National Electric Power Regulatory Authority

Islamic Republic of Pakistan

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No. NEPRA/R/TRF-470/NPPMCL-2019/5063-5065
February 12, 2020

Subject: **Decision of the Authority in the matter of Motion for Leave for Review filed by National Power Parks Management Company (Private) Limited against Decision Dated 19.11.2019 for RLNG Based Power Plant at Balloki** (Case No. NEPRA/TRF-470/NPPMCL-2019)

Dear Sir,

Enclosed please find herewith subject Decision of the Authority (22 Pages) along with Annex-I, II, III & IV in the matter of Motion for Leave for Review filed by National Power Parks Management Company (Private) Limited against Decision dated 19.11.2019 for RLNG Based Power Plant at Balloki in Case No. NEPRA/TRF-470/NPPMCL-2019.

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. The Order of the Authority along with Annex-I, II, III & IV are to be notified in the official Gazette.

Enclosure: As above

12 02 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 MOTION FOR LEAVE FOR REVIEW FILED BY NATIONAL POWER PARKS MANAGEMENT COMPANY PRIVATE LIMITED AGAINST DECISION DATED 19-11-2019 FOR RLNG BASED POWER PLANT AT BALLOKI

1. BACKGROUND

1.1. National Power Parks Management Company (Pvt.) Ltd (NPPMCL) is wholly owned by the Federal Government, incorporated in the year 2015 under the Companies Ordinance, 1984. NPPMCL has setup 1223 MW (gross) RLNG power plant located at Balloki, Kasur. The backup fuel is HSD. The power plant achieved COD on 29th July 2018.

1.2. NPPMCL filed petition for determination of generation Tariff on 22-04-2016. NEPRA gave its tariff determination on 09-08-2016. NPPMCL filed a Modification Petition on 24-05-2019. Decision in the matter of Modification petition was issued on 19-11-2019.

2. FILING OF REVIEW PETITION

2.1. Being aggrieved of decision of the Authority dated 19-11-2019, NPPMCL vide its letter dated 29-11-2019 filed a motion for leave for review. The Review Motion was filed pursuant to Section 7(2)(G) of the NEPRA Act, read with Rule 16(6) of the Tariff Rules and Regulation 3(2) of the Review Regulations. The Authority admitted the review on 20th December 2019 for further proceedings.

3. GROUNDS OF REVIEW MOTION

3.1. NPPMCL seeks review of NEPRA's decisions on the following matters:

a) Modification of cost of Insurance During Operations, which has also not been allowed by NEPRA, as evident from Paragraph 8.84 of the Decision;

b) Consideration of mechanism for adjustment of 'Gas Supply Deposit' during the operations period vis-à-vis Escrow Account and Standby Letter of Credit, in light of observations of NEPRA in Paragraph 8.101 of the Decision;

c) Adjustment date for cost of Site Housing Complex and imposition of penalty, as determined by NEPRA in Paragraph 8.105 of the Decision;

d) Modification of Testing and Commissioning Cost, which has not been allowed by NEPRA, as evident from Paragraph 8.58 of the Decision; and

e) Observation of NEPRA regarding degradation and part load adjustments in Paragraph 8.114 of the Decision, which were not part of the Modification Petition.

3.2. NPPMCL submitted that under the law, it is entitled to recover all costs prudently incurred. The NEPRA Act provides that tariffs should allow recovery of any and all costs prudently incurred. This is also reflected in Rule 17(3) of the Tariff Rules. NPPMCL further submitted that it is evident from the foregoing submissions that all modifications requested by

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NPPMCL are prudent costs, and therefore should be allowed. NPPMCL reserves the right to raise any further grounds or provide any documents in support of the Review at any appropriate stage in the future.

3.3. NPPMCL also requested that a hearing be provided for the purposes of providing detailed submissions, including a session with the professional team of the NEPRA prior to hearing.

4. HEARING

4.1. The Authority decided to hold a hearing in the matter on 19th December 2019 at NEPRA Tower Islamabad. Notices of hearing were sent to stakeholders on 12th December 2019 along with request to file comments in the matter, if any.

4.2. The hearing was held as per schedule and was participated by the representatives from the Petitioner, CPPA-G and PPIB.

5. CONSIDERATION OF THE VIEWS OF THE STAKEHOLDERS, ANALYSIS, FINDINGS AND DECISIONS OF THE AUTHORITY

5.1. After hearing the Petitioner and carefully going through the record, the point-wise discussion on the grounds raised by the Petitioner and the decisions are as follows:

INSURANCE COST DURING OPERATIONS

5.2. According to the NPPMCL, following was requested in the Modification Petition:

i. to 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.

5.3. According to NPPMCL, NEPRA refused the request for reasons stated in paragraphs 8.82 to 8.84 of the decision. NPPMCL submitted that NEPRA's decision is liable to be reviewed, as it does not give due consideration to the cogent submissions of NPPMCL in support of its request. According to NPPMCL, under the PPA, the Petitioner is obligated to procure and have in place, at all times during the operations phase the following insurances:

i. Operations All Risk Insurance, including property damage and business interruption;

ii. Political violence / terrorism; and

iii. Third Party Liability.

5.4. According to the Petitioner, 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 Haveli Bahadur Shah Project) shall be placed only with the National Insurance Company 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

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(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.

5.5. According to the Petitioner, in compliance with the aforementioned framework, NPPMCL 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 NPPMCL amounting to an aggregate of US$ 0.227 Million. However, NICL informed NPPMCL in writing (as per Section 166(5) of the Insurance Ordinance) that it was unable to place the Operations All Risk insurance. Thereafter, NPPMCL conducted a procurement process pursuant to the Public Procurement Rules 2004 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 NPPMCL was US$ 7.62 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$ 6.236 Million, which comes to 1.11% of the EPC Cost.

5.6. The Petitioner further submitted that for the second year of operations, NPPMCL 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, which came to 1.65% of the EPC Cost. The Petitioner also submitted that the process for arranging insurance through NICL is also based on competitive bidding processes.

5.7. In view of the foregoing, the Petitioner submitted that the above costs are prudently incurred actual costs, and have been arrived at after competitive procurement processes being undertaken. Therefore, it is submitted that NEPRA's direction in paragraph 8.84 that NPPMCL should carry out competitive bidding is already being complied with. The Petitioner also submitted that even otherwise, NPPMCL 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.

5.8. With respect to comparison with another power project, as stated in paragraph 8.83 of the decision, the Petitioner reiterated that the gas turbines installed at the Haveli Bahadur Shah power plant are latest technology worldwide. These turbines were selected for the project for the benefit of the consumer, keeping in view the high efficiency benchmarks of the same. Therefore, the insurance cost for the same would also be higher, driven by market forces. The other power project referred to by NEPRA is based on older versions of gas turbines, for which long term data of performance is available in the market. Further, the cost of spares for the older versions is lower. Therefore, the insurance cost of the same is also lower. Hence, it is submitted that NPPMCL's project and projects based on older versions of gas turbines cannot be appropriately compared in this context.

5.9. In light of the foregoing, the Petitioner requested that NEPRA may kindly review its decision, and allow actual insurance cost during operations to NPPMCL subject to a maximum cap of 2% of the EPC cost.

5.10. During the hearing, the Petitioner submitted that as long as we are bound to obtain insurance from NICL, the Authority may allow actual cost with a higher cap and in the case of privatization, the Authority can always have an opening to reconsider it.

5.11. The Authority has noted that for the 1st year of operation of the power plant, NICL was unable to place "Operations All Risk" insurance for the subject power plant and the Petitioner secured insurance coverage by itself from the market through negotiated tendering inviting M/s Adamjee Insurance, M/s EFU General Insurance and M/s Jubilee General Insurance. As per evaluation results provided by the Petitioner, M/s Adamjee Insurance ranked 1st with US$ 6.95 million. Through negotiations, the insurer revised their offer to US$ 5.95 million and the contract was executed. The total insurance cost worked out US$ 6.236 million (including FED @1%) which is approximately 1.08% (against 1.11% claimed by the Petitioner) of the EPC Cost of US$ 579 million.

5.12. For the second year of operations, NICL/PRCL was able to place order for Operations All Risk Insurance, Terrorism and Third Party Liability for total amount of US$ 9.278 million which is 1.6% (against 1.65% claimed by the Petitioner) of the EPC cost.

5.13. The Authority has noted that NICL was unable to secure all risk insurance for the 1st year and secured the same for second year for a price higher than US$ 3 million (US$ 9 Mln - US$ 5.95 Mln) when compared with the private insurance companies keeping in view that the pant was successfully operated for one year without any breakdown/accident. The tariff of the subject power plant was determined in line with the IPPs and allowed competative return on its investment. Therefore, inadequacy on the part of Petitioner due to any reason whatsoever cannot be passed on to the consumers. With more years of successful operation of the power plant, the insurance cost is likely to come down in the coming years. The Petitioner may seek exemption under Section 166(4) of the Insurance Ordinance for placing insurance risk through private insurance companies instead of NICL. Accordingly, the Authority has decided to maintain its earlier decision.

ESCROW ACCOUNT

5.14. According to the Petitioner, NEPRA approved the request of NPPMCL for inclusion of applicable taxes (GST) and one-time adjustment of escrow account with RLNG price at the time of adjustment of tariff at COD. However, regarding request of adjustment of escrow account during operations, NEPRA observed that no mechanism was suggested by NPPMCL. According to the Petitioner, NEPRA further observed that the cost of escrow account form part of the project cost which is locked at the time of COD, therefore, it could not allow adjustment to the cost of escrow account during the operations period.

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5.15. The Petitioner submitted that under the GSA, NPPMCL is required to have in place at all times a 'Gas Supply Deposit', which is quantified on the basis of 3 months' consumption at 100% load. The Gas Supply Deposit can be in the form of an escrow account, a Standby Letter of Credit (SBLC), or a combination of both. Under the Tariff Determination, a combination of one (01) month's escrow account and two (02) months' SBLC has been allowed. NPPMCL proposed and requested that any post COD variation in RLNG price (including impact of US$ to PKR indexation) over and above the cost for escrow amount locked at COD, may be allowed in the cost for SBLC. Accordingly, the two months' SBLC will be adjusted for the post COD differential in escrow account cost as and when applicable.

5.16. The required "Gas Supply Deposit" equivalent to 3 months consumption at 100% load was allowed to the Petitioner in the form of one month escrow account as part of project cost and 2 month's SBLC cost as part of working capital cost subject to adjustment quarterly for variation in RLNG price and KIBOR. The request of Petitioner for addition to or reduction from 60 days cost of SBLC for any post COD variation in RLNG price (including impact of US$ to PKR indexation) over and above the cost for escrow amount locked at COD, as part of cost of working capital, is workable and justified. The Petitioner will be protected against any increase in the RLNG price and exchange rate and consumer will benefit from vice versa. Accordingly, the Authority has decided to allow 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 as part of cost of working capital and will be added to or reduced from cost of SBLC.

SITE HOUSING COMPLEX

5.17. According to the Petitioner, NEPRA allowed an amount of US$ 6.048 Million (as a maximum cap) for construction of site housing complex, subject to adjustment at the time of COD on actual basis. In the Modification Petition, it was requested that the adjustment may be deferred till completion of construction of the housing complex, when the actual cost incurred would be finalized. However, NEPRA has allowed deferment for a period of two years commencing retrospectively from COD, which is effectively only five months from the date of the Decision. Further, NEPRA has decided that penalty at the rate of KIBOR + 3% would be imposed in case of delay beyond such period.

5.18. In this regard, NPPMCL requested to review its decision and to allow a period of two years from the date of one time adjustment to be made by NEPRA. NPPMCL 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.

5.19. The Petitioner further submitted that since NEPRA has retrospectively commenced the 24 month time period from COD, of which almost 16 months leave effectively passed, the

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remaining period of 08 months is unrealistic. Therefore, it is in the interest of justice that the deferment period of two years may kindly be calculated form the date of determination of one time adjustment of tariff by NEPRA.

5.20. The Petitioner requested that the proposed penalty on NPPMCL may kindly be removed. The imposition of such penalty does not commensurate with any loss or damage that would be suffered by any party. Therefore, it is requested that this decision of NEPRA may kindly be reviewed, and the proposed penalty may kindly be removed. In the alternative, the penalty may be rationalized so that it does not go beyond the cost of debt allowed to NPPMCL in the tariff determination.

5.21. It has been noted that the Petitioner has not initiated any process for award of contract for construction of site housing complex. In the modification Petition, the Petitioner requested to defer the adjustment till completion of construction of the housing complex, when the actual cost incurred would be finalized. Now in the instant review, the Petitioner requested two years extension w.e.f. date of COD tariff adjustment decision. The Petitioner has also requested for removal of penalty or the penalty may be rationalized so that it does not go beyond the cost of debt.

5.22. The instant request of the company is not justified and merits rejection. Accordingly, the Authority has decided to maintain its earlier decision. The Authority imposed a penalty @ KIBOR+3% per annum for the delayed period beyond two years from COD. The penalty rate is in line with the cost of debt allowed to the company. However, as per the tariff determination, the premium of 3% over KIBOR is subject to adjustment as per actual at the time of COD tariff adjustment and any savings in the premium shall be shared with 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 adjustment.

TESTING AND COMMISSIONING COST

5.23. According to the Petitioner, through the Modification Application, NPPMCL requested NEPRA to allow Testing and Commissioning Cost of US$ 31.59 Million, instead of US$ 10.956 Million allowed by NEPRA in the Tariff Determination. However, NEPRA did not allow the incurred costs to NPPMCL primarily on the ground that information provided by NPPMCL pertaining to successful/unsuccessful test was inconsistent.

5.24. The Petitioner submitted that NEPRA's findings in Paragraph 8.58 are contrary to the factual position. NPPMCL has included the cost of unsuccessful Reliability Run Test in its claim because although the same was invoiced to the EPC contractor, the EPC contractor has neither agreed with the claim nor paid the amount to NPPMCL. Therefore, this amount remains unrecovered and is requested to be included in the testing & commissioning cost. The Petitioner further submitted that after the filing of the Modification Petition, certain amounts earlier claimed for mark-up cost have been adjusted, amounting to approximately US$ 1.506 Million. In light of the above, the updated aggregate Testing and Commissioning Cost requested by NPPMCL is US$ 30.083 Million, which may kindly be allowed by NEPRA. The details of testing & commissioning costs are as under:

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Serial No.	Testing & Commissioning Cost Summary	Gross Amount PKR	Sales Tax PKR	Net Amount Chargeable to Testing & Commissioning PKR	Net Amount Chargeable to Testing & Commissioning USD @ PKR 105.0
1	Net RLNG Cost *	2,610,795,427	369,498,349	2,241,297,078	21,345,686
2	HSD Cost	258,379,623	75,747,975	182,631,648	1,739,349
3	O&M Cost	667,881,600	92,121,600	575,760,000	5,483,429
4	Markup on WC facility	317,261,273		317,261,273	3,021,536
Total Testing & Commissioning Cost		**3854,317,924**	**537,367,924**	**3,316,950,000**	**31,590,000**
Less: Adjustment of Delay Payment from CPPA-G against markup		158,164,249	-	158,164,249	1,506,326
Net Amount chargeable to Testing & Commissioning		**3,696,153,674**	**537,367,924**	**3,158,785,751**	**30,083,674**

* This amount includes ex GST cost of un successful RRT amounting to Rs. 915,823,965.

5.25. A brief description of the components comprising the Testing and Commissioning Cost is as follows:

a. Cost of RLNG utilized for testing and commissioning that was not recovered: US$ 21.35 Million;

b. Cost of HSD utilized for testing and commissioning that was not recovered: US$ 1.74 Million;

c. Fixed and Variable O&M and LTSA costs that were paid by NPPMCL and have not been allowed: US$ 5.48 Million; and

d. Mark up cost for arranging financing to make payments for RLNG: US$ 1.52 Million.

Unrecovered RLNG Cost

i. The unrecovered RLNG cost contains the cost of RLNG that was utilized for pre-synchronization testing and commissioning, and cost incurred due to testing on part load for certain periods.

ii. It is submitted that in pre-synchronization, no energy was being supplied to the grid/power purchaser, and therefore, NPPMCL could not invoice for the same. As a result, it is a cost that has been directly incurred by NPPMCL with no other mechanism for recovery.

iii. Similarly, at various times during testing and commissioning, the complex was tested on Part Load to ascertain the Performance Guarantees of the EPC Contractor through Tests and ascertain the Performance Guarantees of the EPC Contractor through Tests on Completion as agreed in the EPC Agreement and Commissioning Tests dictated under the PPA. Such part load operations lead to reduction in efficiency. However, as no Part Load factor or adjustment was allowed or catered for during the testing

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and commissioning period, the power purchaser only paid invoices against indexed reference tariff (determined by NEPRA on the basis of 41.01% efficiency during simple cycle operations and 61.63% efficiency during combined cycle operations), which did not cater for part load operations during which the efficiency considerable reduces. Consequently, a significant gap exists between the cost of RLNG paid by NPPMCL to the gas supplier and the amount paid to NPPMCL by the power purchaser.

iv. In support of the above submission, NPPMCL provided a table of the details of invoices received from the gas supplier, and the amounts charged to the power purchaser along with copies of invoices, from which it is evident that an amount of US$ 21.35 Million remains unrecovered.

v. NPPMCL requested that the above costs should be allowed by NEPRA and the same be incorporated in the Testing and Commissioning Cost.

Unrecovered HSD Cost

vi. HSD cost of US$ 1.71 Million also remains unrecovered for the same reasons as detailed in paragraphs (i) to (iii) above, which are reiterated in entirety.

vii. Additionally, it is submitted that the gas turbines installed at the power plant are new technology worldwide. These turbines were selected for the project for the benefit of the consumer, keeping in view the efficiency benchmarks of the same. However, as the same are relatively new in the market, prudency demands that through testing is undertaken on both the primary fuel (RLNG) and back up fuel (HSD) to ensure that the same are fit for the intended propose (i.e. safe and reliable operations for a period of thirty years). It is for this reason that NPPMCL carried out all required pre-synchronization and post synchronization tests on HSD as well to ensure the stability in operations of the gas turbines.

viii. In light of the above, it is submitted that such prudent costs incurred for testing on HSD, including pre synchronization tests should be allowed to NPPMCL and the same be incorporated in the Testing and Commissioning Cost.

Fixed and Variable O&M and LTSA Cost:

ix. It is respectfully submitted that both fixed and variable O&M fee, as well as fixed and variable LTSA fee, were paid by NPPMCL during the testing and commissioning phase in terms of the contractual arrangement with the respective contractor. However, the same could not be recovered for certain periods (in particular, the combined cycle testing and commissioning phase), as NPPMCL was only allowed recover the fuel cost component during such periods.

Mark up Cost:

x. It is submitted that the Company started receiving invoices for RLNG from the gas supplier from the billing period commencing from 01-07-2017. However, the cost of such RLNG could not be invoiced to CPPA-G prior to Commercial Operations Date

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GTI, i.e. 13-08-2017. Therefore, for this period, the Company arranged funds from the Working Capital Facility to pay the gas supplier, and incurred cost of funds on the same which remains unrecovered.

xi. Further, it is submitted that the billing cycles for payment under the GSA and PPA are different. Under the GSA, the gas supplier raised its invoice on a weekly basis, which is payable within three days by NPPMCL. Whereas under the PPA, an invoice is raised on fort nightly basis which is payable by the 25th day. Therefore, there is a significant gap of time during which NPPMCL had to arrange funds and also accrue mark up on such funds to make timely payment to the gas supplier. Therefore, NPPMCL is entitled to recover such costs which have been prudently incurred by it. In this respect, it is also submitted that this aspect is acknowledged and allowed by NEPRA in its Tariff Determination for the post-COD period as well. Therefore, on the same principle, NEPRA is requested to incorporate the mark up accrued for the facility arranged for payment to gas supplier during testing and commissioning.

xii. Furthermore, it is submitted that earlier, NEPRA had not allowed the cost of HSD for testing and commissioning to NPPMCL (which was subsequently partially modified, as detailed in Section I above). Consequently, NPPMCL incurred certain cost of funds for testing and commissioning on HSD, which remain unrecovered.

xiii. For the sake of clarity, it is submitted that at the time of submission of the Modification Petition, this cost had been calculated as US$ 3.02 Million, which has now been updated to US$ 1.52 Million after the input of the financial advisors of NPPMCL.

5.26. According to the Petitioner, from a perusal of the above, it is evident that NPPMCL is only requesting NEPRA to allow cost prudently incurred by it for the purpose of testing and commissioning. It is, therefore, in the interest of justice as well as the dictates of the NEPRA Act that the same may kindly be allowed.

5.27. The Petitioner also submitted that in the Decision, NEPRA has only refused NPPMCL's request on the basis of apparent inconsistency in the information submitted by NPPMCL. However, the inconsistency was not identified, nor NPPMCL was asked to provide any information or documents on any particular aspect. Therefore, the decision of NEPRA fails to provide any reason and is non speaking to this extent. Be that as it may, NPPMCL has provided detailed information in the foregoing paragraphs in support of its claim for Testing and Commissioning Cost. NPPMCL, remains available to provide any further information that may be required by NEPRA. Therefore, even if any inconsistency existed earlier, NEPRA is requested to kindly review its decision in light of the information and documents provided herein, as NEPRA has not disallowed NPPMCL's request on the basis that the request was unjustified in any manner.

5.28. The Petitioner also submitted that the requested cost for Testing and Commissioning is in line with the project costs approved in PC-1, which has been shared with NEPRA as well. The PC-1 is approved after thorough deliberation at various forums and undergoes circumspect scrutiny. Therefore, it is evident that the prudent cost incurred by NPPMCL are in line with expected costs as well. Furthermore, in its comments vis-à-vis the Modification

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Petition, the Planning Commission also stated that the cost of testing and commissioning should be given on actual basis.

5.29. In view of the above submissions, the Petitioner requested NEPRA to review its earlier decision vis à-vis Testing and commissioning Cost and allow an amount of US$ 30.09 Million as Testing and commissioning cost to NPPMCL.

5.30. Some queries were raised to the Petitioner regarding testing & commissioning cost. Following observations have been noted on the replies forwarded by the Petitioner:

i. The questions of NEPRA were to address two major areas of concern. The first one is about the actual operation of the power plant during testing and commissioning periods and accounting for the partial loading. The second area also related to the operation of the plant and the number of days the plant was actually operated during testing and commissioning phase. In order to accurately assess these, NEPRA asked the Petitioner to provide a revised Schedule M which would have included details about the actual usage of fuel and operation of the plant. However the Petitioner has not submitted that and as submission to another question showed reluctance to submit revised Schedule M. The reference by the Petitioner only to 'first fire' of GT's and declaration of CODs for calculation of testing days is not sufficient and may not lead to accurate results as this period include idling time or testing of balance of plant. In the absence of such supporting details, the claimed cost cannot be evaluated.

ii. The petitioner has submitted half hourly energy data without analysing and presenting in a concise manner for usage. The Petitioner was also expected to get it certified by its Consultant.

iii. The assertion of the Petitioner that the Authority did not consider part load efficiency factor while calculating testing and commissioning cost is not based on facts. The Authority has considered part load efficiency, partial loading and reduced plant factor while determining the testing cost.

iv. As per NEPRA decision of 2018, only post synchronization testing on HSD is allowed and testing on HSD during pre-synchronization is not allowed. The company did not seek review of the aforesaid decision. Therefore, claiming HSD testing cost during pre-synchronization testing at this stage is not justified.

v. The claimed cost in review motion pertaining to O&M and LTSA fee is higher than the initial claim filed in 2016. NEPRA only adjusted the claimed cost from 2 months to 5 weeks pursuant to EPC contract in its initial determination.

vi. Schedule M contains details about capacity, efficiency, part load factors, plant factor, pre and post synch details, actual testing days (performance, RRT, FSNL, steam blowing etc.) on both fuels. The same was not provided.

vii. Regarding the impact of actual RLNG price and exchange rate on testing & commissioning cost, the Petitioner did not substantiate its arguments through clear period wise data and analysis along with cost implication.

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viii. NPPMCL has included the cost of unsuccessful Reliability Run Test in its claim. The same was also invoiced to the EPC contractor. The EPC contractor, however, has neither agreed with the claim nor paid the amount to NPPMCL.

ix. Therefore, this amount remains unrecovered and is requested to be included in the testing & commissioning cost.

5.31. In the light of above observations, the Authority has decided to maintain its earlier decision in the matter.

Degradation and Part Load Adjustment

5.32. According to the Petitioner, during the hearing of the Modification Petition on 28.08.2019, it was learnt that CPPA-G had provided written comments to NEPRA. As per paragraph 8.113 of the Decision, CPPA-G had stated to NEPRA that NPPMCL has been claiming Output Degradation Factor, Heat Rate Degradation Factor and Part Load Adjustment Correction from CPPA-G, and that the tariff determination is silent on these matters. Therefore, NEPRA should frame an issue with respect to these adjustment factors and give its decisions on the same.

5.33. The Petitioner submitted that despite NPPMCL's request made at the hearing, the written comments of CPPA-G were never shared with NPPMCL. Therefore, NPPMCL was not given the opportunity to respond or reply to the contentions of CPPA-G. Hence, NERPA could not have given a decision on the matter.

5.34. The Petitioner further submitted that this aspect did not form part of Modification Petition, therefore, the same could not be made part of the Decision. If any such request was to be made by the third party, then the same could be done independently. Even otherwise, it is pertinent to note that CPPA-G itself had requested that an issue be framed in this respect, and a decision be taken after input from all stakeholders. However, from a perusal of the Decision, it is evident that NEPRA did not frame any issue for decision or determination in this respect. In the absence of the same, particularly without any input from the NPPMCL which is directly affected from the findings of NEPRA, no decision could have been passed. Therefore, NEPRA's decision in paragraph 8.114 is liable to be reviewed and set aside on this ground alone.

5.35. Without prejudice to the foregoing, it is respectfully 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. Therefore, NPPMCL's submission is that these matters do not, even otherwise, required determination of NEPRA.

5.36. The Petitioner submitted that in paragraph 8.114 of the Decision, NEPRA has held that the adjustments on account of the above factors shall be considered at the time of one-time adjustment at COD stage. According to the Petitioner, on the basis of this observation, CPPA-G has informed NPPMCL that it will not allow any of these factors and associated costs to NPPMCL for future invoices. Needless to say, the impact of the same is devastating. The Petitioner further submitted that these factors and adjustments are vital to support the

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financial model and feasibility of the project. If the same are not accounted for and reflected in the financial arrangement between the parties for even a short period, the same could have grave consequences for the viability of the project. In view of the same, the Petitioner requested that NEPRA's decision may kindly be held that until such time that any decision is made by NEPRA, the commercial and financial arrangement between the parties under the PPA shall continue to remain applicable.

5.37. With respect to NEPRA's observation that the adjustments shall be based on correction curves of the Complex specified by the OEM, The Petitioner submitted that the OEM cannot provide correction curves for the Complex but only for the gas turbines and ancillary machinery. The correction curves for the Complex, which entail distinct plant and machinery items, can only be provided by the EPC contractor, and the same have also been shared with CPPA-G. Therefore, it is requested that NEPRA may review its decision in view of the above.

5.38. The Authority has considered the submissions of the Petitioner and decided to maintain its earlier decision. The correction curves specified by the OEM/EPC contractor on its letter head shall be provided by the Petitioner. CPPA-G is directed to continue to pay on account of Output Degradation Factor, Heat Rate Degradation Factor and Part Load Adjustment Correction as per the terms of the PPA agreed between the parties till final approval of the Authority in the matter.

6. ORDER

I. The Authority hereby determines and 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 1,198.555 MW on RLNG and 1,064.52 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)	0.0621	0.0699	CPI (General)
Fixed O&M (Foreign)	0.1382	0.1556	US CPI & Rs./US$
Cost of working capital	0.0965	0.1087	KIBOR & Fuel Price
Insurance	0.0579	0.0652	Actual subject to maximum limit
ROE	0.5589	0.6292	Rs./US$
Debt Servicing (years 1 – 10 only)	0.8662	0.9752	KIBOR
Total 1-10 years	**1.7798**	**2.0038**	
Total 11-30 years	**0.9136**	**1.0286**	
Energy Charge RLNG (Rs./kWh):			
Fuel cost Component	4.5074	8.0326	Fuel Price
Variable O&M (Foreign)	0.3143	0.4535	US CPI & Rs./US$
Total	**4.8217**	**8.4861**	

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

II. One Time Adjustment of Project Cost at COD

a) 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.

b) Adjustment as per actual of US$ 16.337 million for items outside the scope of the EPC contract along with currency fluctuation for dollar portion, if any

c) The Customs Duties and Cess of US$ 27.106 million shall be adjusted as per actual.

d) Adjustment as per actual of US$ 6 million for O&M mobilization cost.

e) Adjustment as per actual of US$ 10 million for Security & Surveillance cost.

f) Adjustment as per actual of US$ 8.418 million for Administrative cost.

g) Adjustment as per actual with maximum of US$ 8.8 million for gas pipeline cost

h) Adjustment as per actual of testing & commissioning cost with maximum of US$ 10.956 million.

i) Adjustment as per actual of Escrow Account on the basis of revised RLNG price and applicable GST.

j) Adjustment as per actual of US$ 17.857 million for Financing Fees & Charges subject to maximum of 3.5% of the debt amount.

k) The IDC shall be re established at the time of COD on the basis of applicable KIBOR, actual premium, actual loan and actual loan drawdown.

l) ROE component of tariff shall be adjusted for variation in actual equity investment and actual equity drawdown.

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

n) BOP Spares shall be adjustment as per actual on the basis of signed O&M Agreement with maximum cap of USD 7.50 million.

o) Cost of additional land of 2.026 acres and conversion fees pertaining to use of land shall be included in the tariff as per actual on the basis of verifiable documentary evidence.

III. Adjustment due to Variation in Net Capacity

The reference tariff has been determined on the basis of guaranteed net capacity of 1,198.555 MW with auxiliary consumption of 2.01% (24.551 MW). All the tariff components of capacity charge shall be adjusted at the time of COD based upon the Initial Dependable Capacity (IDC) tests to be carried out for determination of net contracted capacity. In case

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net capacity is established lower than the guaranteed level, maximum 3% of the auxiliary consumption shall be allowed and appropriate adjustment in the tariff components shall be made after adjusting LDs as per Schedule 10 to the EPC contract against the project cost.

IV. Heat Rate Test

The energy charge part of the tariff relating to fuel cost shall be adjusted subsequent to the heat rate test carried out by the independent engineer in the presence of representatives of power purchaser in accordance with the established benchmarks. Subsequent to the submission of the test report to the satisfaction of the Authority, onetime adjustment shall be made in the fuel cost components.

In case the efficiencies on either fuel establish lower than the guaranteed levels, appropriate adjustment in the fuel cost components shall be made after adjusting LDs as per Schedule 10 to the EPC contract against the project cost. In case the efficiencies on either fuel establish higher than the guaranteed levels, the gain shall be shared in the ratio of 60:40 between the power purchaser and power producer and fuel cost components shall be adjusted accordingly.

V. Adjustment in Insurance as per actual

The actual insurance cost for the minimum cover required under contractual obligations with the Power Purchaser not exceeding 1% of the EPC cost shall be treated as pass through. Insurance component of reference tariff shall be adjusted annually as per actual upon production of authentic documentary evidence according to 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$ 5.789 million at Rs. 105/US$
$P_{(Act)}$	=	Actual Premium or 1% of the EPC cost at exchange rate prevailing on the 1st day of the insurance coverage period whichever is lower

VI. Adjustment of cost of Site Housing Complex

The adjustment of cost for Site Housing Complex including the Auditorium has been deferred for a period of 2 years. The Petitioner shall submit verifiable documentary evidence for adjustment of cost on actual basis subject to the maximum cap. Accordingly, the tariff shall be modified. 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 per annum of the approved cost of Housing Complex.

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VII. 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. 105/US$

ii) Indexation applicable to O&M

At COD, O&M components shall be adjusted as per the signed O&M Agreement, LTSA Agreement and actual recurring administrative expenses. Thereafter, O&M components of tariff shall be adjusted on account of local 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 202.98 for February 2016
$US\ CPI_{(REV)}$	=	The revised US CPI (All Urban Consumers)
$US\ CPI_{(REF)}$	=	The reference US CPI of 237.111 for February 2016
$ER_{(REV)}$	=	The revised TT& OD selling rate of US dollar
$ER_{(REF)}$	=	The reference TT& OD selling rate of RS. 105/US$

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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	$P_{(REV)} * (KIBOR_{(REV)} - 6.35\%) / 4$
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 < 6.35%. 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 instalment is due after availing the grace period.

iv) Cost of Working Capital

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

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.

VIII. Fuel Price Adjustment

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

$FCC_{RLNG(Rev)}$	$FCC_{RLNG(Ref)} * P_{RLNG(Rev)} / P_{RLNG(Ref)}$
Where:	
$FCC_{RLNG(Rev)}$	The revised fuel cost component on RLNG
$FCC_{RLNG(Ref)}$	The reference fuel cost component on RLNG
$P_{RLNG(Rev)}$	The revised HHV RLNG price notified by the relevant Authority
$P_{RLNG(Ref)}$	The reference HHV RLNG price of US$ 7/MMBtu
$FCC_{HSD(Rev)}$	$FCC_{HSD(Ref)} * P_{HSD(Rev)} / P_{HSD(Ref)}$
Where:	
$FCC_{HSD(Rev)}$	The revised fuel cost component on HSD
$FCC_{HSD(Ref)}$	The reference fuel cost component on HSD
$P_{HSD(Rev)}$	The revised HHV HSD price notified by the relevant Authority
$P_{HSD(Ref)}$	The reference HHV HSD price of Rs. 42.9112/liter.

IX. Terms & Conditions

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

i. All plant and equipment shall be new and shall be designed, manufactured and tested in accordance with the acceptable standards.

ii. The verification of the new machinery will be done by the independent engineer at the time of the commissioning of the plant duly verified by the power purchaser.

iii. The tariff has been determined on the basis of debt equity ratio of 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.

iv. The debt part of the project can also be financed through foreign financing or mix of local and foreign financing and the debt servicing component shall be adjusted accordingly.

v. In case of foreign financing LIBOR + a premium of 4.5% (4% with Sinosure fee/ECA Exposure fee/credit insurance fee) shall be applicable. In case of actual premium is negotiated less than 4.5% or 4% with Sinosure fee/ECA Exposure fee/credit insurance fee, the saving shall be shared between the power purchase and the power producer in the ratio of 60:40.

vi. In case of foreign financing, Sinosure fee/ECA exposure fee/credit insurance fee shall also be applicable with maximum of 7% of debt service amount in accordance with the bench mark established in the coal upfront tariff.

vii. The savings on interest premium on local financing shall also be shared in the ratio of 60:40 between power purchaser and power producer.

viii. The sponsor of the project can arrange foreign financing in American Dollar ($), British Pound Sterling (£), Euro (€) and Japanese Yen (¥) or in any currency as the Government of Pakistan may allow.

ix. Interest income, if any, on Escrow Account shall be credited to the power purchaser through adjustment against the outstanding payments.

x. The plant availability shall be 92%.

xi. The tariff control period shall be 30 years from the date of commercial operation.

xii. The dispatch will be at appropriate voltage level mutually agreed between the power purchaser and the power producer.

xiii. The dispatch shall be in accordance with economic merit order.

xiv. In case the company is obligated to pay any tax on its income from generation of electricity, or any duties and/or taxes, not being of refundable nature, are imposed on the company, the exact amount paid by the company on these accounts shall be reimbursed on production of original receipts in lump sum and this payment shall be considered as a pass through payment. However, withholding tax on dividend shall not be passed through.

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xv. Taxes and duties on the import of plant & machinery during the construction period have been included in the project cost and shall be adjusted on actual at the time of COD on the basis of verifiable documentary evidence.

xvi. General assumptions, which are not covered in this determination, may be dealt with as per the standard terms of the Power Purchase Agreement.

7. **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 11.2.2020
Member

Rehmatullah Baloch 11/2/2020
Member

Rafique Ahmed Shaikh 11/2/20
Member

— Not Attended —
Engr. Bahadur Shah
Member

Tauseef H. Farooqi
Chairman

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Annex - I

National Power Parks Management Company (Private) Limited
Balloki Power Project
Reference Tariff Table (RLNG)

Year	Energy Purchase Price (Rs./kWh)			Capacity Purchase Price (PKR/kW/Hour)									Total Tariff	
	Fuel	Var. O&M	Total EPP	Fixed O&M local	Fixed O&M foreign	Cost of W/C	Insurance	ROE	Debt Repayment	Interest Charges	Total CPP	Capacity charge@ 92%	Rs./kWh	Cents/kWh
1	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	0.3560	0.5102	1.7798	1.9345	6.7562	6.4345
2	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	0.3904	0.4757	1.7798	1.9345	6.7562	6.4345
3	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	0.4282	0.4379	1.7798	1.9345	6.7562	6.4345
4	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	0.4697	0.3965	1.7798	1.9345	6.7562	6.4345
5	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	0.5152	0.3510	1.7798	1.9345	6.7562	6.4345
6	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	0.5651	0.3011	1.7798	1.9345	6.7562	6.4345
7	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	0.6198	0.2464	1.7798	1.9345	6.7562	6.4345
8	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	0.6798	0.1864	1.7798	1.9345	6.7562	6.4345
9	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	0.7456	0.1205	1.7798	1.9345	6.7562	6.4345
10	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	0.8178	0.0483	1.7798	1.9345	6.7562	6.4345
11	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
12	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
13	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
14	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
15	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
16	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
17	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
18	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
19	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
20	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
21	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
22	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
23	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
24	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
25	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
26	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
27	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
28	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
29	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
30	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	-	-	0.9136	0.9930	5.8147	5.5379
Average														
1-10	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	0.5588	0.3074	1.7798	1.9345	6.7562	6.4345
11-30	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	0.0000	0.0000	0.9136	0.9930	5.8147	5.5379
1-30	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	0.1863	0.1025	1.2023	1.3069	6.1286	5.8367
Levelized														
1-30	4.5074	0.3143	4.8217	0.0621	0.1382	0.0965	0.0579	0.5589	0.3389	0.2257	1.4782	1.6067	**6.4284**	**6.1223**

6.4284 Rs./kWh **6.1223 US Cents/kWh**

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Annex - II

National Power Parks Management Company (Private) Limited
Balloki Power Project
Reference Tariff Table (HSD)

Year	Energy Purchase Price (Rs./kWh)			Capacity Purchase Price (PKR/kW/Hour)									Total Tariff	
	Fuel	Var. O&M	Total EPP	Fixed O&M local	Fixed O&M foreign	Cost of W/C	Insurance	ROE	Debt Repayment	Interest Charges	Total CPP	Capacity charge@ 92%	Rs. / kWh	Cents / kWh
1	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	0.4008	0.5744	2.0038	2.1781	10.6642	10.1563
2	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	0.4396	0.5356	2.0038	2.1781	10.6642	10.1563
3	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	0.4822	0.4931	2.0038	2.1781	10.6642	10.1563
4	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	0.5288	0.4464	2.0038	2.1781	10.6642	10.1563
5	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	0.5801	0.3952	2.0038	2.1781	10.6642	10.1563
6	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	0.6362	0.3390	2.0038	2.1781	10.6642	10.1563
7	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	0.6978	0.2774	2.0038	2.1781	10.6642	10.1563
8	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	0.7654	0.2098	2.0038	2.1781	10.6642	10.1563
9	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	0.8395	0.1357	2.0038	2.1781	10.6642	10.1563
10	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	0.9208	0.0544	2.0038	2.1781	10.6642	10.1563
11	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
12	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
13	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
14	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
15	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
16	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
17	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
18	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
19	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
20	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
21	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
22	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
23	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
24	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
25	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
26	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
27	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
28	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
29	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
30	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	-	-	1.0286	1.1180	9.6041	9.1468
Average														
1-10	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	0.6291	0.3461	2.0038	2.1781	10.6642	10.1563
11-30	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	0.0000	0.0000	1.0286	1.1180	9.6041	9.1468
1-30	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	0.2097	0.1154	1.3537	1.4714	9.9575	9.4833
Levelized														
1-30	8.0326	0.4535	8.4861	0.0699	0.1556	0.1087	0.0652	0.6292	0.3815	0.2541	1.6643	1.8090	**10.2951**	**9.8048**

10.2951 Rs./kWh **9.8048 US Cents/kWh**

NATIONAL ELECTRIC POWER REGULATORY AUTHORITY
NEPRA
AUTHORITY

Annex - III

NEPRA AUTHORITY

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

Gross Capacity	1,223.106	MWs	US$/PKR Parity	105.00	
Net Capacity	1,198.555	MWs	Debt	558.73	US$ Million
LIBOR	6.35%		Debt in Pak Rupees	58,666.45	Rs. Million
Spread over LIBOR	3.00%				
Total Interest Rate	9.35%				

Period	Principal Million Rs.	Principal Repayment Million Rs.	Interest Million Rs.	Balaance Million Rs.	Debt Service Million Rs.	Principal Repayment Rs./kW/h	Interest Rs./kW/h	Debt Servicing Rs./kW/h
1	58,666.45	902.22	1,371.33	57,764.23	2,273.55			
2	57,764.23	923.31	1,350.24	56,840.92	2,273.55			
3	56,840.92	944.89	1,328.66	55,896.03	2,273.55			
4	55,896.03	966.98	1,306.57	54,929.06	2,273.55	0.3560	0.5102	0.8662
1st Year		**3,737.39**	**5,356.79**		**9,094.19**			
5	54,929.06	989.58	1,283.97	53,939.48	2,273.55			
6	53,939.48	1,012.71	1,260.84	52,926.76	2,273.55			
7	52,926.76	1,036.38	1,237.16	51,890.38	2,273.55			
8	51,890.38	1,060.61	1,212.94	50,829.77	2,273.55	0.3904	0.4757	0.8662
2nd Year		**4,099.28**	**4,994.90**		**9,094.19**			
9	50,829.77	1,085.40	1,188.15	49,744.37	2,273.55			
10	49,744.37	1,110.77	1,162.77	48,633.60	2,273.55			
11	48,633.60	1,136.74	1,136.81	47,496.86	2,273.55			
12	47,496.86	1,163.31	1,110.24	46,333.55	2,273.55	0.4282	0.4379	0.8662
3rd Year		**4,496.22**	**4,597.97**		**9,094.19**			
13	46,333.55	1,190.50	1,083.05	45,143.05	2,273.55			
14	45,143.05	1,218.33	1,055.22	43,924.73	2,273.55			
15	43,924.73	1,246.81	1,026.74	42,677.92	2,273.55			
16	42,677.92	1,275.95	997.60	41,401.97	2,273.55	0.4697	0.3965	0.8662
4th Year		**4,931.58**	**4,162.60**		**9,094.19**			
17	41,401.97	1,305.78	967.77	40,096.19	2,273.55			
18	40,096.19	1,336.30	937.25	38,759.90	2,273.55			
19	38,759.90	1,367.53	906.01	37,392.36	2,273.55			
20	37,392.36	1,399.50	874.05	35,992.86	2,273.55	0.5152	0.3510	0.8662
5th Year		**5,409.11**	**3,685.08**		**9,094.19**			
21	35,992.86	1,432.21	841.33	34,560.65	2,273.55			
22	34,560.65	1,465.69	807.86	33,094.95	2,273.55			
23	33,094.95	1,499.95	773.59	31,595.00	2,273.55			
24	31,595.00	1,535.01	738.53	30,059.99	2,273.55	0.5651	0.3011	0.8662
6th Year		**5,932.87**	**3,161.32**		**9,094.19**			
25	30,059.99	1,570.89	702.65	28,489.09	2,273.55			
26	28,489.09	1,607.61	665.93	26,881.48	2,273.55			
27	26,881.48	1,645.19	628.35	25,236.29	2,273.55			
28	25,236.29	1,683.65	589.90	23,552.64	2,273.55	0.6198	0.2464	0.8662
7th Year		**6,507.35**	**2,586.84**		**9,094.19**			
29	23,552.64	1,723.00	550.54	21,829.63	2,273.55			
30	21,829.63	1,763.28	510.27	20,066.36	2,273.55			
31	20,066.36	1,804.50	469.05	18,261.86	2,273.55			
32	18,261.86	1,846.68	426.87	16,415.18	2,273.55	0.6798	0.1864	0.8662
8th Year		**7,137.45**	**1,956.73**		**9,094.19**			
33	16,415.18	1,889.84	383.70	14,525.34	2,273.55			
34	14,525.34	1,934.02	339.53	12,591.32	2,273.55			
35	12,591.32	1,979.22	294.32	10,612.10	2,273.55			
36	10,612.10	2,025.49	248.06	8,586.61	2,273.55	0.7456	0.1205	0.8662
9th Year		**7,828.57**	**1,265.61**		**9,094.19**			
37	8,586.61	2,072.83	200.71	6,513.78	2,273.55			
38	6,513.78	2,121.29	152.26	4,392.49	2,273.55			
39	4,392.49	2,170.87	102.67	2,221.62	2,273.55			
40	2,221.62	2,221.62	51.93	(0.00)	2,273.55	0.8178	0.0483	0.8662
10th Year		**8,586.61**	**507.58**		**9,094.19**			

Annex - IV

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

Gross Capacity	1,095.045 MWs	US$/PKR Parity	105.00	
Net Capacity	1,064.520 MWs	Debt	558.73	US$ Million
LIBOR	6.35%	Debt in Pak Rupees	58,666.45	Rs. Million
Spread over LIBOR	3.00%			
Total Interest Rate	9.35%			

NEPRA AUTHORITY

Period	Principal Million Rs.	Principal Repayment Million Rs.	Interest Million Rs.	Balaance Million Rs.	Debt Service Million Rs.	Principal Repayment Rs./kW/h	Interest Rs./kW/h	Debt Servicing Rs./kW/h
1	58,666.45	902.22	1,371.33	57,764.23	2,273.55			
2	57,764.23	923.31	1,350.24	56,840.92	2,273.55			
3	56,840.92	944.89	1,328.66	55,896.03	2,273.55			
4	55,896.03	966.98	1,306.57	54,929.06	2,273.55	0.4008	0.5744	0.9752
1st Year		**3,737.39**	**5,356.79**		**9,094.19**			
5	54,929.06	989.58	1,283.97	53,939.48	2,273.55			
6	53,939.48	1,012.71	1,260.84	52,926.76	2,273.55			
7	52,926.76	1,036.38	1,237.16	51,890.38	2,273.55			
8	51,890.38	1,060.61	1,212.94	50,829.77	2,273.55	0.4396	0.5356	0.9752
2nd Year		**4,099.28**	**4,994.90**		9,094.19			
9	50,829.77	1,085.40	1,188.15	49,744.37	2,273.55			
10	49,744.37	1,110.77	1,162.77	48,633.60	2,273.55			
11	48,633.60	1,136.74	1,136.81	47,496.86	2,273.55			
12	47,496.86	1,163.31	1,110.24	46,333.55	2,273.55	0.4822	0.4931	0.9752
3rd Year		**4,496.22**	**4,597.97**		9,094.19			
13	46,333.55	1,190.50	1,083.05	45,143.05	2,273.55			
14	45,143.05	1,218.33	1,055.22	43,924.73	2,273.55			
15	43,924.73	1,246.81	1,026.74	42,677.92	2,273.55			
16	42,677.92	1,275.95	997.60	41,401.97	2,273.55	0.5288	0.4464	0.9752
4th Year		**4,931.58**	**4,162.60**		9,094.19			
17	41,401.97	1,305.78	967.77	40,096.19	2,273.55			
18	40,096.19	1,336.30	937.25	38,759.90	2,273.55			
19	38,759.90	1,367.53	906.01	37,392.36	2,273.55			
20	37,392.36	1,399.50	874.05	35,992.86	2,273.55	0.5801	0.3952	0.9752
5th Year		**5,409.11**	**3,685.08**		9,094.19			
21	35,992.86	1,432.21	841.33	34,560.65	2,273.55			
22	34,560.65	1,465.69	807.86	33,094.95	2,273.55			
23	33,094.95	1,499.95	773.59	31,595.00	2,273.55			
24	31,595.00	1,535.01	738.53	30,059.99	2,273.55	0.6362	0.3390	0.9752
6th Year		**5,932.87**	**3,161.32**		9,094.19			
25	30,059.99	1,570.89	702.65	28,489.09	2,273.55			
26	28,489.09	1,607.61	665.93	26,881.48	2,273.55			
27	26,881.48	1,645.19	628.35	25,236.29	2,273.55			
28	25,236.29	1,683.65	589.90	23,552.64	2,273.55	0.6978	0.2774	0.9752
7th Year		**6,507.35**	**2,586.84**		9,094.19			
29	23,552.64	1,723.00	550.54	21,829.63	2,273.55			
30	21,829.63	1,763.28	510.27	20,066.36	2,273.55			
31	20,066.36	1,804.50	469.05	18,261.86	2,273.55			
32	18,261.86	1,846.68	426.87	16,415.18	2,273.55	0.7654	0.2098	0.9752
8th Year		**7,137.45**	**1,956.73**		9,094.19			
33	16,415.18	1,889.84	383.70	14,525.34	2,273.55			
34	14,525.34	1,934.02	339.53	12,591.32	2,273.55			
35	12,591.32	1,979.22	294.32	10,612.10	2,273.55			
36	10,612.10	2,025.49	248.06	8,586.61	2,273.55	0.8395	0.1357	0.9752
9th Year		**7,828.57**	**1,265.61**		9,094.19			
37	8,586.61	2,072.83	200.71	6,513.78	2,273.55			
38	6,513.78	2,121.29	152.26	4,392.49	2,273.55			
39	4,392.49	2,170.87	102.67	2,221.62	2,273.55			
40	2,221.62	2,221.62	51.93	(0.00)	2,273.55	0.9208	0.0544	0.9752
10th Year		8,586.61	**507.58**		9,094.19			