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No. NEPRA/TRF-359/NPPMCL-2016/5894-5896
February 19, 2020

Subject: **Decision of the Authority in the matter of Tariff Adjustments at Commercial Operation Date (COD) of National Power Parks Management Company (Private) Limited (NPPMCL), 1223.106 MW - Balloki (Case No. NEPRA/TRF-359/NPPMCL-2016)**

Dear Sir,

Please find enclosed herewith the subject Decision of the Authority along with Annex-I, II, III & IV (29 pages) in Case No. NEPRA/TRF-359/NPPMCL-2016.

2. The Decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(7) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.
3. Order of the Authority along with Annex-I, II, III, & IV of the Decision are to be notified in the official Gazette.

Enclosure: As above


19 02 20
(Syed Safer Hussain)

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

CC:

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



**DECISION OF THE AUTHORITY IN THE MATTER OF TARIFF ADJUSTMENTS AT
COMMERCIAL OPERATION DATE (COD) OF NATIONAL POWER PARKS MANAGEMENT
COMPANY (PVT) LTD (NPPMCL), 1223.106 MW - BALLOKI**

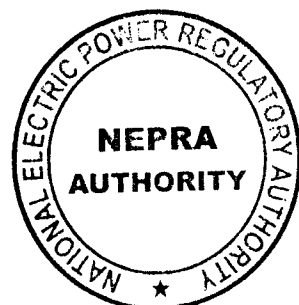
1. Introduction

- 1.1. National Power Parks Management Company (Private) Limited (hereinafter "NPPMCL"), the petitioner is a private limited company incorporated under the laws of Pakistan, wholly owned by the Government of Pakistan GOP, which has setup a Re-gasified Liquefied Natural Gas (hereinafter "RLNG") based Combined Cycle Power Plant in Pakistan namely 1,223.106 MW Power Plant at Balloki, District Kasur (the "Project" or "Balloki Project"). NPPMCL filed an application for issuance of generation license on April 21, 2016 which was granted by the Authority vide its determination dated September 29, 2016 through generation license No. IGSP/69/2016.
- 1.2. Pursuant to the relevant provisions of the NEPRA Act and the Rules and Regulations made there-under; NPPMCL filed Tariff Petition for approval of the reference generation tariff vide its letter dated April 22, 2016. The petition was processed in accordance with provisions of applicable law i.e NEPRA Act and Tariff (Standard & Procedure) Rules -1998. Having considered the submissions of the Petitioner, comments of stakeholders, determination in the matter was issued on August 09, 2016 wherein, the Authority determined a cost-plus levelized tariff of Rs.6.4284/kWh, US Cents 6.1223/kWh for RLNG and Rs. 10.0928/kWh and US Cents 9.6122/kWh for HSD.
- 1.3. The summary of project cost and tariff allowed to NPPMCL in tariff determination is as under:

BREAKUP OF PROJECT COST

*****US\$ in millions*****

Offshore EPC Cost	448.032
Onshore EPC Cost	114.568
EPC cost:	562.600
Combustion Monitoring System of Gas Turbines	0.500
Buffer Vessel	4.463
Site Housing Complex with Additional Recreational Facilities	6.048
BOP Spares	1.714
Acquisition of Land (Site housing complex)	1.513
Fuel Gas treatment plant	2.100
Items not covered in the EPC contract scope:	16.337
Engineering and related consultancy	9.770
Administrative Expenses	8.418
O&M mobilization & training	6.000
Land Cost (Power Complex)	5.160

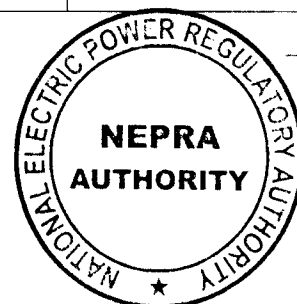




Security Surveillance	10.005
Insurance during construction	5.789
Testing & Commissioning	10.956
Non EPC Cost:	56.098
Customs Duties & Cess	27.106
LTSA Initial Spare Parts	20.880
Gas Pipeline Cost	8.800
One month LNG Escrow Account	37.045
CAPEX	728.867
Financing Fees & Charges 3.5% of Debt	17.857
Interest During Construction 30 Months	51.460
Total Project Cost	798.183
Rupee-Dollar Parity	Rs. 105/USD
US CPI (All Urban Consumers) Feb-16	237.11
Local CPI (General) Feb-16	202.98
Local Financing	3 Months KIBOR plus 3.00%
Debt: Equity Ratio	70 : 30

Tariff on Combined Cycle

Tariff Component	Reference		Indexation
	RLNG	HSD	
Energy Charge (Rs./kWh)			
Fuel cost component	4.5074	8.0326	Fuel price
Variable O&M	0.3143	0.4535	US CPI & Rs./US\$
Total	4.8217	8.4861	
Capacity Charge (Rs./kW/hour)			
Fixed O&M (Local)	0.0621	0.0621	CPI (General)
Fixed O&M (Foreign)	0.1382	0.1382	US CPI & Rs./US\$
Cost of working capital	0.0965	0.0965	KIBOR and fuel price
Insurance	0.0579	0.0579	Actual subject to maximum limit
Return on Equity	0.5589	0.5589	Rs./US\$
Debt servicing (1-10 Yrs)	0.8662	0.8662	KIBOR
Total Capacity Charges 1-10 years	1.7798	1.7798	
Total Capacity Charges 11-30 years	0.9136	0.9136	
Levelized capacity (Rs./kW/h)	1.4782	1.4782	
Levelized capacity @ 92% (Rs./kW/h)	1.6067	1.6067	
Levelized tariff (Rs./kWh)	6.4284	10.0928	
Levelized tariff (Cents/kWh)	6.1223	9.6122	





Tariff on Single Cycle (RLNG only)

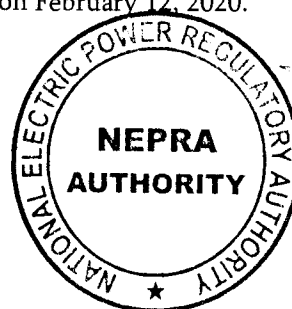
Description	Rs./kWh	Adjustment /Indexation
Fuel cost component	6.7731	Fuel price
Variable O&M (Foreign)	0.3143	US CPI & Rs./US\$
Fixed O&M (Local)	0.0621	CPI General
Fixed O&M (Foreign)	0.1382	US CPI & Rs./US\$
Cost of working capital	0.0965	KIBOR and fuel price
Total	7.3842	

- 1.4. Thereafter, NPPMCL filed a petition to the Authority on May 24, 2019 for modification of the generation tariff. Decision in the matter was issued on November 19, 2019, wherein the Authority determined a levelized tariff of Rs.6.4284/kWh, US Cents 6.1223/kWh for RLNG and Rs. 10.2951/kWh and US Cents 9.8048/kWh for HSD subject to applicable adjustments/indexations. The summary of modified tariff is as under:

Tariff on Combined Cycle

Tariff Component			Indexation
Energy Charge (Rs./kWh)	RLNG	HSD	
Fuel cost component	4.5074	8.0326	Fuel price
Variable O&M	0.3143	0.4535	US CPI & Rs./US\$
Total	4.8217	8.4861	
Fixed O&M (Local)	0.0621	0.0699	CPI (General)
Fixed O&M (Foreign)	0.1382	0.1556	US CPI & Rs./US\$
Cost of working capital	0.0965	0.1087	KIBOR and fuel price
Insurance	0.0579	0.0652	Actual subject to maximum limit
Return on Equity	0.5589	0.6292	Rs./US\$
Debt servicing (1-10 Yrs)	0.8662	0.9752	KIBOR
Total Capacity Charges 1-10 years	1.7798	2.0038	
Total Capacity Charges 11-30 years	0.9136	1.0286	
Levelized capacity (Rs./kW/h)	1.4782	1.6643	
Levelized capacity @ 92% (Rs./kW/h)	1.6067	1.8090	
Levelized tariff (Rs./kWh)	6.4284	10.2951	
Levelized tariff (Cents/kWh)	6.1223	9.8048	

- 1.5. Being aggrieved with the above decision, NPPMCL filed a motion for leave for review in pursuance to Rule 16(6) of NEPRA Tariff (Standards & Procedure) Rules, 1998, on November 29, 2019. Decision in the matter was issued on February 12, 2020.





One Time Adjustments of Project Cost at Commercial Operations Date (COD):

- 1.6. Following one-time adjustments were provided by the Authority in the reference tariff determinations of NPPMCL dated August 09, 2016, November 19, 2019 and February 12, 2020:
- i. EPC Cost.
 - a) Offshore EPC Cost
 - b) Onshore EPC Cost
 - ii. Items not covered in the EPC Agreement Scope
 - iii. Customs, Duties and Cess.
 - iv. O & M mobilization cost
 - v. Security & Surveillance
 - vi. Administrative cost
 - vii. Gas pipeline cost
 - viii. Testing & Commissioning
 - ix. Escrow Account
 - x. Financing Fees & Charges
 - xi. Interest During Construction (IDC)
 - xii. ROE component
 - xiii. O&M component
 - xiv. BoP Spares
 - xv. Additional Land

- 1.7. NPPMCL attained its commercial operations date (COD) with effect from July 29, 2018. As per the determination, NPPMCL submitted its request for adjustment of relevant components of its generation tariff vide letter dated December 10, 2019. In support of its claim, NPPMCL also submitted the documentary evidence.

2. **Details of one-time adjustment is as under:**

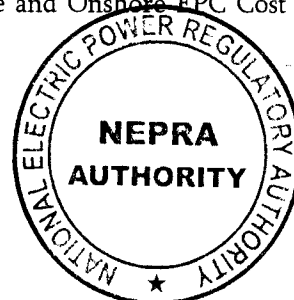
2.1. **EPC Cost**

- 2.1.1. NPPMCL was allowed an EPC Cost of USD 562.6 million (i.e Offshore EPC Cost of USD 448.032 million and Onshore Cost of USD 114.568 million).

- 2.1.2. The relevant provisions of Paragraph 27(II) of the Order dated August 09, 2016 and 9(II) of the decision dated November 19, 2019 stated;

“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\$ 448.032 million of the EPC portion of payment in the foreign currency shall be made against the reference exchange rate of Rs. 105/US\$ on the basis of actual payment. The adjustment shall be made only for the currency fluctuation against the reference parity values.”

- 2.1.3. NPPMCL vide its COD request has claimed same amount of EPC Cost as earlier allowed by the Authority which is USD 562.6 million (i.e Offshore and Onshore EPC Cost of USD 448.032 million and USD 114.568 million respectively).



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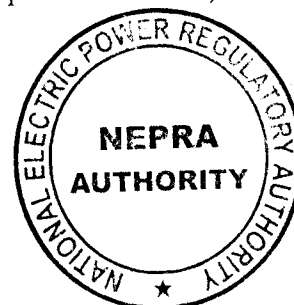
- 2.1.4. NPPMCL submitted that it entered into an EPC Agreement with Joint Venture of Harbin Electric International and Habib Rafiq (Pvt.) Ltd. for the construction of 1223.106 MW Balloki Project, details of which are as reproduced below:

Contract	Contractor	Origin	Contract Price	Contract Date
Offshore	Harbin Electric International and Habib Rafiq (Pvt.) Ltd.	China	USD 448,032,136	November 02, 2015
Onshore	Harbin Electric International and Habib Rafiq (Pvt.) Ltd.	China	USD 114,567,864 (inclusive of ST)	November 02, 2015
Total in USD			USD 562,600,000	

- 2.1.5. As per information provided by NPPMCL, the EPC cost included power generation sets together with all the necessary auxiliary machinery, equipment and systems and includes the erection, testing, commissioning and completion of the equipment and construction of facility. EPC Offshore scope included Supply of equipment i.e. Gas Turbines made by GE, Steam Turbines Alstom, Boilers, Electric Equipment's, SCADA System and all other obligations to be performed by the Supplier outside Pakistan. Scope of EPC Onshore included Civil works, Construction etc.
- 2.1.6. As per Para VIII 'Terms & Conditions' point (xii) of the determination dated August 09, 2016, the construction period was allowed as 27 months. NPPMCL issued "Notice to Proceed" on November 02, 2015 to HEI-HRL Joint Venture. The Project achieved Financial Close on November 28, 2016. Actual COD was achieved on July 29, 2018 having a delay of 177 days as against the RCOD of February 02, 2018.
- 2.1.7. NPPMCL requested to allow US\$ 562.60 million (Rs. 62,487.62 million) on account of currency / exchange rate fluctuation during the construction period. The breakup provided by NPPMCL of EPC cost is as under:

Description	Reference		Claimed	
	Gross/Total	Gross/Total	Gross/Total	Gross/Total
	USD in M	PKR in M	USD in M	PKR in M
EPC Cost-Offshore	448.03	47,043.15	448.03	50,836.07
EPC Cost-Onshore	114.57	12,029.64	114.57	11,651.55
Total	562.60	59,072.79	562.60	62,487.62

- 2.1.8. As per determination, out of the total EPC cost of USD 562.60 million, only the offshore portion of the cost was entitled to adjustment of US\$/PKR parity variations. NPPMCL submitted a claim of Rs. 50,836.07 million @ Rs.113.47/US\$ wherein the exchange rate of the COD adjustment filing date (i.e Rs. 155.70/US\$) was used for conversion of payables.
- 2.1.9. As for the onshore portion, NPPMCL submitted that it had locked the Onshore EPC Price at Rs.101.70/\$ at the time of signing of PPA and EPC Agreement with the EPC Contractor. NPPMCL in support of its claim submitted relevant documentary evidences such as copies of EPC contracts, commercial invoices, milestones completion certificate, interim payments certificates, bank statements etc.



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2.1.10. Upon scrutiny of the documents it was observed that NPPMCL has paid US\$ 474.77 million or Rs. 49,852.814 million to the EPC contractors till COD i.e. July 29, 2018. The remaining amount of US\$ 87.826 million (offshore US\$ 67.204 million and onshore US\$ 20.622 million) was required to be paid. NPPMCL requested the Authority to allow remaining payable cost of US\$ 87.826 million at the exchange rate of PKR 155.70/US\$ for offshore contract price.

2.1.11. The comparison of reference, claimed and verified EPC cost is as under:

Description	Reference		Claimed		Verified					
	Gross/Total	Gross/Total	Gross/Total	Gross/Total	Paid		Payable		Paid + Payable	
	USD in M	PKR in M	USD in M	PKR in M	USD in M	PKR in M	USD in M	PKR in M	USD in M	PKR in M
EPC Cost-Offshore	448.03	47,043.15	448.03	50,836.07	380.83	40,298.54	67.20	7,426.04	448.03	47,724.58
EPC Cost-Onshore	114.57	12,029.64	114.57	11,651.55	93.94	9,554.27	20.62	2,097.28	114.57	11,651.55
Total	562.60	59,072.79	562.60	62,487.62	474.77	49,852.81	87.83	9,523.32	562.60	59,376.14

2.1.12. NPPMCL was required to achieve COD on February 02, 2018 whereas actual COD was achieved on July 29, 2018 with delay of 5 months and 27 days. NPPMCL further delayed its COD tariff adjustment request by filing in December 2019 after a time period of 16 months and 12 days. The Authority considers that the request of NPPMCL to adjust post COD payable amounts at prevailing exchange rate of Rs. 155.70/US\$ as claimed by the Petitioner is not justified.

2.1.13. In view of above, the Authority considers it appropriate to allow the remaining payable amount of US\$ 67.204 million @ Rs. 110.50/US\$ prevailing at RCOD and onshore US\$ 20.622 million @ Rs. 101.70/US\$. Accordingly the overall amount on account of exchange rate variation in EPC offshore till RCOD works out as Rs. 47,724.58 @ weighted average exchange rate of Rs. 106.52/US\$.

2.1.14. The Authority therefore decided to allow amount of US\$ 562.60 Million (Rs. 59,376.136 million) on account of EPC cost which is as under:

Description	Contractor	Allowed	
		USD in M	PKR in M
EPC Cost-Offshore	Harbin Electric International and Habib Rafiq (Pvt.) Ltd.	448.03	47,724.58
EPC Cost-Onshore	Harbin Electric International and Habib Rafiq (Pvt.) Ltd.	114.57	11,651.55
Total		562.60	59,376.136

2.2. Items not covered in the EPC Agreement Scope:

2.2.1. NPPMCL was allowed USD 16.337 million as cost of Items not covered in the EPC Agreement Scope. In modified decision dated November 19, 2019, provisional amount of US\$ 5.79 million on account of BOP spares was allowed subject to payment at the time of COD as per actual.



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2.2.2. During review of the submitted documents, it was noted that only the cost related to Site Housing US\$ 6.100 million, BOP spares for US\$ 7.50 million and Land Cost of US\$ 1.464 million was claimed by NPPMCL resulting in total of US\$ 15.061 million out of which US\$ 13.116 million is still payable on part of the company. Breakup of the cost is as under:

Sr. #	Description	Determined US\$ Million	Modified US\$ Million	Claimed US\$ Million	Paid US\$ Million	Payable US\$ Million	Verified US\$ Million
1	Combustion Monitoring System of Gas Turbine	0.500	0.500	-	-	-	-
2	Buffer Vessel	4.463	4.463	-	-	-	-
3	Site Housing Complex	6.048	6.048	6.100	0.027	6.021	6.048
4	BOP Spares	1.714	7.500	7.500	0.406	7.094	7.500
5	Land Cost	1.513	1.513	1.464*	1.470	-	1.470*
6	Fuel Gas Treatment Plant	2.100	2.100	-	-	-	-
	Total	16.337	22.124	15.061	1.902	13.116	15.018

*NPPMCL claimed cost at exchange rate of Rs.105.39/USD instead of Rs.105/USD

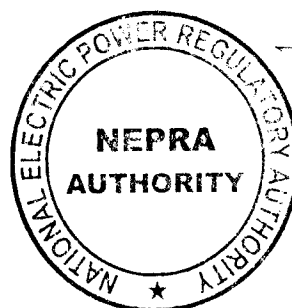
2.2.3. Having considered the submissions of the NPPMCL, the Authority decided to provisionally allow the payable cost of US\$ 13.116 million on account of Site Housing and BOP Spares. In case the Petitioner fails to complete Site Housing Complex within 2 years from COD of the complex, a penalty shall be applicable on the basis of KIBOR + 3% per annum of the cost allowed on account of Site Housing Colony. Further, the payable cost of BOP spares shall also be adjusted along with the adjustment of Site Housing Colony. However, no exchange rate variation will be allowed in BOP spares. Accordingly amount of USD 15.018 million as cost of 'Items not covered in the EPC Agreement Scope' is allowed.

2.3. Non-EPC cost:

2.3.1. The Authority allowed USD 56.098 million as 'Non-EPC Cost, including engineering consultancy, Administrative Expenses during construction, O & M mobilization & training, land cost, Security Surveillance, insurance during construction @ 1% of total EPC cost, testing & commissioning cost.

2.3.2. In accordance with prescribed one-time adjustments, only the cost of O & M mobilization & training of USD 6.00 million, Security Surveillance cost of USD 10.005 million and Administrative Cost of USD 8.418 million was required to be adjusted as per actual at COD. As per the review motion decision dated February 12, 2020, the component of Testing & Commissioning was also to be adjusted as per actual subject to maximum limit of US\$ 10.956 million at the time of COD.

2.3.3. NPPMCL submitted a claim of USD 74.295 million as 'Non-EPC Cost. The cost breakup of these items are as under:



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Description	Determined US\$ Million	Claimed US\$ Million	Paid US\$ Million	Payable US\$ Million	Verified US\$ Million
Engineering consultancy	9.770	10.792	8.281	0.825	9.106
Administrative Expenses	8.418	3.880	3.906 ¹	-	3.906 ¹
O&M mobilization & training	6.000	4.549	4.549	-	4.549
Land Cost	5.160	5.660	5.040	0.627	5.666 ²
Security Surveillance	10.005	7.860 ³	-	10.005	10.005
Insurance during construction	5.789	6.354	4.161	0.032	4.193
Testing & Commissioning	10.956	35.200	35.20	-	10.956
Total	56.098	74.295	36.893	11.489	48.381

1. NPPMCL claimed cost at exchange rate of Rs.105.74/USD instead of Rs.105/USD.
2. NPPMCL claimed cost at exchange rate of Rs.106.17/USD instead of Rs.105/USD.
3. NPPMCL claimed cost at exchange rate of Rs.155.70/USD instead of Rs.105/USD.

2.3.4. NPPMCL submitted an addendum to the COD adjustment request on January 14, 2020 and submitted that the overall revised amount for Engineering Consultancy of US\$ 10.792 million to be allowed instead of actual amount of US\$ 9.106 million, as it was not required to be adjusted at the time of COD. Under the head of Security Surveillance, NPPMCL claimed USD 10.005 million which stands payable to date. In addition to that under the head of Insurance During Construction, it has claimed at maximum 1% of the EPC regardless of actual amount expenditure.

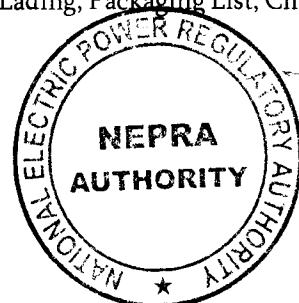
2.3.5. The Authority considered the request of NPPMCL regarding non adjustment of expenditures on actual for engineering consultancy and insurance during construction. The generation tariff determined for NPPMCL is on cost plus basis wherein the defined parameters and terms and conditions have been laid down in the original decision. The Authority considers that the request of NPPMCL regarding allowing the aforesaid cost on reference amount is not justified.

2.3.6. Hence the Authority while declining the request of NPPMCL decided to allow Non-EPC cost of USD 48.381 million @ Rs. 102.802/US\$ including the payable amount of US\$ 11.489 million. However, all the payable amounts i.e. engineering consultancy, security and surveillance, land cost are subject to adjustment along with the adjustment of site housing colony as per Order para (6) of the Decision dated February 12, 2020. No exchange rate variation will be allowed at the time of adjustment of the aforesaid costs.

2.4. Customs, Duties and Cess:

2.4.1. The Authority allowed US\$ 27.106 million as Customs, Duties and Cess. It was also provided that Customs, Duties and Cess of US\$ 27.106 million shall be adjusted as per actual at COD.

2.4.2. NPPMCL submitted a claim of PKR 2,259.115 million (USD 21.523 million) as cost of Custom Duty and Cess paid on import of plant machinery and also provided documents for verification, which included Goods Declaration, Bill of Lading, Packaging List, Challan Cess and etc.





2.4.3. The Authority considering the above claim of NPPMCL decided to allow the verified amount of PKR 2,259.115 million (USD 21.523 million @ Rs. 104.96/US\$) as Custom Duties and Cess.

2.5. **LTSA initial spares inventory:**

2.5.1. The Authority allowed US\$ 20.880 million as cost of LTSA initial spares parts.

2.5.2. NPPMCL claimed an amount of USD 20.880 million on this account and submitted supporting documents including contract with GE, and sales tax invoices for verification.

2.5.3. The Authority considering the above claim of NPPMCL decided to allow the verified amount of PKR 2,287.938 million (USD 20.880 million @ Rs. 109.57/US\$) as cost of LTSA initial spares parts.

2.6. **Gas Pipeline Cost:**

2.6.1. The Authority allowed Gas Pipeline cost of USD 8.8 million subject to adjustment as per actual at COD.

2.6.2. NPPMCL has claimed an amount of Rs. 828 million, out of which Rs. 760 million has been paid however, Rs. 68 million stand as payable and being translated at the exchange rate of USD/PKR 155.7 which is equivalent to USD 0.437 million. Subsequently NPPMCL revised its claim and submitted EY Ford Rhodes report on January 24, 2020, wherein the total cost of laying transmission line amounts to Rs. 869.574 million and balance payable as per report is Rs. 109.574 million.

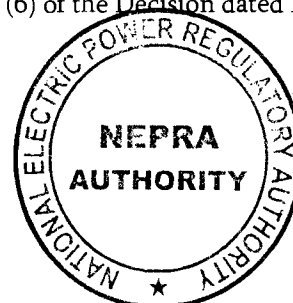
2.6.3. The Authority considering the above claim of NPPMCL and the report of auditor, decided to allow the verified amount of Rs. 869.574 million (USD 8.282 million @ Rs. 105/US\$) as cost of Gas Pipeline.

2.7. **One month LNG Escrow Account:**

2.7.1. The Authority in the determination allowed USD 37.045 million (Rs. 3,889.73 million) as cost of One month LNG Escrow Account which was subject to adjustment on the basis of revised RLNG price and applicable GST at COD.

2.7.2. NPPMCL submitted that out of the total claim of Rs. 9,440.348 million, Rs. 5,723 million has been paid at exchange rate USD/PKR 104.90, however an amount of Rs. 3,717.348 million is still payable.

2.7.3. The Authority while considering the above claim of NPPMCL decided to allow the amount of Rs. 9,440.348 million (USD 83.576 million @ Rs. 112.96/US\$) as One month LNG Escrow Account, subject to verification of payable amount of Rs. 3,717.348 million along with the adjustment of Site Housing Colony as per Order para (6) of the Decision dated February 12, 2020.



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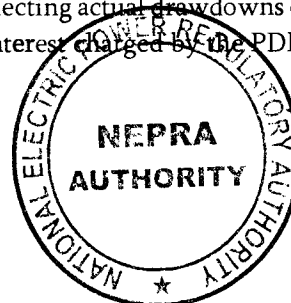


2.8. **Financing Fees & Charges:**

- 2.8.1. The Authority allowed a cost of USD 17.857 million as Financing Fees & Charges (which was 3.5% of the debt). The allowed cost was subject to adjustment as per actual subject to the maximum limit of 3.5% of the approved debt.
- 2.8.2. NPPMCL submitted an amount of PKR 378.905 million inclusive of FED/Sales tax at an exchange rate of Rs 113.21/USD on account of financing fees & charges as per table given below:

No	Description	Amount	Rate	Amount
		USD		PKR
1	Fee	1,676,775	105.0	176,061,359
2	LC Commission	11,131	105.0	1,168,710
3	Bank guarantee charges	1,658,969	121.6	201,675,056
4	Submission charges	4	105.0	450
	Total financing fee	3,346,879	113.2	378,905,575

- 2.8.3. In support of its claim, NPPMCL submitted documentary evidence i.e. Bank Statements, Debit Advices, Letter of Credit etc. NPPMCL also stated that regardless of the less expenditure of the company under this head, it would like to request the Authority to allow them complete 3.5% of the debt as Financing Fees & Charges which amounts to USD 20.08 million.
- 2.8.4. The Authority considering the above claim of NPPMCL decided to allow the actual verified amount of Rs. 352.257 million (USD 3.355 million @ Rs. 105/US\$) as Financing Fees & Charges excluding the adjustable FED amount of Rs. 26.648 million
- 2.9. **Interest during Construction:**
- 2.9.1. The Authority allowed USD 51.460 million for Interest During Construction. It was also provided that,
- 2.9.2. *"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."*
- 2.9.3. NPPMCL submitted that the Project has been financed through seed money from GOP / Ministry of Water and Power (MoWP now Ministry of Energy MoE) amounting to PKR 1.25 Billion and Public Sector Development Program (PSDP) fund disbursed as Cash Development Loan (CDL) amounting to PKR 53.08 Billion which was later converted to GoP equity on June 30, 2017 and acquired by Pakistan Development Fund Limited (PDFL). PDFL provided an amount of PKR 15.8 Billion and PKR 2.5 Billion as a loan on August 31, 2017 and May 25, 2018 respectively. In support of its claim, NPPMCL has submitted copy of financial agreement, copies of bank Statements reflecting actual drawdowns of debt along with bank debit advices evidencing the amount of interest charged by the PDFL and MoF.



8/2



- 2.9.4. The Petitioner claimed for Rs. 2,727.41 million (US\$ 23.98 million) for actual construction period of 33 months. The Petitioner's justification for actual construction period of 33 months was already declined by the Authority in the modified decision dated November 19, 2019. The Authority already decided that an extension in COD can only be granted in case of a declared force majeure event under the PPA/IA, approved by PPIB/NTDC/CPPA-G. As further decided that allowing additional construction period and the resultant requested additional costs would be not justified.
- 2.9.5. NPPMCL issued notice to proceed to EPC contractors on November 02, 2015 which is the start date of construction. The Authority allowed total construction period of 27 months as in the modified decision referred above, whereas NPPMCL claimed IDC on the basis of actual construction period of 33 months for claiming IDC. The Authority considers that request of NPPMCL is not justified.
- 2.9.6. The documents submitted by NPPMCL have been scrutinized and it was observed that the Company has earned interest income on TDR, NIIDA Account and Head Office Account. The Authority considers that this amount needs to be adjusted / deducted in the IDC.
- 2.9.7. Hence the IDC has been calculated on the basis of the allowed construction period of 27 months. The comparison of determined, claimed and allowed IDC is as under:

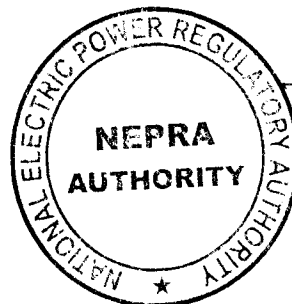
Determined			Claimed			Verified		
Gross/Total	Exch. Rate	Total	Paid			Gross/Total	Exch. Rate	Total
USD in M	PKR / USD	PKR in M	USD in M	PKR / USD	PKR in M	USD in M	PKR / USD	PKR in M
51.46	105.00	5,403.30	23.98	113.74	2,727.41	23.21	105.00	2,437.36

- 2.9.8. As against the claimed amount of Rs. 2,727.41 million, the adjusted amount on account of interest and 40% savings in spread of drawdown (PDFL loan), the IDC has been re-established as Rs. 2,437.362 million (US\$ 23.21 million) at the exchange rate of Rs.105/US\$ and the same has been allowed.

2.10. Sales Tax:

- 2.10.1. NPPMCL has claimed sales tax of Rs. 2,698.767 million (USD 24.344 million) at the COD stage and has provided the following break up of its claim:

Description	Amount in USD	Amount in PKR
Sales Tax		
Adjustable sales tax @ 16 %	22,216,730	2,482,380,965
Non-adjustable sales tax @ 5%	2,127,689	216,385,961
Total	24,344,419	2,698,766,926



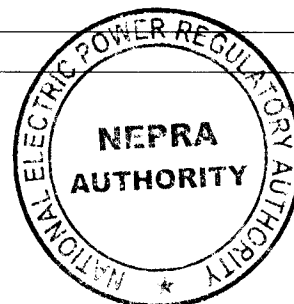


- 2.10.2. In support of sales tax claim, NPPMCL submitted an opinion from Yousaf Saeed & Company Chartered Accountants, a member firm of the Alliance of Independent firms dated January 28, 2020 which confirmed the sales tax to the extent of non-adjustable for Rs. 216.385 million and being final liability of the Petitioner.
- 2.10.3. In view of the report of the auditor, out of the total sales tax amount of USD 24.344 million, USD 22.216 million is adjustable tax while the remaining USD 2.127 million is un-adjustable sales tax. The Authority considers that the request of NPPMCL regarding adjustment of total claimed sales tax amount is not justified and therefore same is declined. Therefore, the Authority decided to allow the non-adjustable sales tax of USD 2.127 million (Rs.216.385 million), however USD 23.641 million is deducted from the overall project cost as cost of adjustable tax which is converted @ Rs.105/US\$.

3. Revised Project Cost

Concluding the discussion made in the above paras, the revised approved project cost of NPPMCL after incorporating one-time adjustments at COD results is as under:

BREAKUP OF PROJECT COST	****US\$ in millions****
Offshore EPC Cost	448.032
Onshore EPC Cost	114.568
EPC cost:	562.600
Combustion Monitoring System of Gas Turbines	-
Buffer Vessel	-
Site Housing Complex with Additional Recreational Facilities	6.048
BOP Spares	7.500
Acquisition of Land	1.470
Fuel Gas treatment plant	-
Items not covered in the EPC contract scope:	15.018
Engineering and related consultancy	9.106
Administrative Expenses	3.906
O&M mobilization & training	4.549
Land Cost	5.666
Security Surveillance	10.005
Insurance during construction	4.193
Testing & Commissioning	10.956
Non EPC Cost:	48.381
Customs Duties & Cess	21.523
LTSA Initial Spare Parts	20.880
Gas Pipeline Cost	8.282
One month LNG Escrow Account	83.576
Less Sales Tax (Adjustable)	(24.265)
CAPEX	736.618



2



Financing Fees & Charges 3.5% of Debt	3.335
Interest During Construction 30 Months	23.213
Total Project Cost	763.186
Rupee-Dollar Parity	Rs. 106.31/USD
US CPI (All Urban Consumers) Jun-18	251.99
Local CPI (General) June-18	226.68
Local Financing	3 M KIBOR (6.92%) plus 1.8% inclusive of 40% sharing in spread.
Debt: Equity Ratio	70 : 30

4. Tariff Components

The operation cost / tariff components were subject to the following adjustments / indexation as per Authority's determination:

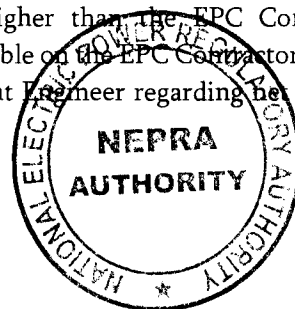
Component	Adjustment
Energy Part:	
Fuel cost Component	Fuel Price
Variable O&M (Foreign)	US CPI & Rs./US\$
Capacity Part:	
Fixed O&M (Local)	CPI General (quarterly)
Fixed O&M (Foreign)	US CPI & US\$/PKR (quarterly)
Cost of working capital	KIBOR & Fuel Price
Insurance	Annually adjustment upto 1% of EPC Cost
ROE	US\$ /PKR (quarterly)
Debt Service	KIBOR

4.1. Fuel Cost Component:

4.1.1. The fuel cost component was determined based on the reference efficiency of 61.627% for RLNG and 53.643% for HSD. The allowed efficiency was subject to adjustment at the time of COD. In pursuance to Section IV of the tariff determination dated August 09, 2016:

"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."

4.1.2. NPPMCL submitted that the Heat Rate Test was conducted in accordance with the testing procedures laid down in the contractual arrangements and was witnessed by the Independent Engineer and CPPA-G. The combined cycle efficiency was established as 61.716% on RLNG fuel ("RLNG Tested Efficiency"). After adjusting the same with degradation curve / factor for the number of fired hours, the corrected combined cycle efficiency was established as 62.30% which was higher than the EPC Contractors' guaranteed value of 61.627%, hence, LD was not applicable on the EPC Contractor in terms of the EPC Contract. Copy of certificate of Independent Engineer regarding the heat rate



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test along with relevant portions of test report for said test on RLNG have been submitted accordingly.

4.1.3. Similarly, the combined cycle efficiency on HSD fuel was established as 54.149% ("HSD Tested Efficiency") and after adjusting the same with degradation curve/factor for the number of fired hours the corrected combined cycle efficiency was established as 54.652% which was higher than the EPC Contractors' guaranteed value of 53.643%. Copy of certificate of Independent Engineer regarding net heat rate test along with relevant portions of test report for said test on HSD has also been submitted accordingly.

4.1.4. NPPMCL submitted that as per section 19.6 of the Order of the Authority determination dated August 09, 2016;

"...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."

4.1.5. NPPMCL submitted that since the HSD Tested Efficiency (54.149%) is higher than the guaranteed efficiency (53.643%) therefore the revised efficiency after incorporating the savings in the ratio of 60:40 works out as 53.947% (53.643% + 60.0% * (54.149% - 53.643%)).

4.1.6. NPPMCL referred the provisions of Clause 8.70 of the Modification Order dated November 19, 2019 and requested for the following adjustments/corrections (provided in Table below) as allowed to UCH II Power Project:

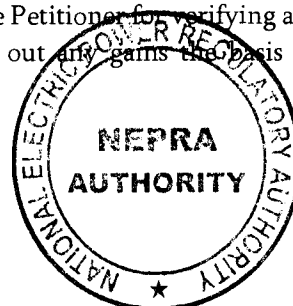
CORRECTION/ADJUSTMENTS

No	Description	Percentage
1	Recoverable and non-recoverable adjustments	0.508%
2	Blow down adjustment	0.18%
3	Misc. adjustment	0.10%
4	Temperature adjustment	0.11%
	Total Adjustment	0.898%

4.1.7. NPPMCL subsequently vide letter dated February 14, 2020 requested to allow efficiency of 60.784% (61.682% - 0.898%) on RLNG ("RLNG Applicable Efficiency") and 53.049% (53.947% - 0.898%) on HSD ("HSD Applicable Efficiency"). The fuel cost components in the Petition have been calculated at the applicable respective efficiencies determined above i.e. 60.784% for RLNG and 53.049% for HSD.

4.1.8. NPPMCL had proposed a mechanism whereby the tested efficiency numbers have been adjusted to verify whether LDs are applicable. While for working out the sharing of gain, in case levels are established more than the EPC guaranteed numbers, the test numbers have been used by comparing those with EPC guaranteed values.

4.1.9. The Authority agrees with the mechanism used by the Petitioner for verifying applicability of LDs. However it is considered that for working out any gains the basis need to be



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consistent and reflect same time frames. Under the proposed approach by the Petitioner, the test numbers and the EPC guaranteed numbers do not represent same time frame. The Authority therefore has allowed efficiency numbers after taking into consideration appropriate factors in the working.

4.1.10. The Petitioner has also claimed that further corrections/adjustments in the efficiency numbers may be allowed to it on same lines as allowed by the Authority to UCH-II power plant. The Petitioner did not provide any further working or evidence to substantiate its claim. The Petitioner also requested these corrections in its earlier petitions for reference tariff and modification of tariff. The Authority in its decision (section 8.7) on the petition for modification of tariff has observed as follows;

“Keeping in view the above, the Authority has decided to consider the request of the Petitioner at COD stage tariff adjustment.”

4.1.11. The Petitioner has claimed the following adjustments;

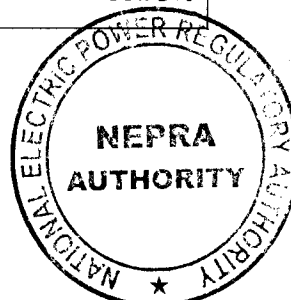
Recoverable and non-recoverable adjustments	0.508%
Blow down adjustment	0.18%
Miscellaneous Adjustment	0.10%
Temperature Adjustment	0.11%
TOTAL	0.898%

4.1.12. The matter was discussed with the Petitioner’s representatives and it was observed that Recoverable and non-recoverable adjustment, and temperature adjustment are already allowed to the petitioner and they requested that adjustments on these accounts be allowed to compensate them as they will receive such adjustments at the end of year whereas they require periodic adjustments during the year. The Petitioner was also unable to provide further details about miscellaneous adjustment.

4.1.13. The Authority is of the considered opinion that the request of the petitioner on these factors cannot be accepted. Adjustment on account of Blow down is a reasonable request however it is to be noted that the Petitioner has already been allowed a tariff which is linked with the EPC guaranteed value which normally has cushion of 2 to 2.5 % than the actual performance levels. For simple cycle operations the petitioner was allowed to claim its costs. Furthermore, efficiency gains have also been shared with the Petitioner whereas performance curves have also been allowed to it. The Authority therefore declines to allow above requested adjustments to the Petitioner.

4.1.14. In view of the discussion in the preceding paragraphs the following Efficiency levels are allowed to the Petitioner:

Fuel	Requested Efficiency	Allowed Efficiency
RLNG	60.784%	61.7%
HSD	53.049%	53.95%



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4.1.15. NEPRA vide its letter dated August 07, 2018 has determined the RLNG price for calculation of the fuel cost component applicable for the month of July 2018 under which the applicable price is RLNG 1,448.2571/MMBTU (ex-GST). For HSD the applicable price of PKR 91.1 per liter has been used which is the net of GST price of HSD as announced by OGRA for the month of July 2018. The same have been used for calculation of the fuel cost component for the purpose of this Petition. The determined, claimed and revised fuel cost component is as under:

Description	Determined	Claimed	Allowed
	Rs./kWh	Rs./kWh	Rs./kWh
Fuel Cost Component (LNG)	4.5074	9.0046	8.8710
Fuel Cost Component (HSD)	8.0326	17.2405	16.9526

4.1.16. With respect to Output Degradation Factor, Heat Rate Degradation Factor and Part Load Adjustment Correction, the Authority in its determination dated November 19, 2018 stated that the respective issue would be considered at the time of COD based on correction curves of the complex specified by OEM on its letter head. On the basis of this observation, CPPA-G has informed NPPMCL, in a meeting, that it will not allow any of these factors and associated costs to NPPMCL for future invoices till the decision of the Authority.

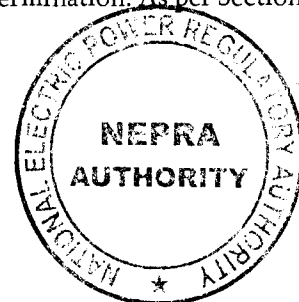
4.1.17. NPPMCL has earlier submitted that these matters have been agreed with the Power Purchaser in PPA as per the industry norms. The PPA is executed after due diligence by both parties and is applicable. Furthermore, this standard PPA is approved by the ECC. In addition, the PPA has been submitted by the power purchaser to NEPRA for approval. In view thereof NPPMCL requested the Authority to allow above referred adjustment factors till approval of PPA.

4.1.18. Furthermore in response to the Authority decision of Nov 2018, whereby the Authority observed that adjustments need to be based on OEM curves - the petitioner has stated that OEM cannot provide the correction curves for the complex: rather the correction curves for the complex – entailing plant and machinery items can only be provided by the EPC contractor and that these curves had already been shared with CPPA-G.

4.1.19. In view of the above, and the decision on Motion for Leave for Review filed by NPPMCL dated February 2020, the Authority agrees that curves provided by EPC Contractor are acceptable for the payments on account of Output Degradation Factor, Heat Rate degradation Factor and Part Load Adjustment correction. The curves provided by the EPC contractor shall be submitted to the Authority at the earliest. Furthermore CPPA-G is directed to continue to pay on account of the stated factors as per PPA which will be considered for approval by the Authority.

4.2. O&M Component:

4.2.1. The Authority allowed O&M cost component in the determination. As per Section II(xi) of the Order of the Authority:



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“O&M component shall be adjusted as per the signed O&M agreement, LTSA agreement”.

4.2.2. The Petitioner in its COD adjustment request submitted that it has followed a bidding process and has signed an O&M Contract with TNB Remaco. In support of its claim NPPMCL also provided the copy of the O&M contract. NPPMCL submitted that the O&M contract does not include in its scope of work costs related to Free Start-ups, Back-feed Power and recurring administration expenses during operations, which have been budgeted separately. Details of the O&M costs as provided by NPPMCL are as below:

O&M COST BREAK-UP

Description	Order			Actual		
	V O&M	F O&M	Total	V O&M	F O&M	Total
	US\$	US\$	US\$	US\$	US\$	US\$
Long Term, Service Agreement (LTSA) Cost	7,419,048	6,960,000	14,379,048	6,395,731	6,000,000	12,395,731
O&M Operator Fee – Foreign	18,916,032	6,855,508	25,771,540	5,570,806	5,912,886	11,483,692
O&M Operator Fee – Local	-	1,209,795	1,209,795	-	-	-
Cost related to NOx Control SCR	2,575,839	-	2,575,839	n/a	n/a	n/a
Back Feed Power				-	1,422,405	1,422,405
Free Start Ups				-	1,801,227	1,801,227
Company's OH cost	-	5,000,000	5,000,000	-	5,000,000	5,000,000
Total	28,910,919	20,025,303	48,936,222	11,966,537	20,136,518	32,103,055

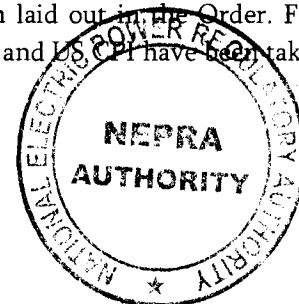
4.2.3. According to NPPMCL, all of the above costs other than corporate overheads are to be incurred in USD. NPPMCL claimed O&M tariff components are as under:

O&M COST COMPONENTS (FOR RLNG ONLY)

Tariff Components	Reference Tariff	Indexed Tariff at COD
Variable O&M (Foreign) (PKR/kWh)	0.1294	0.1592
Fixed O&M (Foreign) (PKR/kW/hour)	0.1185	0.1458
Fixed O&M (Local)	0.0818	0.0913
Indexation Values		
Local CPI	202.98	226.680
US CPI	237.11	251.989
Exchange Rate (PKR/USD)	105.00	121.60

*Adjusted for actual O&M agreement

4.2.4. The Petitioner has indexed the O&M components of the Reference Tariff (adjusted for actual O&M agreement) based on indexation mechanism laid out in the Order. For the purpose of indexation, the indexation values for local CPI and US CPI have been taken for



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the month of June 2018 while exchange rate has been taken as of June 30, 2018 as against the reference local CPI, US CPI and exchange rate values for the month of February 2016.

- 4.2.5. The Authority considered the request of NPPMCL and decided to disallow cost requested on account of back feed power and free start-ups. Accordingly the verified Variable O&M (Foreign) Component @ Rs 0.1498/kWh, Fixed O&M (Foreign) @ Rs 0.1372/kW/h and Fixed O&M (Local) @ Rs 0.0576/kW/h is allowed to the Company. The summary of determined, claimed and approved O&M Components at COD are as under:

	Determined	Claimed	Allowed
Description	Rs./kWh	Rs./kWh	Rs./kWh
Variable O&M (F)	0.3143	0.1592	0.1498
	Rs./kW/h	Rs./kW/h	Rs./kW/h
Fixed O&M (F)	0.1382	0.1458	0.1372
Fixed O&M (L)	0.0621	0.0913	0.0576

4.3. **Insurance during operations component:**

- 4.3.1. The Authority had allowed Rs. 0.0579 per kW/h as insurance tariff component to NPPMCL. NPPMCL requested to allow insurance tariff component of Rs. 0.0982 per kW/h at the COD stage. NPPMCL has claimed Rs. 1,036.457 million (1.29% of EPC cost) for insurance during operations for the period of 1yr (365 Days) i.e. July 29, 2018 to July 28, 2019. In support of its claim, NPPMCL has provided photocopies of Insurance policies and bank statements for payments.

- 4.3.2. The tariff determination at Para 22.2 specified that:

“The insurance cost component shall be adjusted annually on actual subject to maximum of 1% of the EPC cost and prevailing exchange rate on the first day of the insurance coverage period.”

- 4.3.3. The Petitioner’s claim over and above the 1% of the EPC cost already declined by the Authority in the review for modification decision. According to the information submitted by NPPMCL, its insurance cost for the first year of its post COD operations works out to Rs. 614 million (US\$ 5.776 million) based on 1% of the verified EPC cost. Accordingly insurance component of its tariff works out to Rs. 0.0582 per kW/h and the same is allowed.

4.4. **Cost of Working Capital:**

- 4.4.1. The Authority had allowed Rs. 0.0965 per kW/h as cost of working capital tariff component to NPPMCL. The relevant provision as per section VI (iv) of the Order is reproduced as under:

“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.”





4.4.2. NPPMCL claimed Rs. 0.1986/kW/h for cost of working capital against determined Rs. 0.0965/kW/h. The claimed amount has been calculated on the following parameters:

- a. RLNG price of PKR 1,448.2571 /MMBTU on HHV basis and HSD price of USD 91.081/ Liter
- b. Payment cycle of 60 days
- c. 3-month KIBOR of 6.92% as applicable at June 30th, 2018;
- d. Spread of 2.0%
- e. Federal sales tax rate of 17% on RLNG and 24% on HSD
- f. SBLC Cost of 1.5% per annum

4.4.3. The actual facts and figures were verified and impact of cost of working capital has been revised on the basis of Fuel Cost Component, total net capacity, Rate of General Sales Tax, Exchange Rate and KIBOR variation. Accordingly the component for cost of working capital has been calculated as Rs.0.1787/kW/h and the same has been allowed.

4.5. Adjustment of Return on Equity.

4.5.1. The Authority had allowed Rs. 0.5589 per kW/h as return on equity (hereinafter referred to as "ROE") tariff component to NPPMCL in the determination according to which *"ROE component of tariff shall be adjusted for variation in actual equity investment and actual equity drawdown."*

4.5.2. NPPMCL has requested to allow its ROE component of Rs. 0.6004 per kW/h on the basis of claimed equity of US\$ 252.88 million.

4.5.3. On the basis of revised equity of US\$ 228.956 million (30% of project cost) and exchange rate of US\$/PKR of Rs. 106.31, the ROE component of tariff works out as Rs. 0.5381 per kW/h and the same is allowed.

4.6. Debt Servicing Component

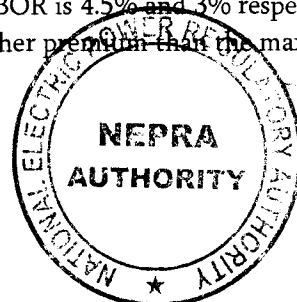
4.6.1. The Authority had assessed debt servicing component of Rs. 0.8662 per kW/h on the basis of debt equity ratio of 70:30. As per the determination;

"The tariff has been determined on the basis of debt equity ratio of 70:30. 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."

4.6.2. The Authority in its determination further decided that;

"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."

4.6.3. NPPMCL submitted that as per Authority's determination interest calculated in the reference debt service schedule shall be subjected to adjustment for variation in quarterly-KIBOR in the case of local loan and quarterly LIBOR in the case of foreign loan on quarterly basis. The maximum allowed premium on LIBOR and KIBOR is 4.5% and 3% respectively and there will be no adjustment on the basis of actual higher premium than the maximum



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allowed limit. In case spread negotiated is less than the said limit, the saving will be shared in the ratio of 60:40 between power purchaser and the power producer respectively. Similarly the repayment of loan shall be considered from the first year of commercial operation. It was further mentioned that

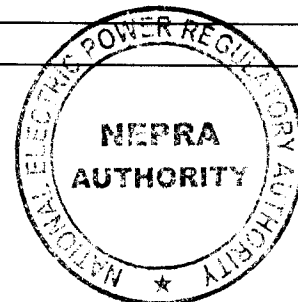
"The minimum equity shall be 20% and the maximum equity shall be 30%; if the equity actually deployed is more than 30% of the cost, equity in excess of 30% shall be treated as loan"

- 4.6.4. NPPMCL has submitted a claim of debt servicing component at Rs. 0.9760 per kW/h at the COD stage.
- 4.6.5. The petitioner negotiated loan arrangement from Pakistan Development Fund. The debt terms agreed on 3 month KIBOR Plus 1% for a term of 10 years. The Petitioner submitted that there has been saving in the spread allowed and negotiated about 0.80%. The reference Karachi Inter Bank Offer Rate (KIBOR) of 6.5% plus 180 basis points has been used for calculating the debt servicing.
- 4.6.6. Based on the project cost of US\$ 763.186 million, debt @ 70% of the project cost works out to be US\$ 534.230 million. Accordingly revised debt servicing component on the basis of 3 months KIBOR 6.92%+1.80% margin along with 40% sharing for power producer works out to Rs. 0.8117 per kW/h and the same is allowed.

5. ORDER

- I. The Authority hereby approves the following generation tariff for National Power Parks Management Company (Private) Limited for its combined cycle power project at Balloki on the basis of net power output of 1,205.0460 MW on RLNG and 1,093.370 MW on HSD along with adjustments/indexations for delivery of electricity to the power purchaser:

Tariff Components	RLNG	HSD	Adjustment/Indexation
Capacity Charges (Rs./kW/hr):			
Fixed O&M (Local)	0.0576	0.0649	CPI (General)
Fixed O&M (Foreign)	0.1372	0.1545	US CPI & Rs./US\$
Cost of working capital	0.1787	0.2012	KIBOR & Fuel Price
Insurance	0.0582	0.0655	Actual subject to maximum limit
ROE	0.5381	0.6058	Rs./US\$
Debt Servicing (years 1 – 10 only)	0.8117	0.9139	KIBOR
Total 1-10 years	1.7815	2.0058	
Total 11-30 years	0.9698	1.0919	
Energy Charge RLNG (Rs./kWh):			
Fuel cost Component	8.8710	16.9526	Fuel Price
Variable O&M (Foreign)	0.1498	0.2162	US CPI & Rs./US\$
Energy Total	9.0208	17.1688	
Total Tariff (Rs./kWh) Levellized	10.6500	19.0032	





The Reference Tariff Tables and Debt Service Schedule are attached as Annex-I, Annex-II, Annex-III and Annex-IV to this determination

Tariff on Single Cycle (RLNG only)

Description	Rs./kWh	Adjustment /Indexation
Fuel cost component	11.6270	Fuel price
Variable O&M (Foreign)	0.1498	US CPI & Rs./US\$
Fixed O&M (Local)	0.0576	CPI General
Fixed O&M (Foreign)	0.1372	US CPI & Rs./US\$
Cost of working capital	0.1787	KIBOR and fuel price
Total	12.1504	

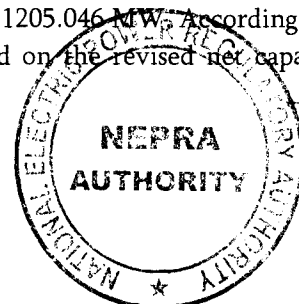
II. Adjustments on Account of Project Cost Payables

In accordance with the decision of the Authority following adjustments shall be made after two years of COD of the Complex.

- a) Adjustment of payable amount of USD 13.116 million under the head of "Items not covered under EPC", which includes:
 - a. Site Housing Colony
The adjustment of cost for Site Housing Complex including the Auditorium which amounts to US\$ 6.021 million has been deferred. In case, the Petitioner fails to complete Site Housing Complex within 2 years from COD of the complex, a penalty shall be applicable @ KIBOR+ 3% per annum of the approved cost of Housing Complex.
 - b. Adjustment of BOP Spares payable amount of USD 7.094 million,
- b) Adjustment of payable amount of USD 11.489 million under the head of "Non-EPC", which includes:
 - Engineering Consultancy payable amount of USD 0.825 million,
 - Land Cost payable amount of USD 0.627 million,
 - Security Surveillance payable amount of USD 10.005 million, and;
 - Insurance during construction payable amount of USD 0.032 million.
- c) One month Escrow account payable amount of Rs. 3,717.348 million
- d) Gas pipeline payable cost of Rs. 109.574 million.

III. Adjustment due to Variation in Net Capacity

The reference tariff was determined on the basis of guaranteed net capacity of 1,198.555 MW with auxiliary consumption of 2.01% (24.551 MW) which was subject to adjustment at the time of COD. At COD Initial Dependable Capacity (IDC) has been established as 1205.046 MW. Accordingly all the tariff components of capacity charge has been adjusted based on the revised net capacity.





Auxiliary has been established as 1.48% instead of 2.01% determined at the time of reference generation tariff.

IV. 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 following formula:

AIC	=	$Ins_{(Ref)} / P_{(Ref)} * P_{(Act)}$
Where		
AIC	=	Adjusted Insurance Component of Tariff
$Ins_{(Ref)}$	=	Reference Insurance Component of Tariff
$P_{(Ref)}$	=	Reference Premium US\$ 5.776 million at Rs. 106.31/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

V. 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:

$ROE_{(Rev)}$	=	$ROE_{(Ref)} * ER_{(Rev)} / ER_{(Ref)}$
Where;		
$ROE_{(Rev)}$	=	Revised ROE Component of Tariff
$ROE_{(Ref)}$	=	Reference ROE Component of Tariff
$ER_{(Rev)}$	=	The revised TT& OD selling rate of US dollar as notified by the National Bank of Pakistan
$ER_{(Ref)}$	=	The reference TT& OD selling rate of Rs. 106.31/US\$

ii) Indexation applicable to O&M

O&M components of tariff shall be adjusted on account of local Inflation (CPI), 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) of 226.68 for June 2018
US CPI _(REV)	=	The revised US CPI (All Urban Consumers)
US CPI _(REF)	=	The reference US CPI of 251.99 for June 2018
ER _(REV)	=	The revised TT& OD selling rate of US dollar
ER _(REF)	=	The reference TT& OD selling rate of Rs. 121.60/US\$

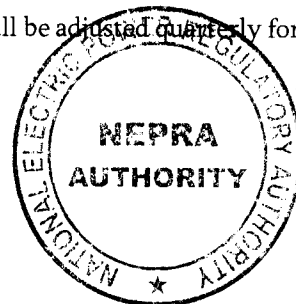
iii) Indexation for KIBOR Variation

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	=	$P_{(REV)} * (KIBOR_{(REV)} - 6.92\%) / 4$
Where:		
ΔI	=	The variation in interest charges applicable corresponding to variation in 3 months KIBOR. ΔI can be positive or negative depending upon whether KIBOR _(REV) is > or < 6.92%. 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

During operational period, the cost of working capital shall be adjusted quarterly for variation in KIBOR and fuel prices only.





Any post-COD variation in RLNG price (including impact of US\$ to PKR indexation) over and above (or vice versa) the cost for escrow amount locked at COD will be added to or reduced from cost of SBLC as part of cost of working capital.

VI. 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\$ 11.91/MMBtu
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
P _{HSD(Rev)}	=	The revised HHV HSD price notified by the relevant Authority
P _{HSD(Ref)}	=	The reference HHV HSD price of Rs. 91.08/liter.

VII. Terms & Conditions

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

- i. The plant availability shall be 92%.
- ii. The tariff control period shall be 30 years from the date of commercial operation.
- iii. The dispatch will be at appropriate voltage level mutually agreed between the power purchaser and the power producer.
- iv. The dispatch shall be in accordance with economic merit order.
- v. 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 in lump sum and this payment shall be considered as a pass-through payment. However, withholding tax on dividend shall not be passed through.
- vi. General assumptions, which are not covered in this determination, may be dealt with as per the standard terms of the Power Purchase Agreement.



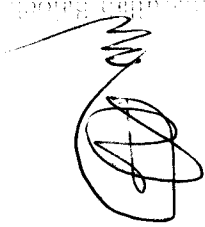
VIII. NOTIFICATION

NOTIFICATION

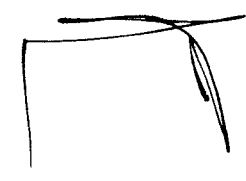
The above Order of the Authority along with 4 Annexes shall be notified in the Official Gazette of the Government of Punjab, Pakistan in the month of February, 2020.

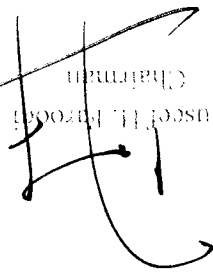
Decision in the matter of Tariff Adjustment of Commercial Distribution System of National Power Parks Management Company Limited (NPPMCL) dated 19.2.2020.

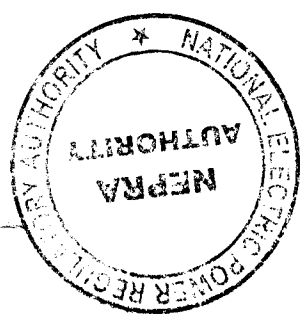
AUTHORITY

Regulation Member


Member
Fatima Zahid
19/2/20

Regulation Member


Chairman
Tausif U. Khattak




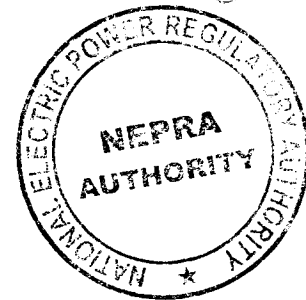
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National Power Parks Management Company Limited - Balloki
Reference Tariff Table RLNG at COD

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	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	0.3540	0.4578	1.7815	1.9364	10.9572	10.3071
2	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	0.3858	0.4259	1.7815	1.9364	10.9572	10.3071
3	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	0.4206	0.3911	1.7815	1.9364	10.9572	10.3071
4	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	0.4585	0.3532	1.7815	1.9364	10.9572	10.3071
5	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	0.4998	0.3119	1.7815	1.9364	10.9572	10.3071
6	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	0.5448	0.2669	1.7815	1.9364	10.9572	10.3071
7	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	0.5939	0.2178	1.7815	1.9364	10.9572	10.3071
8	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	0.6474	0.1643	1.7815	1.9364	10.9572	10.3071
9	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	0.7058	0.1060	1.7815	1.9364	10.9572	10.3071
10	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	0.7693	0.0424	1.7815	1.9364	10.9572	10.3071
11	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
12	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
13	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
14	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
15	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
16	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
17	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
18	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
19	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
20	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
21	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
22	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
23	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
24	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
25	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
26	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
27	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
28	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
29	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
30	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	-	-	0.9698	1.0541	10.0749	9.4772
Average														
1-10	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	0.5380	0.2737	1.7815	1.9364	10.9572	10.3071
11-30	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	0.0000	0.0000	0.9698	1.0541	10.0749	9.4772
1-30	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	0.1793	0.0912	1.2404	1.3482	10.3690	9.7538
Levelized														
1-30	8.8710	0.1498	9.0208	0.0576	0.1372	0.1787	0.0582	0.5381	0.3278	0.2013	1.4989	1.6292	10.6500	10.0181

10.6500 Rs./kWh

10.0181 US Cents/kWh

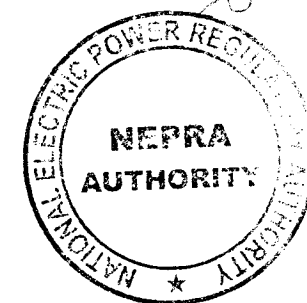


National Power Parks Management Company Limited - Balloki
Reference Tariff Table HSD at COD

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	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	0.3985	0.5154	2.0058	2.1803	19.3491	18.2010
2	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	0.4344	0.4795	2.0058	2.1803	19.3491	18.2010
3	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	0.4736	0.4404	2.0058	2.1803	19.3491	18.2010
4	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	0.5162	0.3977	2.0058	2.1803	19.3491	18.2010
5	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	0.5627	0.3512	2.0058	2.1803	19.3491	18.2010
6	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	0.6134	0.3005	2.0058	2.1803	19.3491	18.2010
7	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	0.6687	0.2452	2.0058	2.1803	19.3491	18.2010
8	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	0.7290	0.1850	2.0058	2.1803	19.3491	18.2010
9	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	0.7946	0.1193	2.0058	2.1803	19.3491	18.2010
10	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	0.8662	0.0477	2.0058	2.1803	19.3491	18.2010
11	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
12	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
13	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
14	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
15	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
16	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
17	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
18	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
19	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
20	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
21	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
22	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
23	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
24	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
25	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
26	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
27	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
28	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
29	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
30	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	-	-	1.0919	1.1869	18.3557	17.2666
Average														
1-10	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	0.6057	0.3082	2.0058	2.1803	19.3491	18.2010
11-30	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	0.0000	0.0000	1.0919	1.1869	18.3557	17.2666
1-30	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	0.2019	0.1027	1.3966	1.5180	18.6868	17.5781
Levelized														
1-30	16.9526	0.2162	17.1688	0.0649	0.1545	0.2012	0.0655	0.6058	0.3691	0.2266	1.6876	1.8344	19.0032	17.8757

19.0032 Rs./kWh

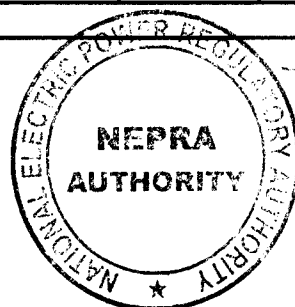
17.8757 US Cents/kWh



National Power Parks Management (Private) Limited
Balloki Project
Debt Service Schedule (RLNG)

Gross Capacity	1,223.106 MWs	US\$/PKR Parity	106.31
Net Capacity	1,205.046 MWs	Debt	534.23 US\$ Million
KIBOR	6.92%	Debt in Pak Rupees	56,792.65 Rs. Million
Spread over KIBOR	1.80%		
Total Interest Rate	8.72%		

Period	Principal Million Rs.	Principal Repayment Million Rs.	Interest Million Rs.	Balaaance Million Rs.	Debt Service Million Rs.	Principal Repayment Rs./kW/h	Interest Rs./kW/h	Debt Servicing Rs./kW/h
1	56,792.65	904.11	1,238.08	55,888.54	2,142.19			
2	55,888.54	923.82	1,218.37	54,964.71	2,142.19			
3	54,964.71	943.96	1,198.23	54,020.75	2,142.19			
4	54,020.75	964.54	1,177.65	53,056.21	2,142.19	0.3540	0.4578	0.8117
1st Year		3,736.44	4,832.33		8,568.77			
5	53,056.21	985.57	1,156.63	52,070.65	2,142.19			
6	52,070.65	1,007.05	1,135.14	51,063.59	2,142.19			
7	51,063.59	1,029.01	1,113.19	50,034.59	2,142.19			
8	50,034.59	1,051.44	1,090.75	48,983.15	2,142.19	0.3858	0.4259	0.8117
2nd Year		4,073.06	4,495.71		8,568.77			
9	48,983.15	1,074.36	1,067.83	47,908.79	2,142.19			
10	47,908.79	1,097.78	1,044.41	46,811.01	2,142.19			
11	46,811.01	1,121.71	1,020.48	45,689.30	2,142.19			
12	45,689.30	1,146.17	996.03	44,543.13	2,142.19	0.4206	0.3911	0.8117
3rd Year		4,440.02	4,128.75		8,568.77			
13	44,543.13	1,171.15	971.04	43,371.98	2,142.19			
14	43,371.98	1,196.68	945.51	42,175.30	2,142.19			
15	42,175.30	1,222.77	919.42	40,952.52	2,142.19			
16	40,952.52	1,249.43	892.77	39,703.10	2,142.19	0.4585	0.3532	0.8117
4th Year		4,840.03	3,728.74		8,568.77			
17	39,703.10	1,276.66	865.53	38,426.43	2,142.19			
18	38,426.43	1,304.50	837.70	37,121.94	2,142.19			
19	37,121.94	1,332.93	809.26	35,789.00	2,142.19			
20	35,789.00	1,361.99	780.20	34,427.01	2,142.19	0.4998	0.3119	0.8117
5th Year		5,276.09	3,292.68		8,568.77			
21	34,427.01	1,391.68	750.51	33,035.33	2,142.19			
22	33,035.33	1,422.02	720.17	31,613.30	2,142.19			
23	31,613.30	1,453.02	689.17	30,160.28	2,142.19			
24	30,160.28	1,484.70	657.49	28,675.58	2,142.19	0.5448	0.2669	0.8117
6th Year		5,751.43	2,817.34		8,568.77			
25	28,675.58	1,517.06	625.13	27,158.52	2,142.19			
26	27,158.52	1,550.14	592.06	25,608.38	2,142.19			
27	25,608.38	1,583.93	558.26	24,024.45	2,142.19			
28	24,024.45	1,618.46	523.73	22,405.99	2,142.19	0.5939	0.2178	0.8117
7th Year		6,269.59	2,299.18		8,568.77			
29	22,405.99	1,653.74	488.45	20,752.25	2,142.19			
30	20,752.25	1,689.79	452.40	19,062.46	2,142.19			
31	19,062.46	1,726.63	415.56	17,335.83	2,142.19			
32	17,335.83	1,764.27	377.92	15,571.56	2,142.19	0.6474	0.1643	0.8117
8th Year		6,834.44	1,734.33		8,568.77			
33	15,571.56	1,802.73	339.46	13,768.82	2,142.19			
34	13,768.82	1,842.03	300.16	11,926.79	2,142.19			
35	11,926.79	1,882.19	260.00	10,044.60	2,142.19			
36	10,044.60	1,923.22	218.97	8,121.38	2,142.19	0.7058	0.1060	0.8117
9th Year		7,450.17	1,118.60		8,568.77			
37	8,121.38	1,965.15	177.05	6,156.24	2,142.19			
38	6,156.24	2,007.99	134.21	4,148.25	2,142.19			
39	4,148.25	2,051.76	90.43	2,096.49	2,142.19			
40	2,096.49	2,096.49	45.70	(0.00)	2,142.19	0.7693	0.0424	0.8117
10th Year		8,121.38	447.39		8,568.77			



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National Power Parks Management (Private) Limited
Balloki Project
Debt Service Schedule (HSD)

Gross Capacity	1,095.045 MWs	US\$/PKR Parity	106.31
Net Capacity	1,093.370 MWs	Debt	534.23 US\$ Million
KIBOR	6.92%	Debt in Pak Rupees	56,792.65 Rs. Million
Spread over KIBOR	1.80%		
Total Interest Rate	8.72%		

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	56,792.65	904.11	1,238.08	55,888.54	2,142.19			
2	55,888.54	923.82	1,218.37	54,964.71	2,142.19			
3	54,964.71	943.96	1,198.23	54,020.75	2,142.19			
4	54,020.75	964.54	1,177.65	53,056.21	2,142.19	0.3901	0.5045	0.8946
1st Year		3,736.44	4,832.33		8,568.77			
5	53,056.21	985.57	1,156.63	52,070.65	2,142.19			
6	52,070.65	1,007.05	1,135.14	51,063.59	2,142.19			
7	51,063.59	1,029.01	1,113.19	50,034.59	2,142.19			
8	50,034.59	1,051.44	1,090.75	48,983.15	2,142.19	0.4253	0.4694	0.8946
2nd Year		4,073.06	4,495.71		8,568.77			
9	48,983.15	1,074.36	1,067.83	47,908.79	2,142.19			
10	47,908.79	1,097.78	1,044.41	46,811.01	2,142.19			
11	46,811.01	1,121.71	1,020.48	45,689.30	2,142.19			
12	45,689.30	1,146.17	996.03	44,543.13	2,142.19	0.4636	0.4311	0.8946
3rd Year		4,440.02	4,128.75		8,568.77			
13	44,543.13	1,171.15	971.04	43,371.98	2,142.19			
14	43,371.98	1,196.68	945.51	42,175.30	2,142.19			
15	42,175.30	1,222.77	919.42	40,952.52	2,142.19			
16	40,952.52	1,249.43	892.77	39,703.10	2,142.19	0.5053	0.3893	0.8946
4th Year		4,840.03	3,728.74		8,568.77			
17	39,703.10	1,276.66	865.53	38,426.43	2,142.19			
18	38,426.43	1,304.50	837.70	37,121.94	2,142.19			
19	37,121.94	1,332.93	809.26	35,789.00	2,142.19			
20	35,789.00	1,361.99	780.20	34,427.01	2,142.19	0.5509	0.3438	0.8946
5th Year		5,276.09	3,292.68		8,568.77			
21	34,427.01	1,391.68	750.51	33,035.33	2,142.19			
22	33,035.33	1,422.02	720.17	31,613.30	2,142.19			
23	31,613.30	1,453.02	689.17	30,160.28	2,142.19			
24	30,160.28	1,484.70	657.49	28,675.58	2,142.19	0.6005	0.2941	0.8946
6th Year		5,751.43	2,817.34		8,568.77			
25	28,675.58	1,517.06	625.13	27,158.52	2,142.19			
26	27,158.52	1,550.14	592.06	25,608.38	2,142.19			
27	25,608.38	1,583.93	558.26	24,024.45	2,142.19			
28	24,024.45	1,618.46	523.73	22,405.99	2,142.19	0.6546	0.2400	0.8946
7th Year		6,269.59	2,299.18		8,568.77			
29	22,405.99	1,653.74	488.45	20,752.25	2,142.19			
30	20,752.25	1,689.79	452.40	19,062.46	2,142.19			
31	19,062.46	1,726.63	415.56	17,335.83	2,142.19			
32	17,335.83	1,764.27	377.92	15,571.56	2,142.19	0.7136	0.1811	0.8946
8th Year		6,834.44	1,734.33		8,568.77			
33	15,571.56	1,802.73	339.46	13,768.82	2,142.19			
34	13,768.82	1,842.03	300.16	11,926.79	2,142.19			
35	11,926.79	1,882.19	260.00	10,044.60	2,142.19			
36	10,044.60	1,923.22	218.97	8,121.38	2,142.19	0.7778	0.1168	0.8946
9th Year		7,450.17	1,118.60		8,568.77			
37	8,121.38	1,965.15	177.05	6,156.24	2,142.19			
38	6,156.24	2,007.99	134.21	4,148.25	2,142.19			
39	4,148.25	2,051.76	90.43	2,096.49	2,142.19			
40	2,096.49	2,096.49	45.70	(0.00)	2,142.19	0.8479	0.0467	0.8946
10th Year		8,121.38	447.39		8,568.77			

