National Electric Power Regulatory Authority
Islamic Republic of Pakistan

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No. NEPRA/R/SA(Tariff)/TRF-359/NPPMCL-2016/13852-13854
May 20, 2020

Subject: **Decision of the Authority in the matter of Review Motion filed by National Power Parks Management Company (Private) Limited (NPPMCL), for its Project 1223.106 MW on RLNG at Balloki against COD Decision of the Authority dated 19.02.2020** (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 (38 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

20 05 20
(Syed Safeer Hussain)

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

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

DECISION OF THE AUTHORITY IN THE MATTER OF REVIEW MOTION FILED BY NATIONAL POWER PARKS MANAGEMENT COMPANY (PVT) LTD., (NPPMCL) FOR ITS 1223.106 MW ON RLNG AT BALLOKI AGAINST COD DECISION OF THE AUTHORITY DATED 19-2-2020 : CASE NO.NEPRA/TRF-359/NPPMCL-2016.

1. Background

1.1. National Power Parks Management Petitioner (Private) Limited (hereinafter "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 Balloki, District Kasur (the "Project" or "Balloki Project"). Petitioner 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. IGSPL/70/2016.

1.2. The Petitioner filed tariff petition on April 22, 2016. The Authority processed the same in accordance with provisions of NEPRA Tariff (Standards & Procedure) Rules – 1998 and determined the generation tariff on August 9, 2016.

1.3. After achieving the Commercial Operations, the Authority issued its COD decision vide NEPRA/TRF-359/Petitioner-2016/5894-5896 dated February 19, 2020. The Petitioner-Balloki filed its review motion against the referred decision vide letter No. Petitioner-Balloki/CEO/2020/16845 dated February 29, 2020. The Authority admitted the review motion for consideration. The Authority decided to provide an opportunity of hearing to the Petitioner. Accordingly notice of hearing was issued to the Petitioner and other relevant parties to the proceedings. Hearing was held on March 16, 2020 which was attended by the representatives of CPPA(G) and Privatization Commission. Subsequently Privatization Commission submitted its comments vide Office Memo No. F-34(1) Petitioner/PS/PC/2018 dated March 3, 2020 and later CPPA(G) vide letter dated March 19, 2020.

1.4. The petitioner sought review to the extent of followings:-

i. Exchange Loss
ii. Back-feed Power and Free Start-Ups
iii. Insurance during Operations
iv. Site Housing Complex
v. Debt Servicing Component
vi. Thermal Efficiency
vii. Adjustable Sales Tax
viii. Testing and Commissioning Cost
ix. Submissions relating to Privatization
x. Other Grounds

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1.5. Discussion, Analysis and the findings/decision of the Authority is as under:

2. Exchange Loss.

2.1. The Petitioner submitted that when the reference tariff was granted to Petitioner, the Authority made, inter alia, the following determination in Section II(i) of the Reference Tariff Order, which is relevant to the instant issue:

> *"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".*

2.2. The Petitioner requested the PKR/US$ parity of Rs.155.7/US$ (prevailing on Dec 06, 2019 i.e. 03 days before filing of petition) for the remaining EPC payments in line with the determination of the Authority. The Petitioner submitted that the adjustment on this account in COD decision has not been made in line with the principle settled in Section II (i) of the Reference Tariff Order i.e. on the basis of actual payments and PKR/US$ rate prevailing on such date or in case of payable amounts, the actual dates of payment in future. Instead, the Authority has applied the PKR/US$ rate applicable on February 02, 2018, which has been determined as the date on which the 27 months period, would have lapsed. The above determination has resulted in a loss of PKR 3,111.49 million approximately to the Petitioner in terms of its established Project Cost, as the actual PKR/US$ rate at the time of payment was significantly higher.

2.3. Further the Petitioner submitted that similarly, in case of items not covered in the EPC Agreement's scope, Non-EPC cost and LTSA, the Authority has applied a rate Rs. 107.84/USD, PKR 102.80/USD, PKR 109.57/USD respectively, rather than the rate prevailing on actual dates of payment or average thereof, which has also resulted in a total loss of Rs. 795.52 million, resultantly total exchange loss of Rs. 3,907.01 million.

2.4. The Petitioner also submitted that it is common practice that payments to EPC contractors continued after the actual COD upon completion of obligations by the EPC contractor. In this regard various clauses (e.g. payment of retention money, final payments, etc.) of the Balloki EPC Agreement dated November 02, 2015 has already been shared with the Authority which also envisage that certain payments will be made after COD. Accordingly, allowing actual USD to PKR parity prevailing on the dates of payments made and to be made after the COD is justified.

2.5. While further justifying its claim, the Petitioner submitted that without prejudice and in addition to the above, it is also pertinent to note that there has been an exceptional

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devaluation of local currency from the time the Authority has fixed i.e. February 2, 2018 till the dates on which payments have been made and to be made. This has led to variation of up to 49% in case of some payments. The resulting loss, amounting to Rs. 3,907.01 million approximately is significant hence, burdening the Petitioner with the same would be tantamount to penalty. In exercise of its regulatory functions, the Authority is also requested to consider this unprecedented devaluation and its impact on the project cost, particularly keeping in view that the same is not attributable to the Petitioner. The Petitioner submitted that the Project was established on local financing and thereby Project did not have any foreign currency available to hedge any future foreign currency related payments. Furthermore, since the project is currently based entirely on local financing, no foreign currency indexation of the debt component is available to the Petitioner under the COD Order, which would mitigate the impact of lower rupee based project cost.

2.6. During the hearing dated March 16, 2020, the Authority questioned the Petitioner that whether any measures were taken to counter exchange rate fluctuations as the foreign currency payments are being delayed due to various reasons. The petitioner in response submitted that being public entity, they are not able to open a foreign currency account as per State Bank regulations. In addition it was submitted that any timelines were not mentioned in the EPC contract regarding payments and that payments can be made after COD.

2.7. CPPA(G) submitted that as per EPC Contract, maximum construction period allowed was 27 months, therefore, any delay in commissioning that resulted in exchange loss should not be passed on to the consumers in any way.

2.8. The Authority considered the submission of the Petitioner, comments of CPPA-G and observed that 27 months period for construction of power plant was allowed to Company. Accordingly the applicable exchange rates for foreign currency are accounted for during the same period of time. Payments made after COD are translated on the exchange rate prevailing at COD. The Authority never allowed the exchange loss for the payments made after the COD date, therefore the burden of the same cannot be passed on to the consumers. Accordingly the Authority has decided to decline the request of the petitioner since this is consistent to the earlier COD decisions.

3. Back Feed Power and Free Start Ups

3.1. The Petitioner requested that the cost incurred for back-feed power as well as free start-ups may be allowed to it. However, in the COD Order, the Authority has disallowed the cost of Back-Feed Power and Free Start-Ups on the grounds that such costs have never been requested or allowed in any similar case in the past.

3.2. The Petitioner submitted that this decision of the Authority is liable to be reviewed. In support thereof, the Petitioner argued that as per the provisions of Section II (xi) of the

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Reference Tariff Order, the Authority determined that O&M Components shall be adjusted as per the signed O&M and LTSA Agreement. In this regard, reference is made to Section 3.1.6 of the O&M Agreement (already shared with the Authority), which provides as follows:

"The O&M Contractor shall pay the following charges on behalf of the Petitioner:

a) any water use charges pursuant to any water use agreements for use of canal water for the complex;
b) any electricity supply agreements for use of grid electricity to back feed the Complex; and
c) any other items, as instructed by the Petitioner .

Such amounts paid by the O&M Contractor shall form part of the Reimbursements."

3.3. The term 'Reimbursements' is defined in the O&M Agreement as follows:

"Reimbursements means the reimbursement on actuals to the O&M Contactor for any payments made by the O&M Contractor on behalf of the Petitioner in accordance with Clause 3.1.6 (General Obligations)."

3.4. The Petitioner submitted that from a perusal of the above, it is evident that the payment to the O&M Contractor in the form of Reimbursements is required to be made. Additionally, Section 7.5 of Schedule B-1 **(Responsibility Matrix)** of the O&M Agreement clearly and explicitly provides that the responsibility for the Back-feed Power rests with the Petitioner. In addition, as per Section 12.3(c) of the O&M Agreement, the Petitioner is responsible for all fuel under this Agreement which includes fuel for free start-ups. This is a prudent cost associated with operations of the Project. Hence, as the Reference Tariff Order of the Authority provided that O&M cost components shall be adjusted on the basis of the actual O&M, it is submitted that the Authority's decision in the COD Order is liable to be reviewed, and the costs associated with back-feed electricity and free-startups are to be allowed to the Petitioner.

3.5. The Petitioner further submitted that the costs mentioned above are prudent costs being incurred pursuant to signed agreement with the O&M Contractor (already shared with the Authority) and as per the requirements of the plant operations. Therefore, under the NEPRA Act, the Authority should, under a cost-plus tariff, allow the same as these are genuine operating costs, which are not covered elsewhere in the tariff of the Project. In this regard, it is also submitted that there have not been instances of actualization of O&M costs in the past, and therefore, this matter may be examined by the Authority and determined on the touchstone of prudency and that it is a genuine cost attributable to operations of the Project.

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3.6. While justifying its claimed cost, the Petitioner submitted that the actual O&M cost requested by it, is considerably lower (by approximately 41.0%) than the O&M cost that was determined by the Authority in the Reference Tariff Order. In view of the Petitioner, the O&M Cost obtained by the Petitioner is already within the cost that was deemed prudent by the Authority. For reference, the Authority determined an O&M Cost of Rs. 0.5320/kWh or US cents 0.5067 in the Reference Tariff Order, whereas under the COD Order, an O&M cost of Rs. 0.3615/kWh or US cents 0.3400/kWh has been allowed. The Petitioner further requested to incorporate the provisions of O&M agreement in the COD Order as a pass-through item subject to verification at the time of quarterly indexation.

3.7. During the hearing, CPPA (G) submitted that these matters have already been discussed, negotiated, agreed and signed by the Parties in the Power Purchase Agreement in line with the industry practice. Therefore there is no reason for re-opening these issues as it may result in renegotiation of the entire PPA.

3.8. The Authority considered the submissions of the Petitioner, comments of CPPA-G and other relevant information. The Authority observed that the request of Petitioner for allowing 'Back Feed Power' and 'Free Start Ups' costs has been clarified by CPPA(G) that these issues have already been discussed, negotiated, agreed and signed by the Parties in Power Purchase Agreement in line with industry practice. The Authority therefore considers that there is no reasoning for reopening of these issues. Hence, the Petitioner request in the matter is declined.

4. <u>Insurance During Operations</u>

4.1. The Petitioner with respect to insurance during operations, requested NEPRA to either: (i) allow the actual cost of insurance premium paid during the operations period; or (ii) to enhance the cap to 2% of the EPC cost from 1% of EPC cost earlier determined. However, this has been refused by the Authority, and the cap allowed has been fixed at 1% of the EPC cost.

4.2. The Petitioner submitted that NEPRA's decision is liable to be reviewed, as it does not give due consideration to the cogent submissions of Petitioner in support of its request. In this regard, it is briefly reiterated that under various agreements, Petitioner is obligated to procure and have in place, at all times during the operations phase, the following insurances:

a. Operations All Risk Insurance, including property damage and business interruption;
b. Political violence / terrorism; and
c. Third Party Liability.

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4.3. The Petitioner submitted that the primary law governing insurance in Pakistan is the Insurance Ordinance, 2000 (the "Insurance Ordinance"). Section 166 of the Insurance Ordinance deals with insurance of public property, and sub-section (3) thereof provides that all insurance business relating to public property (which term includes the Balloki project) shall be placed only with the National Insurance Petitioner Limited ("NICL"). The only exceptions to the same are provided in sub-section (4) and (5) of section 166. Sub-section (4) gives the Federal Government the authority to exempt a particular property. Sub-section (5) provides that if NICL declares in writing that it is unable to enter into a contract of insurance, then the proposed insurance may be exempt from the provisions of sub-section (3). Sub-section (6) clearly provides that non-compliance with section 166 of the Insurance Ordinance is an offence.

4.4. The Petitioner stated that it is in compliance with the aforementioned framework that it had obtained insurance for the operational phase. For the first year of operations, NICL was able to place Political Violence and Third-Party Liability insurance for Petitioner, amounting to an aggregate of US$ 0.227 Million. However, NICL informed Petitioner in writing (as per Section 166(5) of the Insurance Ordinance) that it was unable to place the Operations All Risk insurance. Thereafter, Petitioner conducted a procurement process pursuant to the Public Procurement Rules 2004 (the "2004 Rules") for the same. However, due to time constraints, a negotiated tendering process was undertaken in terms of the 2004 Rules, which is only allowed under specific circumstances (including extreme urgency). Negotiated tendering took place with the most renowned insurance companies in Pakistan. The lowest bid received by Petitioner was US$ 7.02 Million. After following the process for negotiated tendering, the insurance cost came to US$ 6.01 Million. The total cost of all insurance during operations for the first year aggregated US$ 6.24 Million plus Federal Excise Duty of around US$ 1.05 million, which comes to 1.11% of the EPC Cost (which includes items not included in EPC cost). Insurance documents in support of the above have already been provided.

4.5. The Petitioner submitted that for the second year of operations, Petitioner again approached NICL in accordance with the law. NICL was able to place all three insurances, i.e. Operations All Risk, Political Violence and Third Party Liability insurance for NPPMCL. The total cost of such insurance for the second year was an aggregate of US$ 9.278 Million plus Federal Excise Duty of US$ 1.47 Million, which works out to be 1.65% of the EPC Cost. It is pertinent to note that the process for arranging insurance through NICL is also based on competitive bidding processes which fully merit the prudency requirement for regulatory consideration.

4.6. The Petitioner further submitted that for the third year of operations, NICL has informed that pursuant to a transparent & competitive bidding process conducted by NICL, the lowest bid price received by NICL is USD 12.24 Million, including Federal Excise Duty, which is approximately 2.12% of the EPC Cost. It is evident from the results of three

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competitive bidding processes conducted by NICL in three consecutive years that procuring insurance within the Authority approved benchmark of 1% of EPC cost is not possible. It shall be unjustified if the Company is burdened with the cost incurred over and above 1% of the EPC Cost.

4.7. The Petitioner finally stated that in view of the foregoing, it is respectfully submitted that the above costs are prudently incurred actual costs, and have been arrived at after competitive Procurement processes being undertaken. Even otherwise, it is submitted that Petitioner is bound by law to comply with Section 166 of the Insurance Ordinance, and as per sub-section (4) thereof, only the Federal Government can exempt a particular property from the requirements contained therein. The Insurance Ordinance is a special law governing insurance business in Pakistan and contains a special provision dealing with insurance of public property.

4.8. The Petitioner further argued that due to lesser per MW EPC cost of the Project as compared to the per MW cost allowed by the Authority to other IPPs, per MW insurance cost of the Project is almost half of the per MW insurance cost of other IPPs. This is reflected in the table below:

Plant Name	Insurance Cost USD per MW
Orient Power	6,948
Sapphire Power	7,489
Saif Power	7,776
Halmore Power	8,359
Nishat Power	9,271
UCH-II Power	9,666
Average of other IPPs @ 1% of EPC Cost	8,252
Average of Petitioner's Plants @ 1% of EPC Cost (HBS: USD 5,003/MW & Balloki: USD 4,776/MW)	4,889

4.9. The Petitioner submitted that without prejudice, it is pertinent to note that the EPC cost of a project is not reflective / appropriate measure of the cost of operation phase insurance to be acquired for that project. Operation phase insurance takes into account Consequential Loss following All Risk and Machinery Breakdown (Business Interruption coverage). Since, the quantum of consequential loss on account of Capacity for Petitioner's plants is much greater than that of other IPPs, therefore, the cost of insurance on account of Consequential Loss following All Risk and Machinery Breakdown (Business Interruption coverage) for Petitioner's plants is greater than the same cost for other IPPs. A comparison of the annual average capacity revenue of other IPPs and Petitioner's power plants is tabulated as under:

Plant Name	Annual Capacity Revenue USD Million
Orient Power	30.39
Sapphire Power	32.50
Saif Power	32.67
Halmore Power	35.66
Nishat Power	34.36
UCH-II Power	78.06
Annual average Capacity Revenue of other IPPs	**40.61**
Annual average Capacity Revenue of Petitioner's Plants	
(HBS: USD 201.52M & Balloki: USD 193.56M)	**197.54**

4.10. The Petitioner submitted that additionally, in the re-insurance market, it has been experienced that the big players thereof such as SwissRe, MunichRe, Lloyd's etc. do not participate in insurance business in Pakistan. Therefore, the re-insurance has to be arranged from the 2nd tier of international re-insurance market, players of which limit their participation in different industrial sectors and different geographical regions. Therefore, no single re-insurance Petitioner takes the whole of the risk of project(s) of the size of the Project. Due to this fact, the re-insurance cover is arranged from several re-insurance companies which agree on their terms and costs. Due to small size of other IPPs, the local insurance companies take greater share in the Risk and easily arrange remaining cover under their Treaties with foreign re-insurers, hence, the overall premium/insurance cost is less. On the other hand, due to larger size of Petitioner's plants, National Insurance Petitioner Limited /Pakistan Re-insurance Petitioner Limited including local insurance companies take only a fraction of the Risk (usually not more than 1% of the Risk) and arrange the remaining cover (99%) from the overseas re-insurance market outside their Treaties, which eventually costs more.

4.11. The Petitioner stated that in light of the foregoing, it is requested that NEPRA may kindly review its decision, and allow actual insurance cost during operations to Petitioner, subject to a maximum cap of 2% of the EPC cost under annual review by the Authority.

4.12. CPPA (G) during the hearing submitted that the comparison made by the Petitioner is not an apple to apple comparison. It has compared HBS-Balloki with much smaller sized thermal projects (about 200 MW), which is not relevant. The Petitioner should have compared itself with equal size projects like HUBCO & KAPCO that have got insurance at premium under US$ 5 million compared to Petitioner's proposed premium of around US$ 10 million. CPPA has observed that substantial room is available for negotiating insurance policies through engaging international mediators/brokers. Therefore, even 1% of the EPC cost allowed by NEPRA is on the higher side considering prevailing market conditions.

4.13. The Authority has already considered this issue in detail in the review modification decision date 12-2-2020 and the same request was rejected on the grounds that the requested cost is not in line with the benchmarks established by the Authority. Now the Petitioner once again requested to review this issue in COD decision. Since this is not in the scope of COD decision wherein true-up / adjustment of project cost and other relevant tariff components is made in line with the reference tariff therefore the instant request of the Company is declined.

4.14. The Authority had allowed Rs. 0.0582 per kW/h based on insurance of maximum of 1% of EPC costs in the tariff component to Petitioner in the COD decision dated 19-2-2020. After excluding the EPC costs (offshore and onshore) and items not covered in EPC cost the amount still payable is US$ 43.216 and not settled by the petitioner. Accordingly based on the revised EPC cost, the revised insurance at 1% of EPC cost works out to be Rs. 568.48 million (US$ 5.344 million) based on paid and verified EPC cost. Accordingly revised insurance component of its tariff works out to be Rs. 0.0539 per kW/h and the same is allowed.

5. <u>Site Housing Complex</u>

5.1. The Petitioner had requested that the 24-month period allowed by the Authority for adjustment on actual basis for site housing complex may be commenced from the date of COD Order, when the actual cost incurred would be finalized. However, NEPRA has allowed deferment for a period of two years commencing retrospectively from actual COD, of which a considerable time period has already lapsed. It is requested that the Authority may kindly review this decision and allow the time period to be calculated from the date of the COD Order. In this regard, it is submitted that the construction cost is a cost that is to be incurred on actual basis within the cap determined by NEPRA. Therefore, no prejudice would be caused if the time for adjustment is deferred in terms of the above. In this respect, it may be noted that the site for housing complex was used for the storage of imported plant equipment, building material, batching plants etc. during the construction phase as the same was adjacent to the plant's location. If separate land was arranged for the same, it would have led to increased costs. Therefore, the site for housing complex was utilized to save costs and to avoid undue burden on the consumer, as a result of which the deferral request has been made. The Petitioner therefore requested that actualization of costs for site housing complex may kindly be deferred till 24 months from the COD Order.

5.2. The Petitioner further submitted as per Section 5.22 of the Review Order, the Authority had determined as follows:

"... However, as per the tariff determination, the premium of 3% over KIBOR as per actual at the time of COD tariff adjustment and any savings in the premium shall be shared with

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60:40 by power purchaser and power producer. Accordingly, the Authority has decided to impose penalty @ KIBOR + actual premium adjusted for power producer's share at the time of COD tariff determination".

5.3. The Petitioner submitted that however, inadvertently, the same has not been reflected in the COD Order, in which the Authority has written the penalty as KIBOR + 3.0% instead of KIBOR + actual premium adjusted for Power Producer's share. Therefore, to this extent, it is requested that the error may kindly be rectified in the COD Order.

5.4. The Authority considered the above request in the modification petition submitted by the Petitioner. The Authority in its tariff decision dated February 12, 2020 categorically mentioned that the actualization of costs shall be from actual COD instead of date of decision of COD. In view thereof the Authority has decided to decline the request of the being not falling in the ambit of COD scope.

5.5. However the second submission related to the penalty clause being needs to be revised to KIBOR + actual premium adjustment for Power Producer's share in accordance with the decision of review motion dated February 12, 2020. Accordingly the same has been rectified in the instant decision.

6. Debt Servicing Component

6.1. The Petitioner submitted that in the Reference Tariff Order, the Authority established debt for the project assuming a debt to equity ratio of 70:30, as mentioned in Section VIII (iii) of the Reference Tariff Order. In the similar section of the Order, the Authority casts attention towards its established rules on the similar ratio, which reads as follows:

"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."

6.2. The Authority, in the COD Order, has determined the Project Cost of PKR 81.134 Billion (USD 763.2 Million) at an average Exchange Rate of PKR/USD 106.31. Against the aforesaid Project Costs, two financing facilities (**"Financing Facilities"**) totaling PKR 37.901 Billion have been contracted by the Petitioner for the Project, which are as follows:

a. PDFL (**"Pakistan Development Fund Limited"**) Loan: PKR 18.301 Billion @ KIBOR + 1%
b. Musharakah Financing: PKR 19.6 billion @ KIBOR + 0.9%

6.3. The Petitioner stated that financing agreements for the above facilities were submitted to the Authority along with COD Tariff Petition. However, the short-term financing facility provided by PDFL has been converted to long term financing facility. The balance amount

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of the Project Cost of PKR 43.233 Billion has been financed through equity by PDFL. The Petitioner requested that as per the Provisions of the Reference Tariff Order equity exceeding 30% of the Project Cost i.e. PKR 18.893 Billion should have been treated as debt ("Balance Debt").

6.4. The Petitioner submitted that the Authority in its COD Order has assumed the applicable interest spread of this balance debt at the rates applicable for the Financing Facilities, which is not justified. This Balance Debt is stand-alone shareholder financed facility and although it is not being provided a return in line with the applicable ROE, the return should be provided at the determined rate KIBOR plus applicable spread of 3%. There is no provision for applying the rate of Financing Facilities of such date in the Reference Tariff Order. Hence, as per the principle settled by the Authority in the Reference Tariff Order, a spread of 2.42% shall be allowed which works out as follows after accounting for the 60:40 sharing:

	Loan	Amount*		Spread	Weighted spread
A	Total Debt Financing for the Project	56,794	100%		
B	Pakistan Development Fund Loan	18,301	32.2%	1.0%	0.32%
C	Musharakah Facility	19,600	34.5%	0.9%	0.31%
D	Equity above 30% treated as Debt (A-B-C)	18,893	33.3%	3.0%	1.00%
E	Total Weighted Average Spread (B+C+D)				1.63%
F	Spread Allowed under Reference Tariff Order				3.00%
G	Savings in Spread (F-E)				1.37%
H	40% Share of Savings in Spread (40%*G)				0.55%
I	Applicable Spread during Operations Period (E+H)				2.18%

**Amounts are as per COD Order*

6.5. During the hearing, CPPA(G) submitted that the Petitioner has obtained Debt facilities at KIBOR plus spread rate of 0.9 % & 1% as presented by the Petitioner during hearing whereas it has requested for treating Equity portion beyond 30% as Debt @ KIBOR plus 3% spread which is not justified at all.

6.6. The Authority considered the request of Petitioner for treating the equity portion beyond 30% as debt @ KIBOR plus 3%. The Authority considers that in line with the international best practice debt equity ratio has been established since cost of equity is always higher as against the cost of debt which has significant impact on the generation tariff. The equity beyond 30% is treated as notional debt which cannot be allowed the same spread as in the case of original debt amount. In view thereof the Authority considers that the request of the Petitioner is not legitimate and hence cannot be accepted. Accordingly earlier decision in the matter has been maintained.

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7. Thermal Efficiency

7.1. The Petitioner submitted that the as per paragraph 4.1.13 of the COD Order, the Authority decided as follows:

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. [Emphasis added by Petitioner]

7.2. According to the petitioner, it is evident from the above determination that the Authority has declared that adjustment on account of Blow down as reasonable request, however when the same adjustment of 0.18% was claimed, this was disallowed.

7.3. The Petitioner submitted that the observations made in the above paragraph regarding 2 to 2.5% cushions in efficiency are contrary to the actual facts. Hence, it is requested that these observations regarding cushion of 2 to 2.5% in efficiency may kindly be removed being contrary to the facts.

7.4. The Authority noted that the petitioner has already been given the allowance on account of degradation due to power plant operation on simple cycle, which is further used with the EPC guaranteed heat rate and for sharing any savings. Since sufficient margin has already been allowed to the petitioner through this approach, therefore no additional benefit can be granted. The Authority observed that any new evidence or documentary support in its claim has not been provided which requires it to review its earlier decision. Accordingly the Petitioner request in the matter is declined.

7.5. CPPA(G) submitted that "*The Authority in its decision dated 19-02-2020 had directed CPPA(G) to continue to pay on account of correction factors like output degradation, heat rate and part load adjustment etc., as per PPA which were required to be considered for approval by the Authority. It is therefore requested to address the issue of these correction factors while determining subject review motion.*"

7.6. Petitioner in this regard submitted that '*...these matters are all dealt with under the PPA and is the industry norm. The PPA is executed after due diligence by both parties and is a freely executed document...*" In matter of Tariff adjustment at COD for Petitioner dated February 19, 2020 as noted in paragraph 4.1.17 the petitioner submitted that '*...these matters have been agreed with the Power Purchaser in PPA...Furthermore, this standard PPA is approved by the ECC...*'

7.7. The Authority in the above referred decision observed that the performance curves have also been allowed to the petitioner. In view of the above and to clarify the issue the Authority decided that the adjustments on above said factors i.e Output Degradation, Heat-Rate degradation and Part Load adjustment correction are allowed to the petitioner as per the terms of PPA agreed between the parties." Hence CPPA-G is directed to continue to pay on account of degradation factor, heat rate degradation factor and part load adjustment factors as per agreed terms of PPA.

8. Adjustment of Sales Tax

8.1. The petitioner has claimed an amount of Rs.2,698.8 million as sales tax paid and payable on Project Cost. The details of the same were as follows.

Description	Amount (USD)	Amount (PKR)
Nonadjustable sales tax @5%	2,127,689	216,385,961
Adjustable sales tax @16%	22,216,730	2,482,380,965
Total sales tax	**24,344,419**	**2,698,766,927**

8.2. The petitioner submitted that of the above, non-adjustable sales tax has been allowed at actual whereas, adjustable sales tax has been reduced in its entirety by deducting such claimed amount from the gross cost established by the Authority in the COD Order. It may be clarified that the adjustable sales tax amount of Rs. 2.482 billion had been calculated based on PKR / USD rates applied by the Petitioner (i.e. PKR/USD @ 111.7) whereas, as mentioned Section II (a) of this Petition, the same have not been allowed by the Authority. Consequently, the reduction in sales tax from the gross cost established by the Authority should be corresponding to the reduced PKR/USD exchange rates used by the Authority (i.e. PKR/USD @ 110.5) in the COD Order. The resultant amount, calculated in terms of COD Order, comes out to be Rs. 2,071.78 million (US$ 19.867 million) which has an impact of approximately Rs.410.6 million.

8.3. In view of the submission of the Petitioner it is clarified that adjustable sales tax cannot be made part of the claimed project cost, which the Petitioner should not have claimed at all in the COD application. Further to verify evidence about adjustable and non-adjustable sales tax, the Petitioner in support thereof 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 adjustable and non-adjustable sales tax out of which non-adjustable allowed as part of the project cost approved and adjustable sales tax included in each project cost head reduced in its entirety as well. Both adjustable and non-adjustable sales taxes considered as per actuals and based on auditor's certificate provided by the Petitioner for reduction from and inclusion to the project costs. The Petitioner was further asked to provide the auditor's certificate for any differential amount on account of exchange loss being claimed but the same was not provided as such, therefore the claim with respect to exchange rate variation cannot be considered for adjustments as exchange loss in the project cost as well as in taxes. The Authority decided not to allow the exchange loss variation in sales tax accordingly.

9. Testing and Commissioning Cost

9.1. The Petitioner submitted that as per the Section 3 of the COD Order, the testing and commissioning cost has been allowed on a net off sales tax basis. Furthermore, the Authority has deducted the total adjustable sales tax from the Project Cost which included the sales tax on testing and commissioning cost resulting in double grossing down of the sales tax. The Petitioner requested that the above-mentioned correction be made and testing and commissioning cost be allowed on a gross of sales tax basis.

9.2. Considering the submission, it is noted that the Petitioner claimed the adjustable sales tax in the claimed project cost knowing it that it cannot be made part of the project cost, but also claimed the adjustable sales tax for an amount claimed in the review modification filed with the Authority against the testing and commissioning cost. On the other hand the Petitioner submitted an auditor's certificate which included all adjustable sales tax for the cost overrun related to testing and commissioning, resultantly overstating the adjustable sales tax.

9.3. In the review motion, the Petitioner requested that the auditor's certificate provided included the adjustable sales tax for testing and commissioning therefore should be excluded as per the approved amount in the review modification decision of the Authority dated 12-2-2020 for US$ 10.956 million (net of sales tax). As per information provided by the Petitioner, adjustable sales tax amount related to testing and commissioning included in the tax certificate is US$ 5.118 million (Rs. 537.367 million), therefore the same is being adjusted for RLNG, HSD and O&M costs. Accordingly the request of the Petitioner considering being legitimate, the adjustment in adjustable sales tax has been made for US$ 5.118 million (Rs. 537.367 million).

10. Engineering Consultancy

10.1. The Petitioner in the review motion requested that Authority allowed the cost of US$ 9.106 million instead of requested cost of US$ 10.792 million. The Petitioner submitted that the contract is in multi-currency i.e. Euro, US$, PKR etc therefore the amount on this account may kindly be allowed to the Petitioner since it has significant impact due to exchange rate fluctuations.

10.2. The Authority considered the request of the Petitioner and re-examined / reevaluated the requested amount. While scrutiny of the documents it was observed that this head has been contracted in different currencies due to which the calculation of exchange rate variation was not correctly made. Due to this the verified amount was assessed as US$ 9.106 million instead of US$ 9.476 million. Accordingly the Authority has decided to allow the verified amount (excluding payables) of US$ 8.637 million (Rs. 908.69 million) at exchange rate of Rs. 105.21/US$.

11. Submissions relating to Privatization Commission

11.1. The Petitioner submitted that the Government of Pakistan has decided to privatize the Project through the Privatization Commission, and there has been active progress in the privatization process which is at its advanced stages. In view of this, the following points are submitted for consideration of the Authority:

a. In the COD Order, the Authority has fixed the spread for debt financing at KIBOR + 1.8%. The reason for lower spread is that the Petitioner availed borrowing from PDFL (which is wholly owned by the GOP) and from commercial banks on the strength of guarantee of the GOP. It may be noted that in view of the proposed privatization of the Project, the Authority held in the Modification Order as follows:

"... However, after privatization, if revision in tariff is required on the basis of foreign financing under the terms of the privatization agreement, the same may be considered by the Authority as per Law."

b. Despite the above determination of the Authority, the COD Order is silent on the matter. In the case of privatization, a private investor would have to arrange commercial loans (either in local or foreign currency or a combination) to replace existing local debt obtained from PDFL / financial institutions on the basis of GOP's guarantee or otherwise. This will enable Government of Pakistan to divest its investment (both debt and equity) in the power plants. Therefore, in order to enable the privatization process to be concluded, and for bidders to bid a binding price, it is required that as allowed in the Reference Tariff Order, the Authority kindly specify that the following costs in the case of foreign / local debt financing / mix of both shall be allowed to the buyer:

   a. Maximum of LIBOR + a premium of 4.5%;
   b. Maximum of KIBOR + a premium of 3%;
   c. Maximum of Financial Fees and Charges, subject to a maximum of 3.5% of the debt amount;
   d. Any Political Risk fee for debt arranged from outside, subject to a maximum allowed in the case of Sinosure.

11.2. The Petitioner further submitted that as per the original scheme of the tariff, sharing of any saving in the ratio of 60:40 between power purchaser and power producer should also be applicable for any subsequent refinancing after the privatization has been completed.

11.3. The above submissions have already been considered by the Authority and decision in the matter has been issued vide November 19, 2019 which is reproduced hereunder;

"The Authority has considered the request of the petitioner and comments of stakeholders. In the opinion of the Authority, the issue raised by the petitioner is not relevant as the project shall be privatized on the basis of existing cash flows. However, after privatization, if revision in tariff is required on the basis of foreign financing under the terms of the privatization agreement, the same may be considered by the Authority as per Law."

12. Corrections of inadvertent errors.

12.1. While processing the review motion filed by the Petitioner, the Authority noted few Inadvertent errors in the decision dated 19-2-2020. The same were shared with the Petitioner. Since correction of the these errors does not affect the legitimate and prudent costs of the Petitioner determined by the Authority through its COD tariff decision therefore after considering all related facts and submissions of the Petitioner, the Authority has decided to rectify all inadvertent errors as follows;

i. Project Payables of power project
ii. Cost of working capital.
iii. ROE & ROEDC.
iv. Tariff on Simple Cycle Operation on RLNG.
v. Adjustment (True up) of Company's Overhead Cost (Local) Operational Phase – US$ 5.0 allowed in the determination.

13. Project Costs – Payables

13.1. The Authority while adjustment / trueing up of the generation tariff of the Petitioner allowed the project cost including paid and payable amount in line with the decision made in the matter of housing colony which is subject to adjustment after two years from COD of the complex.

13.2. These costs were not verified as paid and reported payable at the time of filing of tariff Adjustment application by the Petitioner. However since cost on account of housing colony was subject to adjustment from COD i.e. July 29, 2018 till July 29, 2020 therefore these payables were also allowed in line with this decision. Further, the petitioner submitted on vide its letter # Ref. NPPMCL/CEO/17435 dated May 5, 2020 and May 12, 2020 that it had either adjusted payables against EPC cost against LD invoices due from EPC contractor or settled few of the payments after COD decision dated 19-02-2020. Final details of the payable after the settlement of EPC cost and payments as on May 15,2020 works out to be as per following;

Sr.No	Project Cost	Project Cost Payable
		US$ (Million)
1	EPC Cost	
a.	EPC Cost-Offshore	22.405
b.	EPC Cost-Onshore	9.161
	Sub-Total	**31.566**
2	**Items not covered in EPC cost**	
a.	Site housing complex with additional recreational facilities	6.021
b.	BOP Spares	5.629
	Sub-Total	11.650
3	Non-EPC cost	
a.	Engineering consultancy	0.839
b.	Land Cost	0.627
c.	Security Surveillance	8.803
d.	Insurance during construction	0.032
	Sub-Total	**10.300**
4	Gas Pipeline Cost	1.044
	Total Project Cost Payable at COD	54.57

13.3. The Authority observed that Security Surveillance cost included a secondary security cost of US$ 1.202 million with maximum cap subject to adjustment as per actual on the basis of verifiable documentary evidence at COD. The Petitioner did not seek any deferment or extension of the security wall to be constructed after COD as the same was not constructed before COD therefore the same has been disallowed accordingly. The amount stands payable to date for security surveillance is excluding the disallowed cost of security wall.

13.4. The responsibility of establishing the claimed cost through documentary evidence is responsibility of the Petitioner. The Authority noted that even after lapse of two years of achieving COD the Petitioner was unable to settle its payables. The Authority further noted that no clear time line for adjustment of the payable amount was given. In absence of such information the decision cannot be kept pending for indefinite time frame. In view thereof the Authority has decided to issue this decision based on the verified project cost of US$ 716.140 million excluding the payable amounting of US$ 54.57 million. However, this payable decision shall not alter the earlier decision pertaining Site housing complex with additional recreational facilities for US$ 6.021 million Dated 19-2-2020, wherein time frame is already given. In line with the provisions of Section 7(6) of NEPRA Act read with

Rules 17(3), to protect the interest of the investors for viability of the project, the Authority has decided to provide one time opener on account of payable to the Petitioner. Accordingly the Petitioner is required to settle all its amount paid / to be paid within one year of issuance of this decision. After settlement of the payable amount within given timeframe, the Petitioner may approach NEPRA for adjustment on this account along with documentary evidence. The adjustment on this account shall be made keeping in view the Authority earlier decisions made in the instant case. However, no exchange rate variation shall be allowed to the petitioner. Further, the project cost so adjusted and generation tariff on based thereon shall be applicable prospectively.

14. Cost of Working Capital

14.1. Cost of working capital was allowed as Rs 0.1787 per kW/h in the COD decision dated 19-2-2020. While reviewing the same, it was revealed that the Petitioner did not actualize the payment terms as required under PPA/GSA and determination.

14.2. The Authority had allowed Rs. 0.0965 per kWh as cost of working capital tariff component to Petitioner. 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."*

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

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

14.4. The actual facts and figures were verified again 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, actual payment days i.e. 26 days and actual load factor of the power plant which comes to 51% on average for the first two years of operation. Accordingly the component for cost of working capital has been calculated as Rs.0.0697/kW/h and the same is allowed.

14.5. The Authority further decided that the cost of working capital shall be adjusted quarterly for variation in KIBOR and fuel prices. The Cost of receivables shall also be subject to adjustment as per actual dispatch factor of the preceding quarter. 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.

15. Adjustment of Return on Equity

15.1. The Authority had allowed Rs. 0.5381 per kW/h as return on equity tariff component to the Petitioner at the time of COD decision dated 19-2-2020. As per provision ROE component of tariff is adjusted as per in actual equity investment and actual equity drawdown including ROEDC during construction period being part of ROE.

15.2. The Petitioner claimed upfront drawdown of 30% equity at the start of the construction period at the time of filing of tariff adjustment at COD. During verification of the same, different versions of the same were also shared. Based on the same assumption, the Petitioner claimed ROE component of Rs. 0.600 per kW/h and on the equity amount of US$ 244.22 million.

15.3. During the re-verification of the equity draw down, the Authority noted that debt was interpreted as equivalent to equity at the start of the construction of the power plant and return on equity component was based on this assumption but the fact was quite different. Debt financing on which interest during construction was charged and paid accordingly cannot be considered equity. An information direction was sent to the Petitioner dated April 8, 2020 wherein it was asked again to explain the factual draw down of the claimed equity during the construction period. The Petitioner in its response dated April 10, 2020 submitted as per following:

i. All funding provided by GoP / Sponsor is in the form of equity and being Sponsors to the Projects, should in any case be considered as equity.

ii) As per the Original Tariff Petition and Determination such amount shall be considered to disbursed upfront till such time as such funding reaches 30% of Project Cost.

iii) Equity above 30% of Project Cost should be treated as debt as per the provisions of the Tariff.

iv) Interest during construction on such notional debt should be calculated at the rate of KIBOR plus 3.0% specified in the Reference Tariff. The Company has already raised the issue of using rates of Sponsor Debt as a basis for determining the mark up rate for the Project debt.

v) Since the notional debt is being computed based on a policy stated by NEPRA, and which substitutes equity funding as a form of financing, and cost of such substituted funding should be considered based on NEPRA's Reference Tariff Determination.

vi) Treating GoP contributions as conventional debt is unjustified because no commercial loan was availed for the purposes, no financing documents were executed, no financing fees were paid, no security/charge was created on Project assets and such funding under SBP Prudential Regulations is also classified as equity.

vii) The IDC allowed under the Determined Project Cost as per the Company's Audited Accounts may be adjusted to reflect any inconsistencies in the Project Cost arising under the above assumptions.

viii) In case where the entire Project is financed by Sponsor contributions NEPRA cannot form a basis to calculate IDC and ROEDC on actual disbursements since no such classification exists. The same has to be based on the assumptions provided used in the Reference Tariff which have been followed by the Company in its submission. Any arrangements between the Company and the Sponsor are internal. As an illustration, if the Sponsor Loan was interest free would it be the case that the Authority would provide neither IDC nor ROEDC on the subject funding.

15.4. In view of the submission of the Petitioner, it was observed that the Petitioner has been insisting to treat the GoP debt equivalent to equity which is not the true fact at all as per the financial statements for the years 2015-16 to 2017-18. While scrutiny of the equity draw down it was found out that only Rs.1,250 million (50% share of the Balloki power plant) injected as "Seed Money" was in fact equity and later on 30-6-2017 debt was converted into equity. ROEDC calculated for equity injected at the start and converted equity as on 30-6-2017 till COD i.e. 02-02-2018 works out as US$ 24.024 million. After addition of ROEDC being part of the equity, total equity works out as US$ 238.866 million. On the basis of revised equity of US$ 238.866 million (30% of project cost paid and assessed) at exchange rate of US$/PKR of Rs.106.38 the ROE component of tariff worked out as Rs. 0.3856 per kW/h and the same is being allowed.

16. Simple Cycle Operation

16.1. The Petitioner vide letter dated May 08, 2020 submitted that it is difficult to manage the generation loss (800MW approx.) in case of sudden outage of Steam Turbine of HBS or Balloki Plant as the Gas Turbines also have to be shut off because of non-provision of Open Cycle Tariff due to which forced load shedding has to be carried out till such time a contingency reserve is brought on bar. The Petitioner submitted that the Power Purchaser vide its letter No. DGM(C/M(R&G)/1402-04 dated 18.01.2019 sought comments of the Company on the proposal of System Operator. The Company informed that the Complex is capable to operate on simple cycle mode therefore, in order to support the System Operator, simple cycle operation can be undertaken subject to permission and award of simple cycle tariff by the Authority. It was further pointed out to the Authority that the commissioning tests under Power Purchase Agreement including Heat Rate and Capacity (RLNG fuel only) were carried out on simple cycle mode which were duly certified by the Independent Engineer and witnessed by Power Purchaser.

16.2. Pursuant to this request of the Company, the Authority in its Decision dated November 18, 2019 for Company's Modification Petitions ruled that the Simple Cycle Tariff would be allowed at One Time Adjustment at COD stage after analysis. In light of this decision of the Authority, during the pendency of the One-Time tariff adjustment, the Company vide it's letter no NPPMCL-HBS/CEO/2020/16551 dated February 07, 2020 submitted the following proposed tariff tables for simple cycle operations:

Description	HBS (PKR/kWh)	Balloki (PKR/kWh)
Fuel Cost Component	11.7045	13.6289
Variable O&M (Foreign)	0.2095	0.2438
Fixed O&M (Local)	0.1462	0.1520
Fixed O&M (Foreign)	0.2229	0.2427
Cost of working capital	0.2821	0.3369
Total	12.5652	14.6043

Table-1 NPPMCL proposed Simple Cycle (RLNG) Tariff

16.3. Basis for the aforesaid proposed simple cycle tariff numbers is as follows;

- The Simple Cycle RLNG efficiencies guaranteed by the EPC Contractors and subsequently allowed in the reference generation tariff of HBS & Balloki were 40.96% and 41.01 % respectively. However, the tested efficiencies of GTs were 41.45% and 41.09% for HBS and Balloki respectively. Since these tested efficiencies were high than the guaranteed numbers, the Company shared the efficiency gain on a 60:40 basis with the Power Purchaser. Thereafter, the one-time adjustment factors petitioned by the Company (cumulative of 0.898%) were deducted from this number to reach a final efficiency number of 40.36% and 40.16%.

16.4. The aforementioned treatment of the efficiencies utilized for reaching proposed tariff table (Table-1) is summarized in the table below:

Description	HBS	Balloki
EPC Guarantee SC efficiency allowed in reference tariff	40.96%	41.01%
Tested efficiency	41.45%	41.09%
Efficiency after sharing (60:40)	41.26%	41.06%
One-time efficiency adjustment	0.898%	0.898%
Net efficiency requested and used for simple cycle tariff submitted on Feb 7, 2020	40.36%	40.16%

Table-2 Underlying working of efficiencies for NPPMCL's proposed Simple Cycle (RLNG) Tariff

16.5. The COD Orders on the other hand allowed the following tariff:

Description	HBS (PKR/kWh)	Balloki (PKR/kWh)
Fuel Cost Component	10.4726	11.6270
Variable O&M (Foreign)	0.1340	0.1498
Fixed O&M (Local)	0.0535	0.0576
Fixed O&M (Foreign)	0.1312	0.1372
Cost of working capital	0.1604	0.1787
Total	**10.9517**	**12.1504**

Table-3 COD Order Simple Cycle (RLNG) Tariff

16.6. However, the COD Orders are silent with regards to the basis for this Simple Cycle Tariff such as what efficiency has been used for calculating the Fuel Cost Component in this tariff. In light of the Information Direction of the Authority, the Company now resubmits its Simple Cycle (RLNG) tariff working on the basis of following efficiencies:

Description	HBS	Balloki
EPC Guarantee SC efficiency allowed in reference tariff	40.96%	41.01%
Tested efficiency	41.45%	41.09%
Efficiency after sharing (60:40), & now being requested for Simple Cycle Tariff (RLNG)	41.26%	41.06%

Table-4 Simple Cycle Efficiency being requested in light of COD Orders

16.7. The Simple Cycle (RLNG) tariff in light of the efficiencies being requested in Table-4 are as under:

Description	HBS (PKR/kWh)	Balloki (PKR/kWh)
Fuel Cost Component	11.4497	13.3308
Variable O&M (Foreign)	0.1787	0.2049
Fixed O&M (Local)	0.1462	0.1520
Fixed O&M (Foreign)	0.2229	0.2427
Cost of working capital	0.2821	0.3369
Total	12.2796	14.2673

Table-5 Simple Cycle (RLNG) Tariff being requested

16.8. With regards to the costs being requested in the above table (Table-5) the Company clarifies that the Fuel Cost Component is a pass-through item in the tariff and is to be incurred by the Company for the generation of electricity. Similarly, Variable O&M (Foreign) is incurred based on the number of units being generated and hence its full recovery is necessary to ensure financially viable operations. Likewise, when the company will operate its plant on simple cycle, it will have to utilize its working capital facility in order to pay the fuel cost, meaning thereby that this is an essential cost and the same should be allowed to the Company.

16.9. The Petitioner further submitted that Fixed O&M costs are to be incurred by the Company irrespective of whether the plants are despatched or not. However, in a scenario where the Company has exhausted its Forced / Partial Forced Outage allowance (389 hours per Agreement Year) under the PPA and the plants are operated on the demand of Power Purchaser / System Operator on Simple Cycle, the Company believes that in such cases, the Fixed O&M (Local & Foreign) components should be allowed to safeguard it against loss during such operations.

16.10. In view of the submissions of the Petitioner, the Authority has decided that under the present gas supply arrangements, the tariff for simple cycle operations will not be applicable. However for any simple cycle operation demanded by the System Operator during maintenance outage, scheduled outage or major overhaul outage, the petitioner will be allowed fuel cost and variable part of O&M costs as determined by the Authority for simple cycle operation.

16.11. For any subsequent revision or modifications in the existing gas supply arrangements, the Authority would review the applicability of tariff for simple cycle operations.

17. <u>Company's Overhead Cost (Local) Operation Phase (Fixed O&M) US$ 5 Million</u>

16.1 The Petitioner submitted that with reference to the matter related to the overhead costs it would like to highlight that a cost of USD 5 million was allowed by the Authority in paragraph 21.10 of the Authority's Reference Tariff Determination of the plants dated August 09, 2016 with no provision for its adjustment. Furthermore, Part (II) of the Order part of the said decision i.e. "One-Time Adjustment at COD" is completely silent about the adjustment of operational phase overhead costs of US$ 5 Million. For clarity of reference sub clause xi) of Part (II) of the Order part is reproduced below:

"27. ORDER

I.................

II. One Time Adjustment of at COD
i) ....

.

.

.

xi) O&M components shall be adjusted as per the signed O&M Agreement, LTSA Agreement."

16.2 The Petitioner stated that it is well established principle of regulatory framework of NEPRA that only those tariff components are adjusted at COD which are expressly stated in the generation reference tariff. In view of the above, it would be extremely unjustified if the One Time Adjustment at COD is applied on the US$ 5 Million amount allowed for overhead costs (local) operational phase. Furthermore, it is submitted that it is not a general precedence of the Authority to adjust such costs at actual, as these costs vary year to year based on the Company's circumstances and requirements. Costs have been allowed by the Authority based on its own judgment in the reference tariffs, especially in the instant case whereby an amount of USD 13.14 million sought by the Company was reduced to USD 5.0 million by the Authority. Notwithstanding the above, based on data currently available with the Company, no basis or assumptions can be made regarding the quantum of such costs over a period 30 years in future. Costs incurred in the construction phase are not reflective of operations period costs; costs in the initial period of operations are being shared between two projects which will not be the case in the future considering the fact that the Company is being privatized by the Government of Pakistan; and costs incurred currently may be different for a private sector investor as requirements may change in their case.

16.3 The Petitioner submitted that without prejudice to the aforesaid, if the Authority feels that there is a need to actualize the same, such actualization may be based on costs incurred each year, subject to a maximum cap of USD 5.0 million allowed by the Authority.

16.4 The Authority considered the request of the Petitioner and observed that it has been categorically mentioned in the indexation mechanism of O&M that the *"at COD the O&M components shall be adjusted as per the signed O&M agreement, LTSA agreement and actual recurring administrative expenses. Thereafter the O&M component tariff shall be adjusted on the basis of local inflation (local CPI), foreign inflation (US CPI) and exchange rate variation ……."*

16.5 Thus in accordance with the reference generation tariff, the O&M cost needs to be adjusted based on actual cost reflected in the Company's financial accounts at the time of COD. The Company is not deprived from the cost incurred on this account. Rather the actual cost adjustment mechanism on annual basis has been given as a matter of equity and justice and transparency. Accordingly the amount of Rs. 272,466 million (US$ 2.561 million) has been allowed on this account. The breakup of the cost is as under:

Administrative expenses	Amount (Rs in 000')
Salaries and administrative expenses (Cost of Sales)	264,067
Salaries, wages and benefits	104,501
Directors' meeting fee and expenses	2,035
Travelling and conveyance	1,148
Vehicle running and maintenance	3.270
Printing and stationary	4,029
Office supplies and utilities	4,900
Repair and maintenance	241
Legal and professional	5,644
Auditors' remuneration	6,130
Fee and subscription	1,763
Rent, rates and taxes	17,513
Telephone and telex	1,511
Total	**416,752**
CPI May 2018	225.4
CPI June 2019	246.82
Adjusted for CPI	**380,585**
Each Plant	190,292
Add Security Cost (US$ 0.61 Mln*Rs.105)	64,050
Add Generation License Fee HBS	18,143
Add Generation License Fee Balloki	18,123
Base Recurring Administrative Expenses at COD Adjustment (HBS)	**272,485**
Base Recurring Administrative Expenses at COD Adjustment (Balloki)	**272,466**
Expenses not considered	
Inauguration and advertisements	1,020
Security services (covered separately)	295

Insurance (covered separately)	9,097
Depreciation (covered through principal repayment)	54,481
Amortization	884
Total	65,777

18. O&M Component:

18.1. The Petitioner submitted that O&M components allowed have not been indexed to account for local and foreign inflation. Therefore, it is requested that the same may please be allowed accordingly. The Authority decided to accept the request of the Petitioner and O&M are revised as per following.

Description	Claimed (PKR)	Allowed (PKR)
Variable O&M (Foreign)	0.1592	0.1357
Fixed O&M (Foreign)	0.1458	0.1242
Fixed O&M (Local)	0.0913	0.0258

19. Summary of Project Cost & Tariff

19.1. Concluding the discussion made in the above paras, the revised approved project cost of Petitioner-Balloki excluding one-time adjustments at review motion against COD is as under:

BREAKUP OF PROJECT COST	*****US$ in millions*****	
	Reference	Assessed
Offshore EPC Cost	448.032	425.627
Onshore EPC Cost	114.568	105.406
EPC cost:	**562.60**	**531.033**
Combustion Monitoring System of Gas Turbines	0.500	-
Buffer Vessel	4.463	-
Site Housing Complex with Additional Recreational Facilities	6.048	0.027
BOP Spares	7.500	1.871
Acquisition of Land	1.513	1.470
Fuel Gas treatment plant	2.100	-
Items not covered in the EPC contract scope:	**22.124**	**3.368**

Engineering and related consultancy	9.770	8.637
Administrative Expenses	8.418	3.906
O&M mobilization & training	6.000	4.549
Land Cost	5.160	5.040
Security Surveillance	10.005	-
Insurance during construction	5.789	4.156
Testing & Commissioning	10.956	10.956
Non EPC Cost:	**56.098**	**37.244**
Customs Duties & Cess	27.106	21.515
LTSA Initial Spare Parts	20.880	20.880
Gas Pipeline Cost	8.800	7.238
One month LNG Escrow Account	37.045	83.576
Less Sales Tax (Adjustable)	-	(15.271)
CAPEX	**734.653**	**689.584**
Financing Fees & Charges 3.5% of Debt	17.857	3.344
Interest During Construction 27 Months	51.460	23.213
Total Project Cost	**803.97**	**716.140**
Rupee-Dollar Parity		Rs. 106.38/USD
US CPI (All Urban Consumers) May-18		251.588
Local CPI (General) May -18		225.4
Local Financing		3 M KIBOR (6.92%) plus 1.8% inclusive of 40% sharing in spread.
Debt: Equity Ratio		70 : 30

TARIFF ON COMBINED CYCLE AT COD

Tariff Components	RLNG	HSD	Adjustment/Indexation
Capacity Charges (Rs./kW/hr):			
Fixed O&M (Local)	0.0258	0.0284	CPI (General)
Fixed O&M (Foreign)	0.1242	0.1369	US CPI & Rs./US$
Cost of working capital	0.0697	0.0768	KIBOR & Fuel Price
Insurance	0.0539	0.0594	Actual subject to maximum limit
ROE	0.3856	0.4250	Rs./US$
Debt Servicing (years 1 – 10 only)	0.7622	0.8400	KIBOR
Total 1-10 years	**1.4214**	**1.5666**	
Total 11-30 years	**0.6592**	**0.7266**	

Energy Charge RLNG (Rs./kWh):			
Fuel cost Component	8.8710	16.9526	Fuel Price
Variable O&M (Foreign)	0.1357	0.1722	US CPI & Rs./US$
Energy Total	**9.0067**	**17.1248**	
Total Tariff (Rs./kWh) Levellized	**10.2633**	**18.5097**	

Tariff on Single Cycle (RLNG only)

Description	Rs./kWh	Adjustment /Indexation
Fuel cost component	11.6345	Fuel price
Variable O&M (Foreign)	0.1357	US CPI & Rs./US$
Fixed O&M (Local)	0.0258	CPI General
Fixed O&M (Foreign)	0.1242	US CPI & Rs./US$
Cost of working capital	0.0697	KIBOR and fuel price
Total	**11.9900**	

20. Adjustment/Indexations

20.1. The operation cost / tariff components are 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
Fixed O&M (Foreign)	US CPI & US$/PKR (quarterly)
Cost of working capital	KIBOR & Fuel Price
Insurance	Actual subject to maximum limit 1% of EPC Cost
ROE	Rs./US$
Debt Service	KIBOR

21. ORDER

I. The Authority hereby approves the following generation tariff for National Power Park Management Company (Private) Limited for its combined cycle power project at Balloki on the basis of net power output of 1,205.046 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)	0.0258	0.0284	CPI (General)
Fixed O&M (Foreign)	0.1242	0.1369	US CPI & Rs./US$
Cost of working capital	0.0697	0.0768	KIBOR & Fuel Price
Insurance	0.0539	0.0594	Actual subject to maximum limit
ROE	0.3856	0.4250	Rs./US$
Debt Servicing (years 1 – 10 only)	0.7622	0.8400	KIBOR
Total 1-10 years	**1.4214**	**1.5666**	
Total 11-30 years	**0.6592**	**0.7266**	
Energy Charge RLNG (Rs./kWh):			
Fuel cost Component	8.8710	16.9526	Fuel Price
Variable O&M (Foreign)	0.1357	0.1722	US CPI & Rs./US$
Total	9.0067	17.1248	

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

Tariff on Single Cycle (RLNG only)

Description	Rs./kWh	Adjustment /Indexation
Fuel cost component	11.6345	Fuel price
Variable O&M (Foreign)	0.1357	US CPI & Rs./US$
Fixed O&M (Local)	0.0258	CPI General
Fixed O&M (Foreign)	0.1242	US CPI & Rs./US$
Cost of working capital	0.0697	KIBOR and fuel price
Total	11.9900	

II. Adjustments on Account of Project Cost Payables

In accordance with the decision of the Authority following adjustments with respect to project costs which stand payable at COD shall be made after submitting the verifiable documentary evidence and without any exchange rate variation beyond Rs. 110.5/US$ within one year of this decision of the Authority:

a) EPC Cost Offshore for an amount of US$ 22.405 million.
b) EPC Cost Onshore for an amount of US $ 9.161 million.
c) 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 + actual premium adjusted for Power Producer's share.
   b. Adjustment of BOP Spares payable amount of US$ 5.629 million,
d) Adjustment of payable amount of US$ 10.30 million under the head of "Non-EPC", which includes:
   - Engineering Consultancy payable amount of US$ 0.839 million,
   - Land Cost payable amount of US$ 0.627 million,
   - Security Surveillance payable amount of US$ 8.803 million, and;
   - Insurance during construction payable amount of US$ 0.032 million.
e) Gas pipeline payable cost of US$ 1.044.

The one time payable adjustments will be incorporated in the project cost based on the provision of verifiable documentary evidence once paid full and final and the revised tariff shall be applicable prospectively from the date of the revised COD.

III. Tariff on Simple Cycle Operation

Under the present gas supply arrangements, the tariff for simple cycle operations will not be applicable. However for any simple cycle operation demanded by the System Operator during maintenance outage, scheduled outage or major overhaul outage, the petitioner will be allowed fuel cost and variable part of O&M costs as determined by the Authority for simple cycle operation.

For any subsequent revision or modifications in the existing gas supply arrangements, the Authority would review the applicability of tariff for simple cycle operations.

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$ 5.344 million at Rs. 106.38/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. 106.38/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 225.40 for May 2018
US $CPI_{(REV)}$	=	The revised US CPI (All Urban Consumers)
US $CPI_{(REF)}$	=	The reference US CPI of 251.588 for May 2018
$ER_{(REV)}$	=	The revised TT& OD selling rate of US dollar
$ER_{(REF)}$	=	The reference TT& OD selling rate of Rs. 106.38/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 1st 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. The Cost of receivables shall also be subject to adjustment as per actual dispatch factor of the preceding quarter.

Any post-COD variation in RLNG price (including impact of US$ to PKR exchange rate) 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 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 and applicable exchange, if any
$P_{RLNG(Ref)}$	=	The reference HHV RLNG price of US$ 11.91/MMBtu and exchange rate of Rs. 121.6481
$FCC_{HSD(Rev)}$	=	$FCC_{HSD(Ref)} * P_{HSD(Rev)} / P_{HSD(Ref)}$
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.

VI. 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.

NOTIFICATION

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

AUTHORITY

Saif Ullah Chattha
Member

Rehmatullah Baloch
Member

Rafique Ahmed Shaikh
Member

Engr. Bahadur Shah
Member

Tauseef H. Farooqi
Chairman

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Annex - I

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	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	0.3324	0.4298	1.4214	1.5450	10.5517	9.9192
2	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	0.3623	0.3999	1.4214	1.5450	10.5517	9.9192
3	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	0.3949	0.3672	1.4214	1.5450	10.5517	9.9192
4	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	0.4305	0.3317	1.4214	1.5450	10.5517	9.9192
5	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	0.4693	0.2929	1.4214	1.5450	10.5517	9.9192
6	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	0.5116	0.2506	1.4214	1.5450	10.5517	9.9192
7	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	0.5577	0.2045	1.4214	1.5450	10.5517	9.9192
8	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	0.6079	0.1543	1.4214	1.5450	10.5517	9.9192
9	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	0.6627	0.0995	1.4214	1.5450	10.5517	9.9192
10	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	0.7224	0.0398	1.4214	1.5450	10.5517	9.9192
11	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
12	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
13	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
14	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
15	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
16	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
17	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
18	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
19	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
20	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
21	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
22	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
23	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
24	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
25	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
26	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
27	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
28	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
29	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
30	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	-	-	0.6592	0.7166	9.7233	9.1404
Average														
1-10	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	0.5052	0.2570	1.4214	1.5450	10.5517	9.9192
11-30	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	0.0000	0.0000	0.6592	0.7166	9.7233	9.1404
1-30	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	0.1684	0.0857	0.9133	0.9927	9.9994	9.4000
Levelized														
1-30	8.8710	0.1357	9.0067	0.0258	0.1242	0.0697	0.0539	0.3856	0.3078	0.1890	1.1560	1.2566	**10.2633**	**9.6481**

10.2633 Rs./kWh **9.6481 US Cents/kWh**

Annex - II

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	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	0.3663	0.4737	1.5666	1.7028	18.8276	17.6990
2	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	0.3993	0.4407	1.5666	1.7028	18.8276	17.6990
3	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	0.4353	0.4048	1.5666	1.7028	18.8276	17.6990
4	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	0.4745	0.3655	1.5666	1.7028	18.8276	17.6990
5	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	0.5172	0.3228	1.5666	1.7028	18.8276	17.6990
6	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	0.5638	0.2762	1.5666	1.7028	18.8276	17.6990
7	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	0.6146	0.2254	1.5666	1.7028	18.8276	17.6990
8	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	0.6700	0.1700	1.5666	1.7028	18.8276	17.6990
9	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	0.7304	0.1097	1.5666	1.7028	18.8276	17.6990
10	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	0.7962	0.0439	1.5666	1.7028	18.8276	17.6990
11	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
12	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
13	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
14	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
15	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
16	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
17	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
18	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
19	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
20	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
21	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
22	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
23	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
24	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
25	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
26	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
27	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
28	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
29	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
30	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	-	-	0.7266	0.7898	17.9145	16.8407
Average														
1-10	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	0.5568	0.2833	1.5666	1.7028	18.8276	17.6990
11-30	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	0.0000	0.0000	0.7266	0.7898	17.9145	16.8407
1-30	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	0.1856	0.0944	1.0066	1.0941	18.2189	17.1268
Levelized														
1-30	16.9526	0.1722	17.1248	0.0284	0.1369	0.0768	0.0594	0.4250	0.3393	0.2083	1.2741	1.3849	**18.5097**	**17.4001**

18.5097 Rs./kWh **17.4001 US Cents/kWh**

Annex - III

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

Gross Capacity	1,223.106 MWs	US$/PKR Parity	106.38	
Net Capacity	1,205.046 MWs	Debt	501.30	US$ Million
KIBOR	6.92%	Debt in Pak Rupees	53,326.39	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	53,326.39	848.93	1,162.52	52,477.45	2,011.45			
2	52,477.45	867.44	1,144.01	51,610.02	2,011.45			
3	51,610.02	886.35	1,125.10	50,723.67	2,011.45			
4	50,723.67	905.67	1,105.78	49,818.00	2,011.45	0.3324	0.4298	0.7622
1st Year		**3,508.39**	**4,537.40**		**8,045.79**			
5	49,818.00	925.41	1,086.03	48,892.58	2,011.45			
6	48,892.58	945.59	1,065.86	47,947.00	2,011.45			
7	47,947.00	966.20	1,045.24	46,980.79	2,011.45			
8	46,980.79	987.27	1,024.18	45,993.53	2,011.45	0.3623	0.3999	0.7622
2nd Year		**3,824.47**	**4,221.32**		**8,045.79**			
9	45,993.53	1,008.79	1,002.66	44,984.74	2,011.45			
10	44,984.74	1,030.78	980.67	43,953.96	2,011.45			
11	43,953.96	1,053.25	958.20	42,900.71	2,011.45			
12	42,900.71	1,076.21	935.24	41,824.50	2,011.45	0.3949	0.3672	0.7622
3rd Year		**4,169.03**	**3,876.76**		**8,045.79**			
13	41,824.50	1,099.67	911.77	40,724.83	2,011.45			
14	40,724.83	1,123.65	887.80	39,601.18	2,011.45			
15	39,601.18	1,148.14	863.31	38,453.04	2,011.45			
16	38,453.04	1,173.17	838.28	37,279.87	2,011.45	0.4305	0.3317	0.7622
4th Year		**4,544.63**	**3,501.16**		**8,045.79**			
17	37,279.87	1,198.75	812.70	36,081.13	2,011.45			
18	36,081.13	1,224.88	786.57	34,856.25	2,011.45			
19	34,856.25	1,251.58	759.87	33,604.67	2,011.45			
20	33,604.67	1,278.86	732.58	32,325.80	2,011.45	0.4693	0.2929	0.7622
5th Year		**4,954.07**	**3,091.72**		**8,045.79**			
21	32,325.80	1,306.74	704.70	31,019.06	2,011.45			
22	31,019.06	1,335.23	676.22	29,683.83	2,011.45			
23	29,683.83	1,364.34	647.11	28,319.49	2,011.45			
24	28,319.49	1,394.08	617.36	26,925.41	2,011.45	0.5116	0.2506	0.7622
6th Year		**5,400.40**	**2,645.39**		**8,045.79**			
25	26,925.41	1,424.47	586.97	25,500.93	2,011.45			
26	25,500.93	1,455.53	555.92	24,045.41	2,011.45			
27	24,045.41	1,487.26	524.19	22,558.15	2,011.45			
28	22,558.15	1,519.68	491.77	21,038.47	2,011.45	0.5577	0.2045	0.7622
7th Year		**5,886.93**	**2,158.85**		**8,045.79**			
29	21,038.47	1,552.81	458.64	19,485.66	2,011.45			
30	19,485.66	1,586.66	424.79	17,899.01	2,011.45			
31	17,899.01	1,621.25	390.20	16,277.76	2,011.45			
32	16,277.76	1,656.59	354.86	14,621.17	2,011.45	0.6079	0.1543	0.7622
8th Year		**6,417.31**	**1,628.48**		**8,045.79**			
33	14,621.17	1,692.71	318.74	12,928.46	2,011.45			
34	12,928.46	1,729.61	281.84	11,198.85	2,011.45			
35	11,198.85	1,767.31	244.14	9,431.54	2,011.45			
36	9,431.54	1,805.84	205.61	7,625.70	2,011.45	0.6627	0.0995	0.7622
9th Year		**6,995.46**	**1,050.32**		**8,045.79**			
37	7,625.70	1,845.21	166.24	5,780.50	2,011.45			
38	5,780.50	1,885.43	126.01	3,895.07	2,011.45			
39	3,895.07	1,926.53	84.91	1,968.53	2,011.45			
40	1,968.53	1,968.53	42.91	(0.00)	2,011.45	0.7224	0.0398	0.7622
10th Year		**7,625.70**	**420.08**		**8,045.79**			

Annex - IV

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

Gross Capacity	1,095.045 MWs	US$/PKR Parity	106.38	
Net Capacity	1,093.370 MWs	Debt	501.30	US$ Million
KIBOR	6.92%	Debt in Pak Rupees	53,326.39	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	53,326.39	848.93	1,162.52	52,477.45	2,011.45			
2	52,477.45	867.44	1,144.01	51,610.02	2,011.45			
3	51,610.02	886.35	1,125.10	50,723.67	2,011.45			
4	50,723.67	905.67	1,105.78	49,818.00	2,011.45	0.3663	0.4737	0.8400
1st Year		3,508.39	4,537.40		8,045.79			
5	49,818.00	925.41	1,086.03	48,892.58	2,011.45			
6	48,892.58	945.59	1,065.86	47,947.00	2,011.45			
7	47,947.00	966.20	1,045.24	46,980.79	2,011.45			
8	46,980.79	987.27	1,024.18	45,993.53	2,011.45	0.3993	0.4407	0.8400
2nd Year		3,824.47	4,221.32		8,045.79			
9	45,993.53	1,008.79	1,002.66	44,984.74	2,011.45			
10	44,984.74	1,030.78	980.67	43,953.96	2,011.45			
11	43,953.96	1,053.25	958.20	42,900.71	2,011.45			
12	42,900.71	1,076.21	935.24	41,824.50	2,011.45	0.4353	0.4048	0.8400
3rd Year		4,169.03	3,876.76		8,045.79			
13	41,824.50	1,099.67	911.77	40,724.83	2,011.45			
14	40,724.83	1,123.65	887.80	39,601.18	2,011.45			
15	39,601.18	1,148.14	863.31	38,453.04	2,011.45			
16	38,453.04	1,173.17	838.28	37,279.87	2,011.45	0.4745	0.3655	0.8400
4th Year		4,544.63	3,501.16		8,045.79			
17	37,279.87	1,198.75	812.70	36,081.13	2,011.45			
18	36,081.13	1,224.88	786.57	34,856.25	2,011.45			
19	34,856.25	1,251.58	759.87	33,604.67	2,011.45			
20	33,604.67	1,278.86	732.58	32,325.80	2,011.45	0.5172	0.3228	0.8400
5th Year		4,954.07	3,091.72		8,045.79			
21	32,325.80	1,306.74	704.70	31,019.06	2,011.45			
22	31,019.06	1,335.23	676.22	29,683.83	2,011.45			
23	29,683.83	1,364.34	647.11	28,319.49	2,011.45			
24	28,319.49	1,394.08	617.36	26,925.41	2,011.45	0.5638	0.2762	0.8400
6th Year		5,400.40	2,645.39		8,045.79			
25	26,925.41	1,424.47	586.97	25,500.93	2,011.45			
26	25,500.93	1,455.53	555.92	24,045.41	2,011.45			
27	24,045.41	1,487.26	524.19	22,558.15	2,011.45			
28	22,558.15	1,519.68	491.77	21,038.47	2,011.45	0.6146	0.2254	0.8400
7th Year		5,886.93	2,158.85		8,045.79			
29	21,038.47	1,552.81	458.64	19,485.66	2,011.45			
30	19,485.66	1,586.66	424.79	17,899.01	2,011.45			
31	17,899.01	1,621.25	390.20	16,277.76	2,011.45			
32	16,277.76	1,656.59	354.86	14,621.17	2,011.45	0.6700	0.1700	0.8400
8th Year		6,417.31	1,628.48		8,045.79			
33	14,621.17	1,692.71	318.74	12,928.46	2,011.45			
34	12,928.46	1,729.61	281.84	11,198.85	2,011.45			
35	11,198.85	1,767.31	244.14	9,431.54	2,011.45			
36	9,431.54	1,805.84	205.61	7,625.70	2,011.45	0.7304	0.1097	0.8400
9th Year		6,995.46	1,050.32		8,045.79			
37	7,625.70	1,845.21	166.24	5,780.50	2,011.45			
38	5,780.50	1,885.43	126.01	3,895.07	2,011.45			
39	3,895.07	1,926.53	84.91	1,968.53	2,011.45			
40	1,968.53	1,968.53	42.91	(0.00)	2,011.45	0.7962	0.0439	0.8400
10th Year		7,625.70	420.08		8,045.79			