



National Electric Power Regulatory Authority Islamic Republic of Pakistan

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No. NEPRA/TRF-304/NPGCL-2015/14377-14379

October 19, 2016

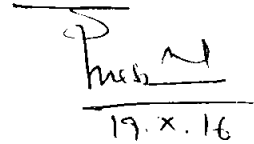
Subject: Decision of the Authority in the matter of Motion for Leave for Review filed by Northern Power Generation Company Ltd. (NPGCL) against Authority's Determination for FY 2014-15 to 2016-17 [Case # NEPRA/TRF-304/NPGCL-2015]

Dear Sir,

This is in continuation of this office letter No. NEPRA/TRF-304/NPGCL-2015/832-834 dated January 22, 2016 whereby Determination of the Authority in the matter of Tariff Petition filed by Northern Power Generation Company Ltd. (NPGCL) for the Determination of its Generation Tariff for the FY 2014-15 to 2016-17 was sent to the Federal Government for notification in the official Gazette.

2. Please find enclosed herewith the subject decision of the Authority (12 pages) in the matter of Motion for Leave for Review filed by Northern Power Generation Company Ltd. against Determination of the Authority dated 22nd January, 2016.
3. The Decision is being intimated to the Federal Government for the purpose of notification in the official gazette pursuant to Section 31(4) of the Regulation of Generation, Transmission and Distribution of Electric Power Act, 1997.

Enclosure: As above



(Syed Safer Hussain)

Secretary
Ministry of Water & Power
'A' Block, Pak Secretariat
Islamabad

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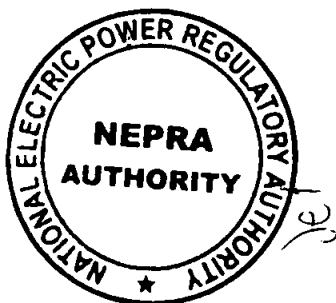
1. Secretary, Cabinet Division, Cabinet Secretariat, Islamabad.
2. Secretary, Ministry of Finance, 'Q' Block, Pak Secretariat, Islamabad.



**DECISION OF THE AUTHORITY IN THE MATTER OF MOTION FOR LEAVE FOR REVIEW FILED BY
NORTHERN POWER GENERATION COMPANY LIMITED (NPGCL)
AGAINST AUTHORITY'S DETERMINATION FOR FY 2014 – 15 TO 2016 – 17**

1. Northern Power Generation Company Limited (hereinafter referred to as "NPGCL" or the "Petitioner") was incorporated on October 15, 1998, under the Companies Ordinance 1984 and is a licensee of NEPRA since July 1, 2002. NPGCL's tariff was approved by the Authority in 2004 & subsequently in 2006.
2. For FY 2014 – 15, the Petitioner had filed a tariff petition, which was approved by the Authority in its determination dated January 22, 2016 (hereinafter referred to as the "Determination"). The Petitioner claims that it is aggrieved of this Determination, hence, it has filed this Motion for Leave to Review (hereinafter referred to as "Review Motion"). NPGCL requested the Authority to review the following issues:
 - (a) Reduction in Capacity Price
 - Salaries, Wages and Other benefits
 - Insurance
 - Vehicle Expenses
 - Other Income
 - Return on Equity
 - (b) Miscellaneous
 - Isolated Auxiliaries
 - Partial Load Adjustment Factor
 - Working Capital
 - Sustainability Charges
 - Maintenance Cost of Railway Track
 - (c) Reduction in Energy Price
 - Fuel Cost Component RFO/Gas
 - Calorific Value
 - Ambient Conditions Correction Factor
 - Variable O&M
 - Open Cycle Tariff for GTPS (Faisalabad)
 - Issues highlighted by the Intervener – Anwar Kamal Law Associates (AKLA)
3. **Proceedings**
 - 3.1 The Review Motion was admitted by the Authority on February 25, 2016, wherein the Authority also directed to fix a date for the hearing. Accordingly, the hearing was scheduled on March 31, 2016. Subsequently NPGCL requested to conduct the hearing in third week of April 2016. Accordingly the Authority decided to conduct the hearing on 19.04.2016. Individual notices were issued to the stakeholder.
4. **Hearing**

The hearing was held on 19th April 2016 wherein the representatives of NPGCL, media and other stakeholders have participated. During the hearing NPGCL requested the Authority to allow requested tariff. NPGCL also submitted that the additional grounds which were not part of original



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petition i.e. maintenance cost of railway track, working capital, isolated auxiliaries etc may also be considered and allowed. The Authority directed the NPGCL to submit the documentary evidence in support of its claim.

5. **Issue-wise Discussion & Decision**

5.1 The issue-wise discussion, findings and decision of the Authority is as under:

6. **Reduction in Capacity Price**

6.1 The Authority considered the submissions of NPGCL with respect to the above issues. In accordance with the provision of Regulation 3(2) of NEPRA Review Procedure Regulations 2009 *"Any party aggrieved from any order of the Authority and who, from the discovery of new and important matter of evidence or on account of some mistake or error apparent on the face of record or from any other sufficient reasons, may file a motion seeking review of such order."* The Authority observed that all the above issues pertaining to 2.1(a) above has already been discussed in detail in the original determination dated 22.1.2016 and no new evidence / justification / rationale is provided by the Petitioner which requires review for modification in the Authority's earlier decision. Similarly no error on part of it has been found. The Authority has therefore decided to maintain the earlier decision with respect to capacity charges allowed to NPGCL.

7. **Miscellaneous Issues**

7.1 The Authority further observed that NPGCL requested for isolated auxiliaries, working capital, and maintenance cost of railway track which was not part of the original petition. The review can only be requested on account of some error, new evidence with respect to the original decision. However, the aforesaid issues were not part of the original petition. Therefore the Authority has decided to not consider the same in the instant review. As regards the sustainability charges the Authority has already directed NPGCL to come up with mutual agreement with NTDC in original determination dated 22nd January 2016.

8. **Reduction in Energy Price Price**

8.1 The submissions of NPGCL with respect to review of reduction in energy charges and decision is as under:

8.2 **Transformation and Switchyard losses**

8.2.1 The Authority allowed 0.25% in respect of adjustment of Transformation and Switchyard Losses, against the claimed 1.84%. The Petitioner claimed that the nameplate loss in capacity mentioned by the manufacturer is 0.5% while the actual loss at site is 1.84% which is also endorsed by the Independent Engineer. The Petitioner further claims that the Authority while determining this figure did not consider losses due to various technical reasons, including part load operation, cyclic operation and ambient site conditions. Going further, the Petitioner submits that this figure has grown to 2.43% for the year 2014 – 15, therefore, the Authority may allow the same.

8.2.2 The Authority considered the submissions of the NPGCL and documentary evidence produced in support of their claim. The Authority observed that the nameplate loss in capacity mentioned by the manufacturer is 0.5%. The Authority considers that the loss beyond this is on part of NPGCL and cannot be allowed. The Authority has therefore considering the nameplate loss in capacity



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mentioned by the manufacturer reasonable decided to allow 0.5% of the transformer and switchyard losses to NPGCL.

8.3 Fuel Cost Component

8.3.1 According to the Review Motion, the Authority while determining the Fuel Cost Component allowed the Heat Rates as determined by tests conducted by the Independent Engineer, however, the Calorific Value of fuel used by the Authority for this calculation is different from the one used in the heat rate tests. Therefore, the Petitioner has requested correction of reference calorific value for Fuel Cost Component as mentioned below;

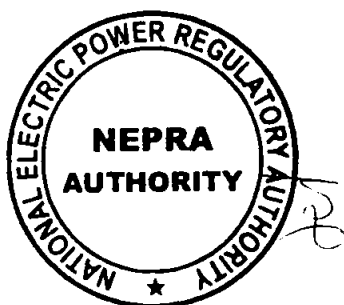
| Unit No. | At the Time of Test | | | Used for FCC Calculation by NEPRA | | | Revised FCC (Rs./kWh) |
|----------|---------------------------------|--|----------------|--|---|--|-----------------------|
| | LHV Heat Rate Allowed (BTU/kWh) | LHV CV used for Heat Rate Calculation (BTU/Kg) | SFC (Gram/kWh) | LHV CV used for FCC Calculation (BTU/kg) | SFC used for calculation of SFC by NEPRA (Gram/kWh) | Reference FCC Allowed by NEPRA (Rs./kWh) | |
| 1 | 10491 | 38102.75 | 275.3345 | 38557.8 | 272.0850 | 10.6113 | 10.738 |
| 2 | 10633 | 38276.87 | 277.7918 | 38557.8 | 275.7678 | 10.7549 | 10.8339 |
| 3 | 10265 | 38133.61 | 269.1851 | 38557.8 | 266.2237 | 10.3827 | 10.4982 |
| 4 | 10259 | 38107.16 | 268.9783 | 38557.8 | 265.8347 | 10.3676 | 10.4902 |
| 5 | 10914 | 38071.90 | 286.6681 | 38557.8 | 283.0556 | 11.0392 | 11.1801 |
| 6 | 11213 | 38292.30 | 292.8265 | 38557.8 | 290.8102 | 11.3416 | 11.4202 |

8.3.2 The company requested to allow fuel cost component on gas also in addition to fuel cost component on furnace oil. NPGCL requested that the matter under this head may be treated in line with the JPCL tariff determination dated 12.09.2014

8.3.3 The heat rate test have been taken as per test reports. However, the CV of the fuel was for specific time period whereas as per mechanism of the CV adjustment, a detailed consignment wise record on annual basis is required to be submitted. The Authority has therefore used the reference value of 18364 btu/lb while calculating the fuel cost component. The minimum benchmark of calorific values prescribed by the Ministry of Petroleum & Natural Resources for the furnace oil is 18,200 Btus/lb (40,123.72 Btu/kg) for imported furnace oil and 18,000 Btus/lb (39,682.8 Btu/kg) for local furnace oil. In case of IPPs, the Authority has prescribed a mechanism for adjustment of calorific value and the same is approved in case of NPGCL. The mechanism is provided hereunder:

- The reference CV will be 18364 Btu/lb. There will however be no adjustment below the minimum limit of 18200 Btu/lb.
- NPGCL shall maintain and submit, annually a detailed record of consignment wise CV of the oil received and consumed for power generation for the adjustment on account of variation against the reference calorific value duly supported with the copies of test reports certified by the fuel supplier.

8.3.4 The fuel cost component determined on the basis of reference calorific value of 18,364 Btu/lb is subject to adjustment on actual basis annually as per directions provided above. For the purpose of clarification the Authority has decided to make the same part of the Order part of this decision. In



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accordance with the prescribed mechanism NPGCL is required to submit the documentary evidence in line with this mechanism to NEPRA on account of CV adjustment which is consistent with the JPCL and IPPs.

8.3.5 According to NPGCL, the plant is being supplied gas. Since gas being a cheaper fuel has less cost as compared to RFO, therefore, it would be in consumer's interest that fuel cost component on gas fuel may also be determined and allowed. Accordingly the gas FCC based on the tested heat rates have been worked out as under:

| Blocks | Description | Units | Energy Purchase Price (Rs./kWh) | | | |
|--------|-----------------|-------|---------------------------------|--------|-----|-----------------|
| | | | Fuel | | | Variable O&M |
| | | | RFO | Gas | HSD | |
| I | Muzaffargarh | 1 | 10.6378 | 6.8522 | - | 0.1200 |
| | | 2 | 10.7819 | 6.9451 | - | 0.1200 |
| | | 3 | 10.4091 | 6.7049 | - | 0.1200 |
| II | | 4 | 10.3936 | 6.6949 | - | 0.1200 |
| III | | 5 | 11.0671 | 7.1287 | - | 0.1200 |
| | | 6 | 11.3698 | 7.3237 | - | 0.1200 |
| IV | GTPS Faisalabad | 5-9 | - | 5.0550 | - | 0.1200 |
| V | SPS Faisalabad | 1-2 | 13.8405 | 8.4515 | - | 0.1200 |
| VI | GTPS Faisalabad | 1-4 | | 9.0387 | - | 0.1200 |

Assumptions:

| | | |
|-----------|---|-------------------|
| RFO Price | = | Rs. 39,000/M.Ton |
| Gas Price | = | Rs. 651.52/MMBTUs |
| CV (RFO) | = | 38,557.9 btu/kg |

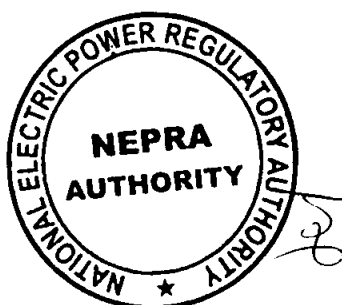
8.4 Ambient Conditions Correction Factor

8.4.1 With respect to Ambient Conditions Correction Factor, the Petitioner claims that despite having submitted documentary evidence for four units, duly vetted by the Independent Engineer, the Authority has not allowed to pass on the impact of Ambient Conditions Correction Factor. The Petitioner further submits that due to the scarcity of time for filing of this Review Motion, the correction curves for the remaining units could not be made available, however, requests that the Authority at the very minimum allow the correction factor to the extent of those four units. The Petitioner states that while additional data with respect to two units is made available, the Authority is requested to convert its principal approval in financial terms.

8.4.2 The NPGCL was directed to provide the documentary evidence in support of its claim. However, the Company has failed to provide any basis / justification for ambient conditions factors. The Authority has therefore decided to maintain its earlier decision.

8.5 Variable O&M

8.5.1 The Petitioner submitted that while determining the Variable O&M, the Authority did not consider the component of *Chemical and Fuel Additives* which is evident when a comparison of Chart appearing at Para 17.3 is made with Para 17.2 of the Determination and requested that the correction may be made accordingly. NPGCL submitted that the cost requested in the petition was based on 60% plant generation. The NPGCL requested Rs. 512 million on account of start-up cost,



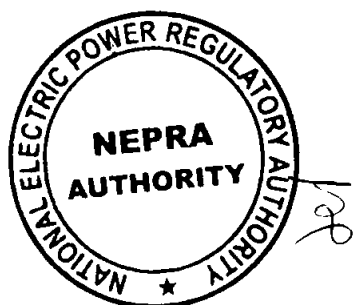
Rs. 744 million on account of Repair & Maintenance and Rs. 173 million on account of Chemicals and Additive cost. NPGCL further submitted that the number of startups each year cannot be determined due to variation in dispatch instructions, grid constraints, technical issues and plant issues, therefore the Authority may determine a benchmark rate for each startup which may then be invoiced using these benchmark rates and the number of actual startups.

8.5.2 While evaluation the information it was noted that the stance of the NPGCL is not correct. While calculating the variable O&M component the cost of chemicals and additives have been accounted for therefore there is no error on this account. The actual cost of start up as per audited account provided by NPGCL is Rs. 167 and Rs. 122 million during the FY 2012-13 and FY 2013-14. The repair and maintenance cost is Rs. 302 and Rs. 352 million during the FY 2012-13 & 2013-14. Similarly the store and spare consumed are Rs. 113 million and Rs. 147 million. Based on generation of 4,476,656 MWh and 5,307,826 MWh, the variable O&M has been worked out as Rs. 0.13/kWh and Rs. 0.12/kWh for the FY 2012-13 & FY 2013-14. After excluding the cost of start-up for the FY 2012-13 & FY 2013-14, the variable O&M works out as Rs. 0.09/kWh. The NPGCL requested Rs. 512 million on account of start-up cost, Rs. 744 million on account of Repair & Maintenance and Rs. 173 million on account of Chemicals and Additive cost. NPGCL was allowed above requested amount based on 100% plant generation including cost of start-up which works out as Rs. 0.13/kWh. NPGCL was directed to provide the audited accounts. Keeping in view the actual generation indicated in the audited accounts provided by NPGCL for the FY 2012-13 and FY 2013-14, the generation cost for 60% plant factor as stated by NPGCL in review motion seems on higher side which needs to be rationalized. In view thereof based on 30% increase in repair and maintenance expenses during the FY 2014-15, Rs. 458 million have been assessed on this account and the same is allowed. Keeping in view the previous history of Chemical and Additive expenses, the requested amount of Rs. 173 million is allowed as such.

8.5.3 The Authority considered the request of NPGCL with respect to start-up cost. The Authority is of the view that the start-up cost should be in line with the Independent Power Producers and separate invoice should be raised based on actual cost in accordance with the Power Purchase Agreement. The Authority has therefore decided not to allow the start-up cost as part of variable O&M. The power purchaser and power producer shall deal the matter in line with the PPA and submit the same to NEPRA for approval. Accordingly based on the last year actual generation of 5,307,826 MWh for FY 2013-14, the variable O&M has been assessed as Rs. 0.12/kWh and the same is allowed to NPGCL. The allowed variable O&M cost shall be subject to CPI indexation in line with the JPCL.

8.6 Open Cycle Tariff of GTPS Faisalabad (Block – IV)

8.6.1 The Petitioner elaborates that with regard to the Open Cycle Tariff of GTPS Faisalabad (Block – IV), the Authority unlike its previous determination has not passed on the cost for operation on Open Cycle, which may result in additional cost of about 1.5 times compared to operations on Combined Cycle.



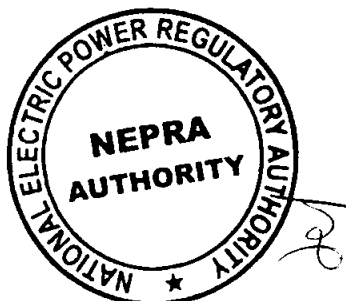
8.6.2 The Authority allowed the open cycle tariff in similar public sector GENCO i.e. JPCL. The Authority has therefore decided to allow open cycle tariff to NPGCL. The fuel cost component on open cycle has been worked out as Rs. 9.5345/kWh and the same is allowed to Company.

9 Issues Highlighted by the intervener: Anwar Kamal Law Associates (AKLA)

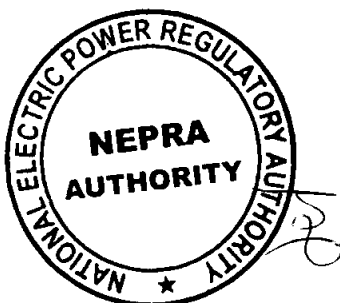
9.1 AKLA vide letter dated 28th April 2016 submitted the multiple queries with respect to NPGCL's review motion. The concerns of the AKLA and details are as under:

- i) Is NPGCL observing Performance Standards and is NEPRA monitoring and evaluating NPGCL's performance?
- ii) In terms of the 2006 Determination, NPGCL had to come for a one-time adjustment, but it did not do so. Who is accountable for this lapse? And who is being held responsible for the Rs. 22 billion loss?
- iii) What has NEPRA been doing all these 7 years during which the losses have accumulated?
- iv) Has not the lack of monitoring not only resulted in financial loss but have consumers also not lost future energy security for 25 years or more?
- v) Has NPGCL carried out maintenance work on its' Power Plants with the investment allowed for the purpose?

9.2 The issues highlighted by the intervener have already been discussed in detail in the State of Industry reports published by NEPRA. The quarterly reports on Key Performance Indicators (KPI) as per requirement of Performance Standards (Generation) (PSGR) Rules – 2009 are made for the generation companies. The performance of GENCO-III is a matter of concern for the regulator and an aggressive monitoring program has been initiated for overseeing GENCO-III regulatory affairs. Earlier, all the GENCOs were advised by the Authority to carryout performance tests so that degradation in their operational capabilities, efficiencies and administrative factors like manpower, timely overhauling and maintenance are set afresh. Particularly, the surplus human resource which is sitting idle due to closure and non-operational plants and over employment are major factors contributing towards higher cost of generation. The NPGCL performance was equally monitored by NEPRA and being owner of the GOP the advisories were issued to the GOP. The monitoring and enforcement department of NEPRA have been further strengthened in order to take immediate and necessary steps as and when required in order to safeguard the interest of the end-consumers. Keeping in view the deterioration in net capacity and heat rates, NPGCL has been issued explanations and show cause notices. The proceedings in the matter are under process. Being outlived generation units of the NGPS Multan, the generation license of GENCO-III was modified in accordance with the procedure laid down in the Licensing Rules. Due to inefficient power plants of the GTPS Faisalabad and SPS Faisalabad, the proceedings with respect to modification of the generation license are also in process with respect to the GENCO-III. Being owner of the public sector GENCOs, GOP has been issued several advisories to take necessary steps in the matter to overcome the energy crises in the country. Since the fuel cost component was determined on the basis of efficiency based on the past heat rates and only fuel price variation was allowed, therefore the loss on account of losing the efficiency has not been passed on to the end-consumers.



- 9.3 The generation of the GENCO-III was lower due to the different reasons i.e. fuel availability, deterioration in net capacity, delay in overhauling of the power plants, delay in payments, no financial control etc. Based on the continuous advisories, the GOP in consultation with the US Energy Assistance program conducted the technical audit of the GENCOs which highlighted the performance deficiencies in the GENCO-III which are as under:
- Delay in Overhauling of the plants due to (i) refusal of shut-down by the system operator because of shortage in power supply in the country, (ii) delay in payments of GENCOs against power sale,; and (iii) delay in procurement of parts and services of major overhauling plants.
 - Payments to GENCO have not been made on time which resulted in deferment of maintenance routines; the major reason behind plant output and efficiency degradation.
 - Reportedly approval process for procurement of spare parts and services through international tendering has been cumbersome and time consuming
 - Reportedly the management has not been empowered to initiate performance based human resource management system to promote efficiency and competition.
- 9.4 The non-availability of the power plants issues are part of the operational requirement which governs under the Power Purchase Agreement wherein Liquidated Damages are imposed on the power producers. The Power Purchaser in this regard is already directed to impose the liquidated damages in case of non-availability of the power plant.
- 9.5 As regards the one-time adjustment, in accordance with the provision of tariff determination 2006, one-time adjustment for net dependable capacity and heat rate test of Block 1,2,3 and Block 7 was required to be conducted in presence of representative from NTDC and upon satisfaction of the Authority. The heat rate test and net dependable capacity tests are carried out in the scenario when machines are able to perform the tests in accordance with the laid down technical parameters. However, due to the multiple factors as discussed above, the NPGCL was unable to conduct the heat rate test and net dependable capacity test. No provision of force outages, repair and maintenance, timely overhauling, availability of spare parts, financial control and managerial decisions etc are those different factors due to which the tests were not carried out. GOP being cognizant of the fact have conducted the net dependable capacity test and heat rate test of NPGCL in 2014 with assistance of US Energy Assistance program. Based on these results NPGCL have submitted the instant petition which was finalized during January 2016.
- 9.6 As regards the investment amount allowed in the original determination, there are practical problems as the companies are being operated by the GENCOs holding Company under the supervision of Ministry of Water & Power. The companies have not been allowed to operate independently. Since the funds are being controlled by the parent Ministry, therefore the Company had to face liquidated issues due to which proper maintenance could not be done. Moreover, Company was unable to think in commercial manner. The approval and bidding process for maintenance take such a long time that practically the maintenance of plants in time by manner becomes almost impossible. As a result thereof the plants performance is further deteriorated and it fails to achieve NEPRA targets. While determining the generation tariff of the NPGCL in original determination 2016 these issues have been addressed by directing the power purchaser to deduct the amount of capacity payments in case the NPGCL is not available as per the PPA.



9.7 How does NEPRA view the continuous loss of Rs. 22 billion? Is NPGCL financially viable and what is NEPRA doing about it?

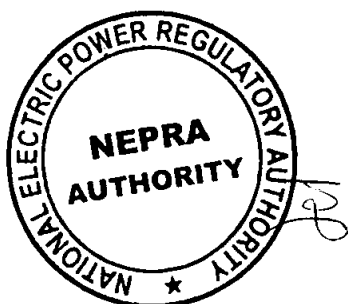
9.7.1 The generation tariff for NPGCL was determined in 2006 wherein fuel cost component was calculated on the following efficiency:

| Blocks | Description | Heat Rate (LHV) as 100% MCR |
|--------|---------------------------|-----------------------------|
| 1 | M/garh Unit 1 | 10788 |
| 1 | M/garh Unit 2 | 10788 |
| 1 | M/garh Unit 3 | 10788 |
| 2 | M/garh Unit 4 | 10692 |
| 3 | M/garh Unit 5 | 12158 |
| 3 | M/garh Unit 6 | 12158 |
| 4 | GTPS Faisalabad Units 5-9 | 8,593.65 |
| 5 | SPS Faisalabad Units 1-4 | 14,367.67 |
| 6 | GTPS Faisalabad Units 1-4 | 15,365.97 |

9.7.2 The Calorific Value was taken as 40,792 Btu/kg. The heat rate test of Block 1, 2, 3 and Block 7 was required to be made in presence of the representative of NTDC and satisfaction of the Authority. The fuel cost determined was only required to be adjusted as per the mechanism notified in the official gazette based on the fuel price variation.

9.7.3 NPGCL was time and again issued the directives to carry out the heat rate test. However, due to the different factors as described above, NPGCL was unable to conduct the heat rate test. The GOP was also issued advisories to take necessary action in this regard since loss was occurring due to the deterioration in the efficiency. No adjustment in deterioration in efficiency was given to the NPGCL by NEPRA during the period. Similarly no CV adjustment was allowed. The loss in this account was due to the aforesaid factors which was borne by the NPGCL through less return on equity.

9.7.4 GENCO-III was constantly directed to carry out repair and maintenance of the power plant. Similarly in order to address issues like CV, the NPGCL was directed to file tariff petition in order to adjust the same with the actual test carried out by the fuel supplier i.e. PSO. However, no petition was filed till 2015. After the heat rate test and net dependable capacity test, the actual results are in front of the NEPRA upon which the fuel cost component has been adjusted and allowed. In order to ensure the timely repair and maintenance and overhauling of the power plants, the capacity payments have been linked with the availability of the power plant. This in built mechanism shall enforce the NPGCL to make available its power plant otherwise the Company will not be able to claim capacity charges. In addition to that, NPGCL has been directed in the original determination to submit the annual actual expenditure details on account of repair & maintenance. Furthermore, the GOP be advised to grant upon more financial autonomy to the public sector GENCOs in order to enable them to take the necessary steps for repair and maintenance and other day to day requirements which ensure the plants availability and smooth operation.



9.8 Is it correct that there is no timely monitoring?

The timely monitoring was made of all the GENCOs including GENCO-III. The operational issues are dealt under the Power Purchase Agreement and rights and liabilities are met through the terms and conditions. However, due to no financial autonomy, and multiple reasons as described above the GENCO-III was unable to perform its functions. These issues have been addressed in the determination dated 2016 wherein the fixed payment has been linked with the performance of the GENCO-III and in case the power producer is unable to ensure contracted capacity availability in the system, no fixed payment will be made for that particular capacity. NEPRA had continuously issued letters/ directions to NPGCL and CPPA to strictly perform their functions in accordance with the provision of NEPRA Act and Rules made there-under. The advisories issued and details are mentioned in the State of Industry Report published by NEPRA.

9.9 The Faisalabad Power Plants of NPGCL have very low efficiency and have completed their useful life. An APM was initiated for de-commissioning: why was it not completed

In accordance with the provision of Authority's Proposed Modifications – 1999, the proceedings in the matter have been initiated and hearing has been held. During the hearing NPGCL was directed to provide the detailed information and response to the queries raised during the hearing. The response in the matter is awaited. Once the information is submitted the same will be considered and decision will be made accordingly.

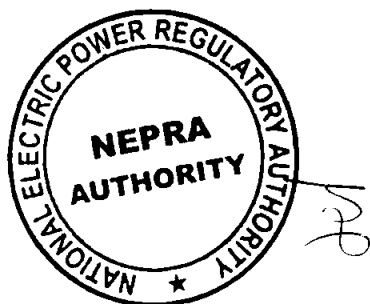
9.10 Is it correct that to date there is no Power Purchase Agreement (PPA) between NPGCL and NTDC? How then is the business being conducted?

9.10.1 The first PPA was signed in 1999 which was revalidated in 2006. NPGCL and CPPA again signed PPA in 2014 and new PPA was signed in 2015. NEPRA being regulator of the power sector performing its functions in accordance with the provision of NEPRA Act, Rules and Regulations made there-under. The decisions are made in consultation with the stakeholders keeping in view all aspects of the cases. The AKLA have not provided any comments with respect to the original petition and review decision wherein the details with respect to salaries, wages, other benefits, administrative expenses and all issues raised by NPGCL have been given. Due to non-availability of any comments specific to the issue, the earlier decision was issued on the basis of available information.

9.10.2 AKLA also requested for provision of audio recording and transcripts. However, since the request was not in accordance with the provision of law therefore the same has not been provided.

10 Decision

10.1 Keeping in view of the above discussions, no change in the tariff is made except to the extent of variable O&M, transformer & switchyard losses and fuel cost component on gas.



11 Order

11.1 Northern Power Generation Company Limited (NPGCL) is allowed to charge the tariff as provided hereunder for sale of its electricity to the Central Power Purchasing Agency (Guaranteed by Limited), according to the following approved tariff:

| Capacity Purchase Price | Reference Tariff Rs /kW/hr | Indexation |
|----------------------------------|-------------------------------|------------|
| Net Dependable Capacity | 1472.52 MW | |
| Fixed O&M | 0.1904 | CPI |
| - Administration & Establishment | 0.1966 | CPI |
| - Insurance & Regulatory Cost | 0.0040 | CPI |
| - Other income | -0.0101 | CPI |
| Depreciation | 0.0806 | - |
| Interest cost | 0.0022 | - |
| Return on Equity | 0.1621 | - |
| Total Capacity Charge | 0.4353 | |

11.2 The tariff has been calculated on the basis of following net capacity:

| Blocks | Description | Installed Capacity | Present Net Dependable Capacity |
|--------|---------------------------|-----------------------|---------------------------------------|
| 1 | Muzaffargarh Units 1-3 | 630 | 556 |
| 2 | Muzaffargarh Units 4 | 320 | 272.2 |
| 3 | Muzaffargarh Units 5-6 | 400 | 355.32 |
| 4 | GTPS Faisalabad Units 5-9 | 144 | 117 |
| 5 | SPS Faisalabad Units 1-2 | 132 | 97 |
| 6 | GTPS Faisalabad Units 1-4 | 100 | 75 |

Note: In case the available capacity is established less than the agreed in the PPA, then the capacity payment Rs./kW/hr shall be paid according to the available capacity and excess amount paid shall be deducted from the generation tariff of the NPGCL. However, NPGCL shall be entitled for the capacity payments if it is available however did not operated by the power purchaser due to merit order constraints.

11.3 The fuel cost component is as under:

| Blocks | Description | Units | Energy Purchase Price (Rs./kWh) | | | |
|--------|--------------|-------|---------------------------------|--------|-----|-----------------|
| | | | Fuel | | | Variable O&M |
| | | | RFO | Gas | HSD | |
| I | Muzaffargarh | 1 | 10.6378 | 6.8522 | - | 0.1200 |
| | | 2 | 10.7819 | 6.9451 | - | 0.1200 |
| | | 3 | 10.4091 | 6.7049 | - | 0.1200 |
| II | | 4 | 10.3936 | 6.6949 | - | 0.1200 |
| III | | 5 | 11.0671 | 7.1287 | - | 0.1200 |





| | | | | | | |
|-----|-----------------|-----|---------|--------|---|--------|
| | | 6 | 11.3698 | 7.3237 | - | 0.1200 |
| 8IV | GTPS Faisalabad | 5-9 | - | 5.3325 | - | 0.1200 |
| V | SPS Faisalabad | 1-4 | 13.8397 | 8.9147 | - | 0.1200 |
| VI | GTPS Faisalabad | 1-4 | | 9.5345 | - | 0.1200 |

Assumptions:

RFO Price = Rs. 39,000/M.Ton

Gas Price = Rs. 651.52/MMBTUs

CV (RFO) = 38557.9 btu/kg

The variable O&M will be subject to indexation on account of CPI along with capacity charge indexation.

I. Indexation / Adjustments

Fuel cost component of Energy Charge part of tariff for each block will be adjusted on account of fuel price variation, according to the following formula:

$$FCC (Rev) = FCC (Ref) * FP (Rev) / FP (Ref)$$

Where:

| | | |
|-----------|---|--|
| FCC(Rev) | = | The applicable fuel cost component as revised in accordance with revised fuel price |
| FCC (Ref) | = | The fuel cost component as indicated in the reference tariff |
| FP (Rev) | = | Revised applicable RFO / Gas price as the case may be |
| FP (Ref) | = | The reference fuel price per unit of fuel (residual oil and natural gas) as mentioned below: |
| | | Gas: Rs. 588.23/MMBTU |
| | | RFO: Rs. 39,000 / M.Ton (Ex-GST including freight) |

For the purpose of fuel cost component adjustment, NPGCL would submit to the Authority relevant purchase orders, in case of change in furnace oil / gas prices.

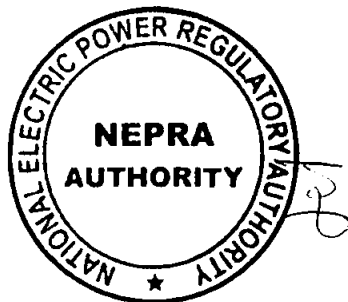
II. CPI Indexation

The fixed O&M comprising of Administrative & Establishment Charges, Insurance & Regulatory Cost and other Income will be adjusted on account of Inflation (CPI) only, in future. Indexation adjustment due to inflation will be made twice a year on January 01 and July 01. The adjustment will be on the basis of the latest monthly CPI as notified by the Pakistan Bureau of Statistics (PBS). As per present practice according to which CPI is updated on 11th of every month, the indexation on January 01 will be based on CPI for preceding November while the indexation on July 01 will be based on CPI of preceding May. The CPI adjustment will be made according to the following formula:

$$FO\&M (Rev) = FO\&M (Ref) * CPI (Rev) / CPI (Ref)$$

Where:

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| | | |
|------------|---|---|
| FO&M(Rcv) | = | The revised fixed O&M of the Capacity Charge |
| FO&M (Ref) | = | The reference fixed O&M of the Capacity Charge i.e. Rs. 0.1904/kW/hr |
| CPI (Rev) | = | The revised Consumer Price Index (CPI) as notified by the Pakistan Bureau of Statistics. |
| CPI (Ref) | = | The reference Consumer Price Index (CPI) as notified by the Pakistan Bureau of Statistics |

III. Adjustment on account of Calorific Value

The minimum benchmark of calorific values prescribed by the Ministry of Petroleum & Natural Resources for the furnace oil is 18,200 Btus/lb (40,123.72 Btu/kg) for imported furnace oil and 18,000 Btus/lb (39,682.8 Btu/kg) for local furnace oil. In case of IPPs, the Authority has prescribed a mechanism for adjustment of calorific value and the same is approved in case of NPGCL. The mechanism is provided hereunder:

- c) The reference CV will be 18364 Btu/lb. There will however be no adjustment below the minimum limit of 18200 Btu/lb.
- d) NPGCL shall maintain and submit, annually a detailed record of consignment wise CV of the oil received and consumed for power generation for the adjustment on account of variation against the reference calorific value duly supported with the copies of test reports certified by the fuel supplier.

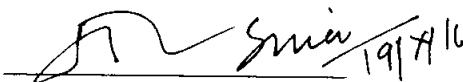
The fuel cost component will be determined on the basis of reference calorific value of 18,364 which will be subject to adjustment on actual basis annually as per directions provided above.


IV. Taxes

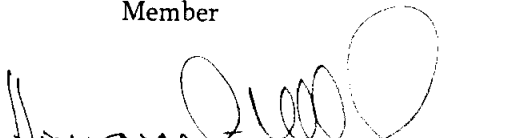
The impact of taxes has not been accounted for in the tariff. In case NPGCL is obligated to pay any tax, the exact amount paid shall be reimbursed as per existing practice.

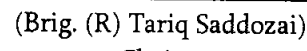
11.4 The decision is intimated to the Federal Government for notification in the official gazette under Section 31(4) of the NEPRA Act, 1997.

AUTHORITY

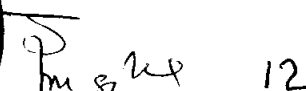

(Major (R) Haroon Rashid)
Member


(Syed Masood-ul-Hassan Naqvi)
Member


(Himayat Ullah Khan)
Vice Chairman


(Brig. (R) Tariq Saddozai)
Chairman




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