as pass through item whereas there is no mention of the early completion bonus in the EPC Contract. Therefore, the Authority has decided to withdraw the pass through of the early completion bonus provided in Para 16.3 of the determination dated December 26, 2017.
- 3.4. Regarding Pre-NTP administrative costs, the Petitioner submitted that the Authority completely ignored the fact that PTPL incurred administrative costs during Pre-NTP period of approximately 3-4 months and simply pro-rated the majority of administrative cost line items over a period of 26 months instead of 30 months which may not be the true reflection of the actual cost incurrence pattern. PTPL did not provide any evidence in support of Pre-NTP administrative costs. It is also a fact that implementation of the instant project is handled by the existing team of the Bhikki project with addition of very few individuals. However, for the remaining few individuals hired specifically for this project, the Authority has decided to allow administrative costs during Pre-NTP period of approximately 3-4 months on the basis of verifiable documentary evidence and the same shall be included in the administrative expenses at the time of COD adjustment.
- 3.5. Regarding advertisement expenses, the Petitioner submitted that advertisement expenses represents expenditures for advertisement of various tenders / bids including EPC, LTSA, O&M, procurement of IT & other Office Assets / Services and recruitment etc. required under PPRA Rules. The Petitioner did not provide any documentary evidence in support of its request, however, the Authority considers that this is a legitimate cost and decided to allow the same at the time of COD upon provision of verifiable documentary evidence. The actual advertisement expenses only for the specified purposes shall be included in the administrative expenses at the time of COD adjustment.
- 3.6. In terms of Regulation 3(2) of the NEPRA (Review Procedure) Regulations, 2009, except as



Handwritten signature



provided under Paras 3.3 to 3.5, the Authority has decided to maintain its earlier decision on the grounds raised by the Petitioner in the review motion.

4. ORDER

- I. The Authority hereby determines and approves the following generation tariff for Punjab Thermal Power (Private) Limited for its 1,242.70 MW (net) Power Project on RLNG and 1,081.80 MW (net) on HSD at Jhang for combined and simple cycle operations and adjustments/indexations for delivery of electricity to the power purchaser:

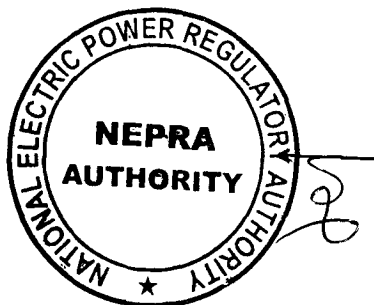
TARIFF ON COMBINED CYCLE OPERATION

Tariff Components	1-10 Years		11-30 Years		
	RLNG	HSD	RLNG	HSD	
Capacity Charges (Rs./kW/hr):					
Fixed O&M (Local)	0.0631	0.0724	0.0631	0.0724	CPI (General)
Fixed O&M (Foreign)	0.1041	0.1196	0.1041	0.1196	US CPI &Rs./US\$
Cost of working capital	0.0922	0.1059	0.0922	0.1059	KIBOR and Fuel Price
Insurance	0.0531	0.0610	0.0531	0.0610	Actual subject to maximum limit
ROE	0.3330	0.3825	0.3330	0.3825	Rs./US\$
Debt Servicing	0.8111	0.9318	-	-	KIBOR
Total	1.4565	1.6732	0.6454	0.7414	
Energy Charge (Rs./kWh):					
Fuel cost Component	5.6005	10.7216	5.6005	10.7216	Fuel Price
Variable O&M (Foreign)	0.3079	0.4443	0.3079	0.4443	US CPI &Rs./US\$
Total	5.9084	11.1659	5.9084	11.1659	

- Schedules of tariffs are attached at Annex-I and Annex-II.
- Schedules of debt servicing are attached as annex-III and Annex-IV

TARIFF ON SIMPLE CYCLE OPERATION ON RLNG

Description	Rs./kWh	Adjustment/ Indexation
Fuel Cost Component RLNG	8.7369	Fuel Price
Variable O&M (Foreign)	0.3079	US CPI & Rs./ US\$
Fixed O&M (Local)	0.0631	CPI (General)
Fixed O&M (Foreign)	0.1041	US CPI & Rs./ US\$
Cost of Working Capital	0.0922	KIBOR and Fuel Price
Total	9.3042	



[Handwritten signature]

[Handwritten signature]

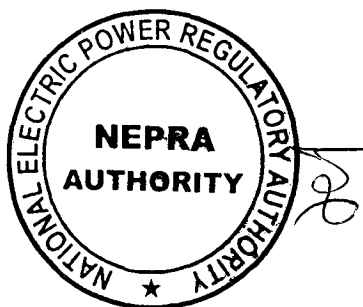


II. One-time Adjustment at COD

- i) Since the exact timing of payment to EPC contractor is not known at this point of time, therefore, an adjustment for relevant foreign currency fluctuation for the US\$ 415.968 million of the EPC portion of payment in the foreign currency shall be made against the reference exchange rate of Rs. 109.9/US\$ on the basis of actual payment. The adjustment shall be made only for the currency fluctuation against the reference parity values.
- ii) Adjustment as per actual with maximum of US\$ 5.71 million for items outside the scope of the EPC contract along with currency fluctuation for dollar portion, if any.
- iii) The Customs Duties and Cess of US\$ 29.326 million shall be adjusted as per actual.
- iv) Adjustment as per actual with maximum of US\$ 5.257 million for O&M mobilization cost.
- v) Adjustment as per actual with maximum of US\$ 7.986 million for Security & Surveillance cost.
- vi) Adjustment as per actual with maximum of US\$ 10.995 million for Administrative cost.
- vii) Actual pre-NTP administrative costs for a period of approximately 3-4 months for the few individuals hired specifically for this project on the basis of verifiable documentary evidence shall also be included in the administrative cost in addition to the above capped administrative cost at the time of COD adjustment.
- viii) Actual advertisement expenses pertaining to various tenders / bids including EPC, LTSA, O&M, procurement of IT & other Office Assets / Services and recruitment etc. on the basis of verifiable documentary evidence shall also be included in the administrative cost in addition to the above capped administrative cost at the time of COD adjustment.
- ix) Adjustment as per actual with maximum of US\$ 36.224 million for gas pipeline cost.
- x) Adjustment as per actual of US\$ 14.776 million for Financing Fees & Charges subject to maximum of 3.0% of the debt amount.
- xi) The IDC shall be re-established at the time of COD on the basis of applicable KIBOR, actual premium, actual loan and actual loan drawdown.
- xii) ROE component of tariff shall be adjusted for variation in actual equity investment and actual equity drawdown.
- xiii) O&M components shall be adjusted as per the signed O&M Agreement, LTSA Agreement and actual recurring administrative expenses

III. Adjustment due to Variation in Net Capacity

The reference tariff has been determined on the basis of guaranteed net capacity of 1,242.7 MW on RLNG and 1,081.80 MW on HSD. All the tariff components of capacity charge





shall be adjusted at the time of COD based upon the Initial Dependable Capacity (IDC) test to be carried out for determination of net contracted capacity. In case net capacity is established lower than the guaranteed level, maximum 3% of the auxiliary consumption shall be allowed and appropriate adjustment in the tariff components shall be made after adjusting LDs as per Schedule 10 to the EPC contract against the project cost.

IV. Heat Rate

The energy charge part of the tariff relating to fuel cost shall be adjusted subsequent to the heat rate test carried out by the independent engineer in the presence of representatives of power purchaser in accordance with the established benchmarks. Subsequent to the submission of the test report to the satisfaction of the Authority, onetime adjustment shall be made in the fuel cost components. In case the efficiencies on either fuel establish lower than the guaranteed levels, appropriate adjustment in the fuel cost components shall be made after adjusting LDs as per Schedule 10 to the EPC contract against the project cost. In case the efficiencies on either fuel establish higher than the guaranteed levels, the gain shall be shared in the ratio of 60:40 between the power purchaser and power producer and fuel cost components shall be adjusted accordingly.

V. Adjustment in Insurance as per actual

The actual insurance cost for the minimum cover required under contractual obligations with the Power Purchaser not exceeding 1% of the EPC cost shall be treated as pass-through. Insurance component of reference tariff shall be adjusted annually as per actual upon production of authentic documentary evidence according to the following formula:

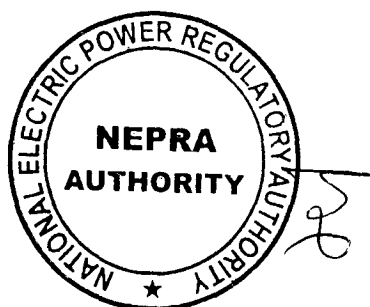
AIC	=	$\text{Ins}_{(\text{Ref})} / \text{P}_{(\text{Ref})} * \text{P}_{(\text{Act})}$
Where		
AIC	=	Adjusted Insurance Component of Tariff
Ins (REF)	=	Reference Insurance Component of Tariff
P(Ref)	=	Reference Premium US\$ 5.257 million at Rs. 109.9/US\$.
P(Act)	=	Actual Premium or 1% of the EPC cost at exchange rate prevailing on the 1st day of the insurance coverage period whichever is lower

VI. Indexations

The following indexations shall be applicable to the reference tariff;

i) Indexation of Return on Equity (ROE)

ROE component of tariff shall be quarterly indexed on account of variation in Rs./US\$ parity according to the following formula:



7/11

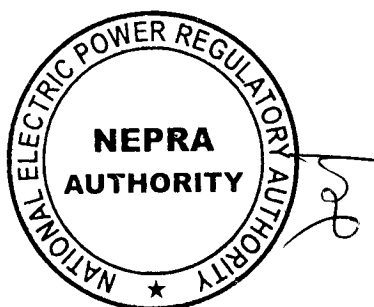


$ROE_{(Rev)}$	=	$ROE_{(Ref)} * ER_{(Rev)} / ER_{(Ref)}$
Where		
$ROE_{(Rev)}$	=	Revised ROE Component of the Tariff
$ROE_{(Ref)}$	=	Reference ROE Component of the Tariff
$ER_{(Rev)}$	=	The revised TT & OD selling rate of US dollar as notified by the National Bank of Pakistan
$ER_{(Ref)}$	=	The reference exchange rate of Rs. 109.9/US\$

ii) Indexation applicable to O&M

At COD, O&M components shall be adjusted as per the signed O&M Agreement, LTSA Agreement and actual recurring administrative expenses. Thereafter, O&M components of tariff shall be adjusted on account of local CPI, 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 (All Urban Consumers) 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:

$F V. O\&M_{(REV)}$	=	$F V. O\&M_{(REF)} * US CPI_{(REV)} / US CPI_{(REF)} * ER_{(REV)} / ER_{(REF)}$
$L F. O\&M_{(REV)}$	=	$L F. O\&M_{(REF)} * CPI_{(REV)} / CPI_{(REF)}$
$F F. O\&M_{(REV)}$	=	$F F. O\&M_{(REF)} * US CPI_{(REV)} / US CPI_{(REF)} * ER_{(REV)} / ER_{(REF)}$
Where:		
$F V. O\&M_{(REV)}$	=	The revised Variable O&M Foreign Component of Tariff
$L F. O\&M_{(REV)}$	=	The revised Fixed O&M Local Component of Tariff
$F F. O\&M_{(REV)}$	=	The revised Fixed O&M Foreign Component of Tariff
$F V. O\&M_{(REF)}$	=	The reference Variable O&M Foreign Component of Tariff
$L F. O\&M_{(REF)}$	=	The reference Fixed O&M Local Component of Tariff
$F F. O\&M_{(REF)}$	=	The reference Fixed O&M Foreign Component of Tariff
$CPI_{(REV)}$	=	The revised CPI (General)
$CPI_{(REF)}$	=	The reference CPI (General) for the month of Sep. 2017
$US CPI_{(REV)}$	=	The revised US CPI (All Urban Consumers)
$US CPI_{(REF)}$	=	The reference US CPI (All Urban Consumers) for the month of Sep. 2017
$ER_{(REV)}$	=	The revised TT & OD selling rate of US dollar
$ER_{(REF)}$	=	The reference TT & OD selling rate of RS. 109.9/US\$



6



iii) Indexation for 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 KIBOR according to the following formula;

ΔI	=	$P_{(REV)} * (KIBOR_{(REV)} - 6.14\%) / 2$
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 $< 6.14\%$. The interest payment obligation will be enhanced or reduced to the extent of ΔI for each semi-annual period under adjustment applicable on semi-annual basis.
$P_{(REV)}$	=	The outstanding principal (as indicated in the attached debt service schedule to this order) on a semi-annual basis on the relevant period calculation date. Period 1 shall commence on the date on which the 1 st installment is due after availing the grace period.

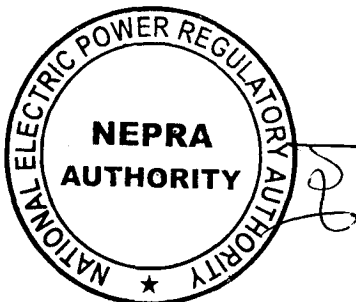
iv) Cost of Working Capital

At the time of COD, cost of working capital shall be adjusted for actual payment terms agreed in the PPA and GSA and fuel prices. Thereafter, the cost of working capital shall be adjusted quarterly for variation in KIBOR and fuel prices only.

v) Fuel Price Adjustment

The fuel cost component of tariff subsequent to adjustment of heat rate test at COD shall be adjusted on account of fuel price variation as and when notified by the relevant authority as per the following mechanism:

$FCC_{RLNG(Rev)}$	=	$FCC_{RLNG(Ref)} * P_{RLNG(Rev)} / P_{RLNG(Ref)}$
Where:		
$FCC_{RLNG(Rev)}$	=	The revised fuel cost component on RLNG
$FCC_{RLNG(Ref)}$	=	The reference fuel cost component on RLNG
$P_{RLNG(Rev)}$	=	The revised HHV RLNG price notified by the relevant Authority
$P_{RLNG(Ref)}$	=	The reference HHV RLNG price of US\$ 8.2464/MMBtu at Rs. 109.9/US\$
$FCC_{HSD(Rev)}$	=	$FCC_{HSD(Ref)} * P_{HSD(Rev)} / P_{HSD(Ref)}$



7

[Handwritten signature]

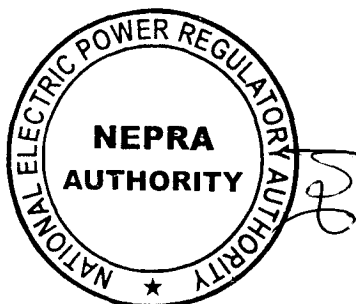


Where:		
$FCC_{HSD(Rev)}$	=	The revised fuel cost component on HSD
$FCC_{HSD(Ref)}$		The reference fuel cost component on HSD
$P_{HSD(Rev)}$	=	The revised HHV HSD price notified by the relevant Authority
$P_{HSD(Ref)}$	=	The reference HHV HSD price of Rs. 59.54 /liter.

VII. Terms & Conditions

The following terms and conditions shall apply to the determined tariff:

- i. All plant and equipment shall be new and shall be designed, manufactured and tested in accordance with the acceptable standards.
- 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. The tariff has been determined on the basis of debt equity ratio of 75:25. Minimum equity requirement is 20%. There will be no limit on the maximum amount of equity; however, equity exceeding 30% of the total project cost will be treated as debt.
- iv. The debt part of the project can also be financed through foreign financing or mix of local and foreign financing and the debt servicing component shall be adjusted accordingly.
- v. In case of foreign financing, Sinasure fee/ECA exposure fee/credit insurance fee shall also be applicable with maximum of 7% of debt service amount in accordance with the bench mark established in the coal upfront tariff.
- vi. In case of foreign financing LIBOR+ a premium of 4.5% shall be applicable. In case of project financing with Sinasure fee/ECA exposure fee/credit insurance, the applicable premium over LIBOR shall be 4.0%. In case the actual premium is negotiated less than the maximum limit, the saving shall be shared between the power purchaser and the power producer in the ratio of 60:40.
- vii. The sponsor of the project can arrange foreign financing in American Dollar (\$), British Pound Sterling (£), Euro (€) and Japanese Yen (¥) or in any currency as the Government of Pakistan may allow.
- viii. The plant availability shall be 92%.
- ix. The tariff control period shall be 30 years from the date of commercial operation.
- x. The simple cycle tariff on unit delivered basis on RLNG fuel shall only be applicable during the availability of the gas turbines for simple cycle operation for maximum of 349 days before the COD of the complex on combined cycle operation.
- xi. The construction period is 26 month.
- xii. The dispatch will be at appropriate voltage level mutually agreed between the power purchaser and the power producer.






- xiii. The dispatch shall be in accordance with economic merit order.
- xiv. In case the company is obligated to pay any tax on its income from generation of electricity, or any duties and/or taxes, not being of refundable nature, are imposed on the company, the exact amount paid by the company on these accounts shall be reimbursed on production of original receipts. This payment shall be considered as a pass-through payment. However, withholding tax on dividend shall not be passed through.
- xv. Taxes and duties on the import of plant & machinery during the construction period have been included in the project cost and shall be adjusted on actual at the time of COD on the basis of verifiable documentary evidence.
- xvi. General assumptions, which are not covered in this determination, may be dealt with as per the standard terms of the Power Purchase Agreement.


VIII. NOTIFICATION

The above Order of the Authority along with 4 Annexes shall be notified in the Official Gazette in terms of Section 31(7) of the Regulations of Generation, Transmission and Distribution of Electric Power Act, 1997.

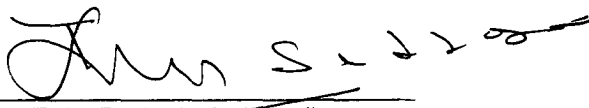
AUTHORITY

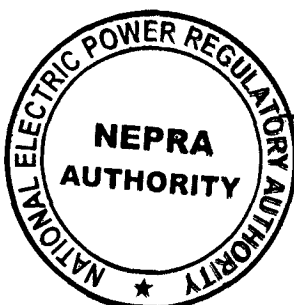

31.5.18
(Himayat Ullah Khan)
Member

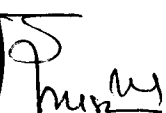

1.6.2018
(Saif-Ullah Chattha)
Member


24/6/18
(Rehmatullah)
Member


5/6
(Syed Masood-ul-Hassan Naqvi)
Vice Chairman


(Brig (R) Tariq Sadozai)
Chairman




570618

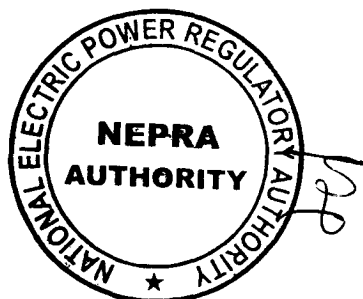
Punjab Thermal Power (Pvt) Limited

Reference Tariff Table RLNG

Year	Energy Purchase Price (Rs./kWh)			Capacity Purchase Price (PKR/kW/Hour)									Total Tariff	
	Fuel	Var. O&M	Total EPP	Fixed O&M local	Fixed O&M foreign	Cost of W/C	Insurance	ROE	Debt Repayment	Interest Charges	Total CPP	Capacity charge@ 92%	Rs. / kWh	Cents/kWh
1	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	0.3557	0.4555	1.4565	1.5832	7.4916	6.8168
2	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	0.3870	0.4241	1.4565	1.5832	7.4916	6.8168
3	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	0.4212	0.3899	1.4565	1.5832	7.4916	6.8168
4	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	0.4584	0.3528	1.4565	1.5832	7.4916	6.8168
5	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	0.4988	0.3123	1.4565	1.5832	7.4916	6.8168
6	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	0.5429	0.2683	1.4565	1.5832	7.4916	6.8168
7	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	0.5908	0.2203	1.4565	1.5832	7.4916	6.8168
8	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	0.6429	0.1682	1.4565	1.5832	7.4916	6.8168
9	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	0.6997	0.1114	1.4565	1.5832	7.4916	6.8168
10	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	0.7614	0.0497	1.4565	1.5832	7.4916	6.8168
11	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
12	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
13	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
14	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
15	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
16	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
17	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
18	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
19	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
20	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
21	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
22	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
23	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
24	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
25	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
26	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
27	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
28	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
29	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
30	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	-	-	0.6454	0.7015	6.6100	6.0145
Average														
1-10	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	0.5359	0.2753	1.4565	1.5832	7.4916	6.8168
11-30	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	0.0000	0.0000	0.6454	0.7015	6.6100	6.0145
1-30	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	0.1786	0.0918	0.9158	0.9954	6.9038	6.2819
Levelized														
1-30	5.6005	0.3079	5.9084	0.0631	0.1041	0.0922	0.0531	0.3330	0.3270	0.2017	1.1741	1.2762	7.1846	6.5374

7.1846 Rs./kWh

6.5374 US Cents/kWh



Punjab Thermal Power (Pvt) Limited
Reference Tariff Table HSD

Year	Energy Purchase Price (Rs./kWh)			Capacity Purchase Price (PKR/kW/Hour)									Total Tariff	
	Fuel	Var. O&M	Total EPP	Fixed O&M local	Fixed O&M foreign	Cost of W/C	Insurance	ROE	Debt Repayment	Interest Charges	Total CPP	Capacity charge@ 92%	Rs. / kWh	Cents/kWh
1	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	0.4085	0.5232	1.6732	1.8187	12.9845	11.8149
2	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	0.4446	0.4872	1.6732	1.8187	12.9845	11.8149
3	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	0.4839	0.4479	1.6732	1.8187	12.9845	11.8149
4	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	0.5266	0.4052	1.6732	1.8187	12.9845	11.8149
5	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	0.5730	0.3587	1.6732	1.8187	12.9845	11.8149
6	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	0.6236	0.3082	1.6732	1.8187	12.9845	11.8149
7	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	0.6787	0.2531	1.6732	1.8187	12.9845	11.8149
8	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	0.7386	0.1932	1.6732	1.8187	12.9845	11.8149
9	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	0.8038	0.1280	1.6732	1.8187	12.9845	11.8149
10	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	0.8747	0.0571	1.6732	1.8187	12.9845	11.8149
11	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
12	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
13	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
14	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
15	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
16	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
17	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
18	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
19	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
20	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
21	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
22	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
23	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
24	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
25	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
26	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
27	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
28	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
29	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
30	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	-	-	0.7414	0.8058	11.9717	10.8933
Average														
1-10	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	0.6156	0.3162	1.6732	1.8187	12.9845	11.8149
11-30	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	0.0000	0.0000	0.7414	0.8058	11.9717	10.8933
1-30	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	0.2052	0.1054	1.0520	1.1434	12.3093	11.2005
Levelized														
1-30	10.7216	0.4443	11.1659	0.0724	0.1196	0.1059	0.0610	0.3825	0.3756	0.2317	1.3487	1.4660	12.6319	11.4940

Levelized Tariff =

12.6319 Rs./kWh

11.4940 US Cents/kWh

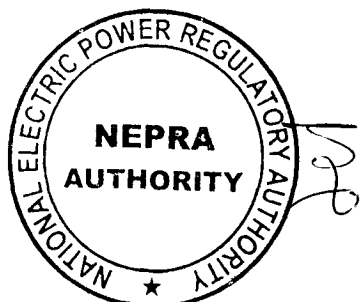


Punjab Thermal Power (Pvt) Limited

Debt Service Schedule RLNG

Gross Capacity	1263.20	MWs	US\$/PKR Parity	109.90
Net Capacity	1242.70	MWs	Debt	530.82 US\$ Million
KIBOR	6.14%		Debt in Pak Rupees	58,337.00 Rs. Million
Spread over KIBOR	2.50%			
Total Interest Rate	8.64%			

Period	Principal Million Rs.	Principal Repayment Million Rs.	Interest Million Rs.	Balaance Million Rs.	Debt Service Million Rs.	Principal Repayment Rs./kW/h	Interest Rs./kW/h	Debt Servicing Rs./kW/h
1	58,337.00	1,894.89	2,520.16	56,442.11	4,415.05			
2	56,442.11	1,976.75	2,438.30	54,465.36	4,415.05	0.3557	0.4555	0.8111
1st Year		3,871.64	4,958.46		8,830.10			
3	54,465.36	2,062.14	2,352.90	52,403.22	4,415.05			
4	52,403.22	2,151.23	2,263.82	50,251.99	4,415.05	0.3870	0.4241	0.8111
2nd Year		4,213.37	4,616.72		8,830.10			
5	50,251.99	2,244.16	2,170.89	48,007.83	4,415.05			
6	48,007.83	2,341.11	2,073.94	45,666.72	4,415.05	0.4212	0.3899	0.8111
3rd Year		4,585.27	4,244.82		8,830.10			
7	45,666.72	2,442.25	1,972.80	43,224.47	4,415.05			
8	43,224.47	2,547.75	1,867.30	40,676.72	4,415.05	0.4584	0.3528	0.8111
4th Year		4,990.00	3,840.10		8,830.10			
9	40,676.72	2,657.81	1,757.23	38,018.91	4,415.05			
10	38,018.91	2,772.63	1,642.42	35,246.28	4,415.05	0.4988	0.3123	0.8111
5th Year		5,430.44	3,399.65		8,830.10			
11	35,246.28	2,892.41	1,522.64	32,353.87	4,415.05			
12	32,353.87	3,017.36	1,397.69	29,336.51	4,415.05	0.5429	0.2683	0.8111
6th Year		5,909.77	2,920.33		8,830.10			
13	29,336.51	3,147.71	1,267.34	26,188.80	4,415.05			
14	26,188.80	3,283.69	1,131.36	22,905.11	4,415.05	0.5908	0.2203	0.8111
7th Year		6,431.40	2,398.69		8,830.10			
15	22,905.11	3,425.55	989.50	19,479.56	4,415.05			
16	19,479.56	3,573.53	841.52	15,906.03	4,415.05	0.6429	0.1682	0.8111
8th Year		6,999.08	1,831.02		8,830.10			
17	15,906.03	3,727.91	687.14	12,178.12	4,415.05			
18	12,178.12	3,888.95	526.09	8,289.17	4,415.05	0.6997	0.1114	0.8111
9th Year		7,616.86	1,213.24		8,830.10			
19	8,289.17	4,056.96	358.09	4,232.22	4,415.05			
20	4,232.22	4,232.22	182.83	-	4,415.05	0.7614	0.0497	0.8111
10th Year		8,289.17	540.92		8,830.10			



Punjab Thermal Power (Pvt) Limited

Debt Service Schedule HSD

Gross Capacity	1105.00	MWs	US\$/PKR Parity	109.90
Net Capacity	1081.80	MWs	Debt	530.82 US\$ Million
KIBOR	6.14%		Debt in Pak Rupees	58337.00 Rs. Million
Spread over KIBOR	2.50%			
Total Interest Rate	8.64%			

Period	Principal Million Rs.	Principal Repayment Million Rs.	Interest Million Rs.	Balaance Million Rs.	Debt Service Million Rs.	Principal Repayment Rs./kW/h	Interest Rs./kW/h	Debt Servicing Rs./kW/h
1	58,337.00	1,894.89	2,520.16	56,442.11	4,415.05			
2	56,442.11	1,976.75	2,438.30	54,465.36	4,415.05	0.4085	0.5232	0.9318
1st Year		3,871.64	4,958.46		8,830.10			
3	54,465.36	2,062.14	2,352.90	52,403.22	4,415.05			
4	52,403.22	2,151.23	2,263.82	50,251.99	4,415.05	0.4446	0.4872	0.9318
2nd Year		4,213.37	4,616.72		8,830.10			
5	50,251.99	2,244.16	2,170.89	48,007.83	4,415.05			
6	48,007.83	2,341.11	2,073.94	45,666.72	4,415.05	0.4839	0.4479	0.9318
3rd Year		4,585.27	4,244.82		8,830.10			
7	45,666.72	2,442.25	1,972.80	43,224.47	4,415.05			
8	43,224.47	2,547.75	1,867.30	40,676.72	4,415.05	0.5266	0.4052	0.9318
4th Year		4,990.00	3,840.10		8,830.10			
9	40,676.72	2,657.81	1,757.23	38,018.91	4,415.05			
10	38,018.91	2,772.63	1,642.42	35,246.28	4,415.05	0.5730	0.3587	0.9318
5th Year		5,430.44	3,399.65		8,830.10			
11	35,246.28	2,892.41	1,522.64	32,353.87	4,415.05			
12	32,353.87	3,017.36	1,397.69	29,336.51	4,415.05	0.6236	0.3082	0.9318
6th Year		5,909.77	2,920.33		8,830.10			
13	29,336.51	3,147.71	1,267.34	26,188.80	4,415.05			
14	26,188.80	3,283.69	1,131.36	22,905.11	4,415.05	0.6787	0.2531	0.9318
7th Year		6,431.40	2,398.69		8,830.10			
15	22,905.11	3,425.55	989.50	19,479.56	4,415.05			
16	19,479.56	3,573.53	841.52	15,906.03	4,415.05	0.7386	0.1932	0.9318
8th Year		6,999.08	1,831.02		8,830.10			
17	15,906.03	3,727.91	687.14	12,178.12	4,415.05			
18	12,178.12	3,888.95	526.09	8,289.17	4,415.05	0.8038	0.1280	0.9318
9th Year		7,616.86	1,213.24		8,830.10			
19	8,289.17	4,056.96	358.09	4,232.22	4,415.05			
20	4,232.22	4,232.22	182.83	-	4,415.05	0.8747	0.0571	0.9318
10th Year		8,289.17	540.92		8,830.10			

