



National Electric Power Regulatory Authority Islamic Republic of Pakistan

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No. NEPRA/TRF-361/APL-2016/8884-8886
June 21, 2016

Subject: **Determination of the Authority in the matter of Approval of Tariff for Atlas Powergen Limited for its 220 MW (net Capacity) Combined Cycle RLNG based Power Plant at Sheikhpura**

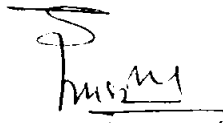
Dear Sir,

Please find enclosed herewith the subject Determination of the Authority along with Annex-I, II & III (17 pages) in Case No. NEPRA/TRF-361/APL-2016.

2. The Decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

3. Order of the Authority along with 3 Annexes of the Determination needs to be notified in the official Gazette.

Enclosure: As above


21.06.16
(Syed Safeer Hussain)

Secretary
Ministry of Water & Power
'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)**

Determination of the Authority

,
In the matter of Approval of Tariff for Atlas Powergen Limited for
its 220 MW (net capacity) Combined Cycle RLNG based Power Plant at
Sheikhupura

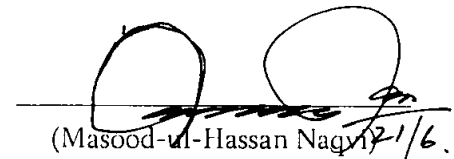
21st June 2016

The Authority, in exercise of the powers conferred by Section 31 (4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997 (XL of 1997), and Regulation 12 of National Electric Power Regulatory Authority Competitive Bidding Tariff (Approval Procedure) Regulations, 2014 read with all applicable law and all other powers enabling it in this behalf, and after taking into consideration all the submissions made by the parties, issues raised, evidence/record produced during the proceedings, and all other relevant material, hereby issues this determination.

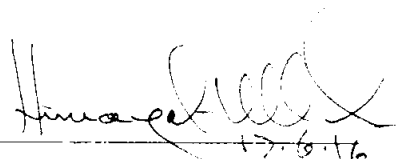
AUTHORITY



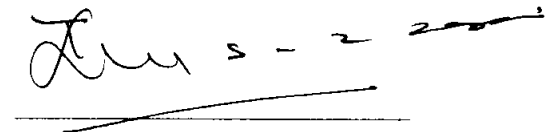
(Maj (R) Haroon Rashid)
Member



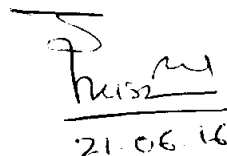
(Masood-ul-Hassan Nagvi)
Member



(Himayat Ullah Khan)
Vice Chairman

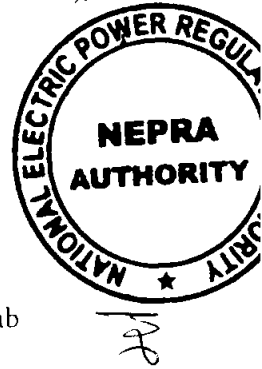


(Brig (R) Tariq Sadozai)
Chairman


21.06.16

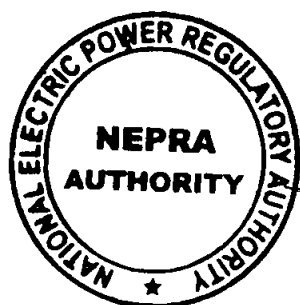
1. BACKGROUND

- 1.1. The Government of Pakistan (GOP) is making concerted efforts to alleviate power shortages in the country and all possibilities for addition in generation in the minimum possible time are being explored. In order to achieve this, GOP decided to induct new medium-sized (100 – 250 MW) power plants with RLNG as fuel having a cumulative capacity of 1000 MW through private sector investment, based on International Competitive Bidding (ICB). The proposed plants will either be located at the existing sites of old/ abandoned GENCO plants or in the vicinity of existing grid stations/ transmission lines of NTDC/ DISCOs, while considering gas supply network of SNGPI/ SSGCL, infrastructure facilities, etc.
- 1.2. PPIB vide its letter No. 1(102)PPIB/16/0-45931 dated February 4, 2016 submitted the Request for Proposals (RFP) for 1000 MW RLNG based power projects for the approval of the Authority under Regulation 3 (ii) of the NEPRA Competitive Bidding Tariff (Approval Procedure), Regulations, 2014 for the following sites:
 - i. 200 – 225 MW IPP at existing site of GTPS & SPS Faisalabad, Punjab
 - ii. 200 – 225 MW IPP at the existing site of NGPS Piranghaib, Multan, Punjab
 - iii. 150 (\pm 10%) MW IPP at Nawabshah, Sindh
 - iv. 200 (\pm 10%) MW IPP near Arian Road, Sukkur, Sindh
 - v. 200 (\pm 10%) MW IPP in the vicinity of Atlas Power Project at Sheikhpura, Punjab
- 1.3. The Authority vide letter No. NEPRA/ SAT – I/ TRF – 100/ LNG/ 2008 dated February 10, 2016 approved the RFPs for the aforementioned and sites with changes.
- 1.4. PPIB, in pursuance to the ECC decision dated January 29, 2016 on a Summary titled “Approval of Framework and Standardized Security Documents for 1000 MW RLNG based Power Projects”, invited bids from private sector entrepreneurs through advertisement published in national and international press on February 10, 2016. Upon request of prospective bidders, the competent authority approved extension in bid submission deadline from March 22, 2016 to April 5, 2016, for which a corrigendum was published in national and international press on March 16, 2016.
- 1.5. According to PPIB, 24 RFPs were issued to interested parties for four sites. None of the parties purchased RFP for the Nawabshah site. Against the 24 issued RFPs, only 3 bids were received one for each site of Faisalabad, Multan and Sheikhpura by D.G Khan Cement Ltd/Nishat Group, Fatima Group/Fatima Holding Ltd. and Atlas Power Limited respectively.
- 1.6. According to PPIB, a Bid Evaluation Committee (the Committee) was constituted consisting of senior officials from MoW&P, MoP&NR, MoF, NTDC, CPPA-G, GENCO Holding and PPIB under the chairmanship of Additional Secretary MoW&P in accordance with the ECC approved Framework. Furthermore, a Grievance Redressal Committee was also constituted under the Chairmanship of Secretary MoW&P and comprising Joint Secretary (PI) MoW&P,



MD PPIB, CEO CPPA(G) and MD NTDCI. as members, to address concerns of any bidder feeling aggrieved by any act of the Bid Evaluation Committee.

- 1.7. According to PPIB, Fatima Group submitted only photocopies of the bid without the original documents, which were received approximately 3 hours after the Bid Submission Deadline. The Committee decided not to entertain the photocopy of the bid submitted by Fatima Group for further processing. Fatima Group pleaded its case before the Grievance Redressal Committee which upheld the decision of Bid Evaluation Committee.
- 1.8. PPIB vide letter No. 1(102) PPIB/16/Proj/0-46773 dated 3rd May 2016 submitted Bid evaluation Report of 1000 MW RLNG Based Power Projects for the aforementioned sites. PPIB submitted that the Committee finalized Evaluation Report on Technical Bids (Envelope-I) in its 5th meeting held on 25th April 2016 with the following recommendations:
 - a. The Bid submitted by Atlas Power Ltd. (APL) for 220 MW RLNG Based IPP at Sheikhpura, Punjab, is a Technically Qualified Bid hence Envelope-II (Financial Bid) may be opened.
 - b. The Bid submitted by D.G. Khan Cement Ltd. (DGKCL) and other Consortium members, for 225 MW Independent Power Project, based on RLNG at the existing site of GTPS 8 SPS Faisalabad, Punjab, is a Technically Non-Qualified Bid, hence shall not be processed further.
- 1.9. The Reference Levelized Tariff offered by APL for operation on RLNG is US Cents 10.4155/kWh which is lower by US Cents 0.1386 /kWh (1.313%) compared to the Benchmark Tariff of US Cents 10.5541 /kWh as given in the RFP on Local Debt Financing. Whereas, the Reference Levelized Tariff offered by APL for operation on HSD is US Cents 16.7410/kWh which is lower by US Cents 0.1347 /kWh (0.798 %) compared to the Benchmark Tariff of US Cents 16.8757 /kWh as given in the RFP on Local Debt Financing.
- 1.10. According to the PPIB, as per the evaluation criteria given in the RFP, the Bids were to be ranked solely on the basis of the Weighted Average Levelized Tariff. Accordingly, the Weighted Average Levelized Tariff of APL was calculated as Rs. 11.6805/ kWh in accordance with the evaluation criteria stipulated in the RFP.
- 1.11. PPIB requested NEPRA for approval of the Evaluation Reports and ranking and notification of Successful Bidder (ranked first) for further processing of 220 MW RLNG based power project at Sheikhpura in accordance with the NEPRA Competitive Bidding Tariff (Approval Procedure) Regulations 2014 read with all applicable laws.
- 1.12. Accordingly, after considering the bid evaluation report and other information and documents submitted by PPIB, the Authority declared Atlas Power Limited (APL) as first ranked bidder (the successful bidder) vide notification No. SRO. 408(1)/2016, dated May 11, 2016 in the bidding process for establishment of 220 MW RLNG based IPP at Sheikhpura, Punjab.



- 1.13. According to Atlas, PPIB vide its letter No. 1(102) PPIB-2057-01/16/PRJ/46846 advised Atlas to form a project company and file applications for generation license and approval of generation tariff. Consequently, Atlas Powergen Limited (hereinafter the "Project Company") was incorporated.
- 1.14. APL vide letter dated May 19, 2016 filed an Application for approval of tariff and intimation to Federal Government for notification in pursuance of Section 31(4) of NEPRA Act for the 220 MW (net capacity) RLNG based power plant to be located at Sheikhpura.
- 1.15. APL's bid tariff was based on the following project cost:

Description	Rs. Million
EPC Cost (92% in US\$)	16,600.00
Custom Duty of equipment cost not manufactured in Pakistan	790.16
Non EPC cost	1,660.00
Financing Charges (3.5% of 75% Capex cost)	500.07
1 Month Escrow Account	1,246.07
Interest During Construction	1,405.26
Total Project Cost	22,201.56

- 1.16. APL has arranged financing from ABL consortium in Pak. Rupees on the following terms:

	Allied Bank of Pakistan (ABL) consortium
Amount (Rs. Million)	16,651.17
Currency of Loan	PKR
Repayment Period	10 Years
Final Maturity (Years from COD)	March 2, 2028
Grace Period (Years from 30-April-2028)	2 Years
Principal Repayment Frequency (Months)	Quarterly
Interest Rate (%)	9.5% KIBOR + 3%
Upfront Fee (%)	3.5% of 75% of Capex cost
Commitment/ Drawdown Fees (%)	
[Other Fees (%)]	

- 1.17. APL's bid tariff is based on the underlying Combined Cycle efficiencies of 52.05% and 49.31% on RLNG and HSD, respectively and Open Cycle efficiency is 33.10% on RLNG.
- 1.18. The Application was admitted by the Authority on June 15, 2016 and 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, the Authority has granted approval of the tariff.



2. ORDER

- I. The Authority hereby approves the following Combined Cycle generation tariff along-with adjustment/ indexations for the 220 MW (net capacity) RLNG based power plant to be established by Atlas Powergen Limited at Sheikhpura, Punjab for delivery of electricity to Central Power Purchasing Agency (Guarantee) Limited:

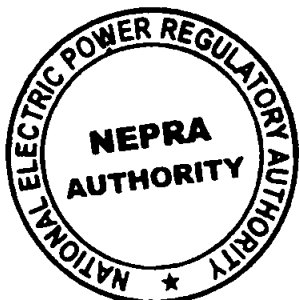
Reference Tariff Table			
Tariff Components	1 – 10 Years	11 – 30 Years	Adjustment/ Indexation
Capacity Charge (Rs./kW/hour)			
Fixed O&M (Foreign)	0.1290	0.1290	Rs./ US\$ & US CPI
Fixed O&M (Local)	0.0980	0.0980	CPI (General)
Cost of Working Capital	0.2151	0.2151	KIBOR and Fuel Price
Insurance	0.0861	0.0861	Actual with subject to maximum limit
ROE	0.5187	0.5187	Rs./ US\$
Debt Servicing	1.5255	-	KIBOR & Rs./ US\$
Total	2.5725	1.0470	
Energy Charge LNG (Rs./kWh)			
FCC	7.8666	7.8666	Fuel Price
Variable O&M (Foreign)	0.3300	0.3300	Rs./ US\$ & US CPI
Total	8.1966	8.1966	
Energy Charge HSD (Rs./kWh)			
FCC	14.0317	14.0317	Fuel Price
Variable O&M (Foreign)	0.4904	0.4904	Rs./ US\$ & US CPI
Total	14.5221	14.5221	

Reference Tariff Tables and Debt Servicing Schedule are attached as Annexure to this determination

During Open Cycle operations, only following tariff components will be paid on units delivered basis:

- i Fuel Cost Component
- ii Variable O&M
- iii Fixed O&M local & foreign
- vi Cost of working capital

Fuel cost component on Open Cycle shall be calculated as per the following mechanism:



FCoc	=	Ref FCcc x Ref Effcc/ Ref Effoc x Rev P LNG/ Ref P LNG
Where:		
FCoc	=	Fuel Cost Component on Open Cycle
Ref FCcc	=	Reference Fuel Cost Component on combined cycle as per the bidder of Rs. 7.8666/ kWh
Ref Effcc	=	Reference Efficiency on combined cycle as per the bidder of 52.05%
Ref Effoc	=	Reference Efficiency on open cycle as per the bidder of 33.10%
Ref P LNG	=	Reference LNG HHV Price of US\$ 10.83/ MMBtu @ Rs. 100/ US\$
Rev P LNG	=	Revised LNG HHV Price

II. ONE-TIME ADJUSTMENT AT COD

a. Adjustment in EPC Cost on Account of Exchange Rate Variation:

At the time of COD, an adjustment will be made for exchange rate variations for 92% of EPC portion of payment in US\$ against the reference exchange rate of Rs. 100/US\$. The Project Company will be required to provide all relevant details along with documentary evidences to NEPRA for adjustments.

b. Adjustment in Interest During Construction:

Interest during construction shall be re-established at the time of COD on the basis of weighted average quarterly KIBOR and the spread of 3%.

c. Adjustment due to Custom Duties and Cess:

The Project Company was required to include in the Tariff all applicable Custom Duties, Taxes and Cess as of April 3, 2015. Any subsequent change in the aforementioned Customs Duties, Taxes and Cess will be pass-through in the tariff.

d. Adjustment in Sinasure:

In case export credit agency fee or sinasure fee on foreign financing is payable, the Reference Tariff quoted by the Project Company should include this export credit agency fee subject to maximum of 7% benchmark as set out in the upfront tariff.

III. 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 will 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	=	$\text{Ins}_{(\text{Ref})} / P_{(\text{Ref})} * P_{(\text{Act})}$
Where:		
AIC	=	Adjusted Insurance Component of Tariff
$\text{Ins}_{(\text{Ref})}$	=	Reference Insurance Component of Tariff
$P_{(\text{Ref})}$	=	Reference Premium US\$ 1.66 million at Rs. 100/ US\$.
$P_{(\text{Act})}$	=	Actual Premium or 1% of the EPC cost at exchange rate prevailing on the 1 st day of the insurance coverage period whichever is lower.

IV. 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 accordingly to the following formula:

$\text{ROE}_{(\text{Rev})}$	=	$\text{ROE}_{(\text{Ref})} * \text{ER}_{(\text{Rev})} / \text{ER}_{(\text{Ref})}$
Where:		
$\text{ROE}_{(\text{Rev})}$	=	Revised ROE Component of Tariff
$\text{ROE}_{(\text{Ref})}$	=	ROE Component of Tariff established at the time of COD
$\text{ER}_{(\text{Rev})}$	=	The revised 'TT' & OD selling rate of US dollar as notified by the National Bank of Pakistan
$\text{ER}_{(\text{Ref})}$	=	The reference 'TT' & OD selling rate of Rs. 100/US\$

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:

$F V. O\&M_{(REV)}$	=	$F V. O\&M_{(REF)} * US CPI_{(REV)} / US CPI_{(REF)} * ER_{(REV)} / ER_{(REF)}$
$L F. O\&M_{(REV)}$	=	$L F. O\&M_{(REF)} * CPI_{(REV)} / CPI_{(REF)}$
$F F. O\&M_{(REV)}$	=	$F F. O\&M_{(REF)} * US CPI_{(REV)} / US CPI_{(REF)} * ER_{(REV)} / ER_{(REF)}$
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 March 2014
$US CPI_{(REV)}$	=	The revised US CPI (All Urban Consumers)
$US CPI_{(REF)}$	=	The reference US CPI (All Urban Consumers) for the month of March 2014
$ER_{(REV)}$	=	The revised TT & OD selling rate of US dollar
$ER_{(REF)}$	=	The reference TT & OD selling rate of RS. 100/US\$

iii. Indexation in KIBOR:

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	=	$P_{(REV)} * (KIBOR_{(REV)} - 9.5\%) / 4$
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 < 9.5%. 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 1 st installment is due after availing the grace period.

iv. **Cost of Working Capital:**

The cost of working capital will be adjusted for variation in KIBOR and fuel price.

v. **Fuel Price Adjustment:**

The fuel cost component of tariff shall be adjusted on account of fuel price variation as and when notified by the relevant authority as per the following mechanism:

$FCC_{LNG(Rev)}$	=	$FCC_{LNG(Ref)} * P_{LNG(Rev)} / P_{LNG(Ref)}$
Where:		
$FCC_{LNG(Rev)}$	=	The revised fuel cost component on LNG
$FCC_{LNG(Ref)}$	=	The reference fuel cost component on LNG of Rs. 7.8666/kWh
$P_{LNG(Rev)}$	=	The revised LNG price notified by the relevant Authority
$P_{LNG(Ref)}$	=	The reference LNG price (HHV) of US\$ 10.83/MMBtu @ Rs. 100/ US\$
$FCC_{HSD(Rev)}$	=	$FCC_{HSD(Ref)} * P_{HSD(Rev)} / P_{HSD(Ref)}$
Where:		
$FCC_{HSD(Rev)}$	=	The revised fuel cost component on HSD
$FCC_{HSD(Ref)}$	=	The reference fuel cost component on HSD of Rs. 14.0317/ kWh
$P_{HSD(Rev)}$	=	The revised HSD price notified by the relevant Authority
$P_{HSD(Ref)}$	=	The reference HSD price (HHV) of Rs. 68.90/liter

V. TERMS & CONDITIONS OF TARIFF

- 1) The underlying Combined Cycle efficiencies are 52.05% and 49.31% on RLNG and IISD, respectively and Open Cycle efficiency is 33.10% on RLNG.
- 2) Net Capacity of Complex at RLNG will be 220 MW and on IISD will be 200 MW at reference site conditions (as per Performa XIII of technical bid duly approved).
- 3) The discount rate used for calculation of Levelized Tariff is 10%.
- 4) All plant and equipment shall be new and shall be designed, manufactured and tested in accordance with the acceptable standards.
- 5) 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.
- 6) The Project Company 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.
- 7) Interest income, if any, on Escrow Account will be credited to the power purchaser through adjustment against the outstanding payments.
- 8) No provision for income tax, workers profit participation fund and workers welfare fund, any other tax, levy, charge, surcharge or other governmental impositions except the customs duties and cess has been accounted for in the tariff. If the company is obligated to pay any tax the exact amount will be reimbursed by CPPA-G/ DISCO on production of original receipts. However, withholding tax on dividends will not be passed through under this tariff.
- 9) No corporate income tax and no minimum turnover tax have been assumed.
- 10) Any change in applicable taxes after the date of Benchmark Tariff shall be treated as Pass-Through item in accordance with the provisions of the PPA.
- 11) The plant availability will be 92%.
- 12) The tariff control period will be 30 years from the date of commercial operation (COD).
- 13) No adjustment will be allowed in this tariff to account for financial impact of any delay in project construction. However, the failure of the applicant to complete construction within the stipulated time will not invalidate the tariff granted to it.
- 14) The point of delivery/ inter-connection point will be as per the PPA.
- 15) The grid interconnection study shall be approved by the power purchaser/ NTDC.

- 16) The dispatch will be at appropriate voltage level mutually agreed between the power purchaser and the power producer.
- 17) The project company shall be responsible to acquire land for the Project and finalize site in consultation with NTDCL.
- 18) 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.
- 19) The Tariff will be applicable for a period of 30 years commencing from Commercial Operations Date.
- 20) All invoicing and payment terms are assumed to be in accordance with the standardized PPA.
- 21) As per Engineering Development Board, local manufacturers are capable to manufacture HRSG, Cooling Towers, Feed Water Pumps etc. In case the Project Company proposes to import any such equipment which is manufactured locally, pass through of such duty shall not allowed. Exemption is allowed if the Project is over 25 MW and in IPP mode as per CGO No. 05/2015 dated 9th November, 2015.
- 22) The Contract Capacity for the purpose of calculation of Reference Tariff is the net capacity as committed by the Project Company at the Reference Site Conditions.
- 23) Reference Site Conditions will be as follows:
 - a. Ambient air temperature (dry bulb): 30 °C
 - b. Mean Relative Humidity: 60%
 - c. Site conditions other than temperature and humidity: according to the site
- 24) Degradation of net heat rate (net efficiency) and net plant output (net capacity in MW) due to ageing shall not be permissible.
- 25) Correction in heat rate (efficiency) due to load variations and corrections in net plant output (net capacity) due to variation in ambient temperature will be permissible and mutually agreed between Power Purchaser and power producer as per manufacturer's curves/ data.
- 26) The Project Company will not charge for the following number of Complex starts in each category ("Free Starts") after which each start, in its respective category will attract Start-up Charges as per applicable Schedules of the PPA:

Type of Start	Hot Start	Warm Start	Coal Start
No. of free starts	26	12	3

- 27) Maximum number of free start-ups from steam turbines allowed per year will be as follows:
- | | | |
|----------------|---|----|
| a. Hot Starts | = | 52 |
| b. Warm Starts | = | 24 |
| c. Cold Starts | = | 5 |
- 28) The Project Company will be responsible for arrangement and acquisition of Site and provision of required infrastructure at the defined locations.
- 29) Open cycle operation shall only be available for a period of 10 months on RLNG before the COD in combined cycle mode of the Project.
- 30) The plant will be dispatched by power purchaser according to the requirements/ demand of electricity based on Economic Merit Order.
- 31) The net output and net heat rates are committed by the Project Company at the delivery point and are net of internal consumption.
- 32) Minimum Annual Availability of the complex shall not be less than the availability committed in accordance with the RFP requirements.
- 33) NTDC will be responsible for constructing the interconnection to the grid unless agreed otherwise between the parties.
- 34) Tolerance in Dispatch shall be in accordance with standardized PPA.
- 35) The power plant shall be operated on RLNG. HSD can be used for start-up/ shut down/ backup purposes, if so required.
- 36) Backup Fuel Storage: The Project Company shall maintain a minimum inventory of HSD, on site sufficiency for 07 (seven) days operation at full load.
- 37) Gas Supply Agreement (GSA) will be signed by the Project Company with Pakistan LNG Ltd. (P.L.) in consultation with the power purchaser.
- 38) GOP will not guarantee fuel supplies or obligations of the fuel supplier.
- 39) For local debts, Interest/ Mark-up Rate will be 3-month KIBOR plus spread of 3%. The Project Company is encouraged to arrange loans with lowest spread in order to quote the lower tariff.
- 40) Reference Date for following indexes is March 2014:
- | |
|---|
| a. Consumer Price Index (CPI General) as notified by GoP's Federal Bureau of Statistics |
|---|

- b. Floating portion of Interest/ Mark-up Rate; i.e, KIBOR

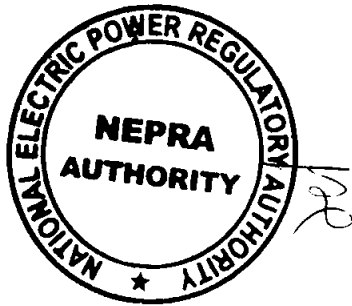
The KIBOR rate as on March 2014 are as follows:

Three (3) Month KIBOR = 9.5%

- c. United States of America Consumer Price Index (US CPI).

3. NOTIFICATION

The above Order of the Authority along with 3 Annexures shall be notified in the Official Gazette.



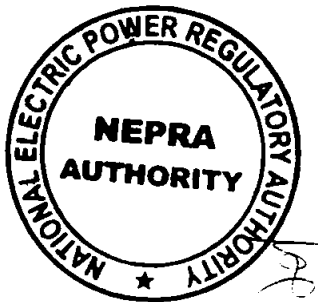
Reference Tariff Table for Operation on R-LNG

Year	Energy Purchase Price (Rs./kWh)			Capacity Purchase Price (PKR/kW/Hour)								Capacity Charge@ 92%	Total Tariff	
	Fuel	Var. O&M	Total	Fixed O&M		Cost of W/C	Insurance	ROE	Debt Repayment	Interest Charges	Total CPP		Rs. /kWh	Cents/kWh
	Component	Foreign	EPP	Local	Foreign									
1	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	0.4668	1.0587	2.5725	2.7962	10.9928	10.9928
2	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	0.5280	0.9975	2.5725	2.7962	10.9928	10.9928
3	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	0.5971	0.9284	2.5725	2.7962	10.9928	10.9928
4	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	0.6754	0.8502	2.5725	2.7962	10.9928	10.9928
5	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	0.7638	0.7617	2.5725	2.7962	10.9928	10.9928
6	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	0.8639	0.6617	2.5725	2.7962	10.9928	10.9928
7	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	0.9770	0.5485	2.5725	2.7962	10.9928	10.9928
8	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	1.1050	0.4205	2.5725	2.7962	10.9928	10.9928
9	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	1.2497	0.2758	2.5725	2.7962	10.9928	10.9928
10	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	1.4134	0.1121	2.5725	2.7962	10.9928	10.9928
11	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
12	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
13	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
14	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
15	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
16	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
17	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
18	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
19	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
20	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
21	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
22	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
23	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
24	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
25	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
26	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
27	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
28	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
29	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
30	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	9.3347	9.3347
Average														
1-10	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	0.8640	0.6615	2.5725	2.7962	10.9928	10.9928
11-30	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	0.0000	0.0000	1.0470	1.1380	9.3347	9.3347
1-30	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	0.2880	0.2205	1.5555	1.6908	9.8874	9.8874
Levelized														
1-30	7.8666	0.3300	8.1966	0.0980	0.1290	0.2151	0.0861	0.5187	0.5118	0.4826	2.0413	2.2189	10.4155	10.4155

Levelized Tariff =

10.4155 Rs./kWh

10.4155 Cents/kWh



Reference Tariff Table for Operation on HSD

Year	Energy Purchase Price (Rs./kWh)			Capacity Purchase Price (PKR/kW/Hour)								Capacity Charge@ 92%	Total Tariff	
	Fuel	Var. O&M	Total	Fixed O&M		Cost of W/C	Insurance	ROE	Debt Repayment	Interest Charges	Total CPP		Rs. /kWh	Cents/kWh
	Component	Foreign	EPP	Local	Foreign									
1	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	0.4668	1.0587	2.5725	2.7962	17.3183	17.3183
2	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	0.5280	0.9975	2.5725	2.7962	17.3183	17.3183
3	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	0.5971	0.9284	2.5725	2.7962	17.3183	17.3183
4	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	0.6754	0.8502	2.5725	2.7962	17.3183	17.3183
5	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	0.7638	0.7617	2.5725	2.7962	17.3183	17.3183
6	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	0.8639	0.6617	2.5725	2.7962	17.3183	17.3183
7	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	0.9770	0.5485	2.5725	2.7962	17.3183	17.3183
8	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	1.1050	0.4205	2.5725	2.7962	17.3183	17.3183
9	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	1.2497	0.2758	2.5725	2.7962	17.3183	17.3183
10	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	1.4134	0.1121	2.5725	2.7962	17.3183	17.3183
11	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
12	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
13	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
14	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
15	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
16	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
17	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
18	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
19	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
20	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
21	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
22	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
23	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
24	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
25	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
26	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
27	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
28	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
29	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
30	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	-	-	1.0470	1.1380	15.6601	15.6601
Average														
1-10	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	0.8640	0.6615	2.5725	2.7962	17.3183	17.3183
11-30	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	0.0000	0.0000	1.0470	1.1380	15.6601	15.6601
1-30	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	0.2880	0.2205	1.5555	1.6908	16.2129	16.2129
Levelized														
1-30	14.0317	0.4904	14.5221	0.0980	0.1290	0.2151	0.0861	0.5187	0.5118	0.4826	2.0413	2.2189	16.7410	16.7410

Levelized Tariff =

16.7410 Rs./kWh

16.7410 Cents/kWh



Debt Servicing Schedule (Local Currency Loan)

Net Capacity 220.00 MWs Debt in Pak Rupees 16,651.17 Rs. Million
 LIBOR 9.50%
 Spread over LIBOR 3.00%
 Total Interest Rate 12.50%

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	16,651.17	214.65	520.35	16,436.52	735.00			
2	16,436.52	221.36	513.64	16,215.17	735.00			
3	16,215.17	228.27	506.72	15,986.89	735.00			
4	15,986.89	235.41	499.59	15,751.49	735.00	0.4668	1.0587	1.5255
1st Year		899.68	2,040.30		2,939.99			
5	15,751.49	242.76	492.23	15,508.72	735.00			
6	15,508.72	250.35	484.65	15,258.37	735.00			
7	15,258.37	258.17	476.82	15,000.20	735.00			
8	15,000.20	266.24	468.76	14,733.96	735.00	0.5280	0.9975	1.5255
2nd Year		1,017.53	1,922.46		2,939.99			
9	14,733.96	274.56	460.44	14,459.40	735.00			
10	14,459.40	283.14	451.86	14,176.26	735.00			
11	14,176.26	291.99	443.01	13,884.27	735.00			
12	13,884.27	301.11	433.88	13,583.15	735.00	0.5971	0.9284	1.5255
3rd Year		1,150.81	1,789.18		2,939.99			
13	13,583.15	310.52	424.47	13,272.63	735.00			
14	13,272.63	320.23	414.77	12,952.40	735.00			
15	12,952.40	330.23	404.76	12,622.17	735.00			
16	12,622.17	340.55	394.44	12,281.61	735.00	0.6754	0.8502	1.5255
4th Year		1,301.54	1,638.45		2,939.99			
17	12,281.61	351.20	383.80	11,930.42	735.00			
18	11,930.42	362.17	372.83	11,568.25	735.00			
19	11,568.25	373.49	361.51	11,194.76	735.00			
20	11,194.76	385.16	349.84	10,809.59	735.00	0.7638	0.7617	1.5255
5th Year		1,472.02	1,467.97		2,939.99			
21	10,809.59	397.20	337.80	10,412.40	735.00			
22	10,412.40	409.61	325.39	10,002.79	735.00			
23	10,002.79	422.41	312.59	9,580.38	735.00			
24	9,580.38	435.61	299.39	9,144.77	735.00	0.8639	0.6617	1.5255
6th Year		1,664.83	1,275.16		2,939.99			
25	9,144.77	449.22	285.77	8,695.54	735.00			
26	8,695.54	463.26	271.74	8,232.28	735.00			
27	8,232.28	477.74	257.26	7,754.54	735.00			
28	7,754.54	492.67	242.33	7,261.87	735.00	0.9770	0.5485	1.5255
7th Year		1,882.89	1,057.10		2,939.99			
29	7,261.87	508.06	226.93	6,753.81	735.00			
30	6,753.81	523.94	211.06	6,229.87	735.00			
31	6,229.87	540.31	194.68	5,689.56	735.00			
32	5,689.56	557.20	177.80	5,132.36	735.00	1.1050	0.4205	1.5255
8th Year		2,129.52	810.47		2,939.99			
33	5,132.36	574.61	160.39	4,557.75	735.00			
34	4,557.75	592.57	142.43	3,965.18	735.00			
35	3,965.18	611.09	123.91	3,354.09	735.00			
36	3,354.09	630.18	104.82	2,723.91	735.00	1.2497	0.2758	1.5255
9th Year		2,408.45	531.54		2,939.99			
37	2,723.91	649.88	85.12	2,074.04	735.00			
38	2,074.04	670.18	64.81	1,403.85	735.00			
39	1,403.85	691.13	43.87	712.72	735.00			
40	712.72	712.72	22.27	0.00	735.00	1.4134	0.1121	1.5255
10th Year		2,723.91	216.08		2,939.99			

