

**BEFORE THE GUJARAT ELECTRICITY REGULATORY COMMISSION
GANDHINAGAR**

Petition No. 2279 of 2023

In the Matter of:

Petition under Section 86 (1) (b) of the Electricity Act 2003 for approval of amendments to the PPA dated 19.02.2000 read with supplementary Agreement dated 17.12.2014 for procurement of power from 2 x 125 MW lignite based thermal power plant established by GMDC at Akrimota, Kutch, Gujarat.

Petitioner : Gujarat Urja Vikas Nigam Limited
Sardar Patel Vidyut Bhavan
Race Course Circle, Vadodara – 390007.

Represented by : Ld. Adv. Ms. Kriti Soni along with Mr. H.P. Patel

V/s.

Respondent : Gujarat Mineral Development Corporation Limited
“Khanij Bhavan”, 132 Feet Ring Road
Gujarat University Ground
Vastrapur, Ahmedabad – 380052, Gujarat.

Represented by : Ld. Advocates Mr. Gursharan H. Virk and Mr.
Simranjit H. Virk along with Mr. J.N. Dave and Mr. Y.T.
Thaker

CORAM:

**Anil Mukim, Chairman
Mehul M. Gandhi, Member
S. R. Pandey, Member**

Date: 06/07/2024

ORDER

1. The present Petition filed by the Petitioner under Section 86 (1) (b) and (e) of the Electricity Act 2003 for approval of amendments to the Power Purchase Agreement dated 19.02.2000 read with Supplementary Agreement dated 17.12.2014 for procurement of power from 2X125 MW lignite based thermal power plant established by GMDC at Akrimota, Kutch, Gujarat.

2. The relief sought by the Petitioner is as under:
 - a. Admit this Petition.
 - b. Approve the supplementary agreement for amendments to the Power Purchase Agreement dated 19.02.2000 readwith Supplementary Agreement dated 17.12.2014.
3. The facts mentioned in the Petition briefly stated as under:
 - 3.1. The Petitioner has submitted that the Government of Gujarat had notified the Gujarat Electricity Industry (Reorganization and Regulation) Act 2003 in May 2003 for the reorganization of the State Electricity utilities in the State of Gujarat. Pursuant to the Gujarat Electricity Industry Reorganization and Comprehensive Transfer Scheme, 2003 notified under the Gujarat Electricity Industry (Reorganization and Regulation) Act 2003, erstwhile Gujarat Electricity Board has been reorganised and its functions have been vested in different entities. The function of Bulk purchase and Bulk sale of power is assigned to the Petitioner - Gujarat Urja Vikas Nigam Ltd. (GUVNL) as per the reorganization scheme.
 - 3.2. It is submitted that the Power Purchase Agreements entered into by erstwhile Gujarat Electricity Board had been vested in the GUVNL. One Such PPA was with the Respondent, Gujarat Mineral Development Corporation dated 19.02.2000 in relation to their 250 MW lignite based thermal power plant located at Akrimota, Kutch, Gujarat (hereinafter "Akrimota Thermal Power Station" or "ATPS").
 - 3.3. It is submitted that the PPA was on cost plus tariff basis and the PPA, inter alia, provided for the parameters and formula for determination of tariff for sale of electricity. The Commission under its Order dated 10.10.2000 in case No. 19/1999 directed the GUVNL to attempt to reduce the cost of power purchase from the Independent Power Producers (IPPs) through consultative approach. The Government of Gujarat initiated actions in this regard by writing a letter dated 14.03.2002 to all IPPs including GMDC, emphasizing the need to reduce

the cost of power being purchased by GUVNL from their Power Projects in the larger interests of the end users of electricity and also constituted a Negotiating Team to discuss various parameters of the PPAs with the IPPs. The Negotiating Committee constituted by the Government of Gujarat and GMDC discussed all issues relating to and / or arising from the PPA including but not limited to the claims / disputes of GMDC as also areas / parameters on which agreement can be reached between the Parties with a view to reduce tariff.

- 3.4. It is submitted that the Government of Gujarat constituted a second Negotiating Committee in order to further reduce the cost of power purchase by revising the tariff parameters under the PPA. Subsequent to discussions between the Negotiating Team and GMDC, understandings have been reached on the modifications of certain parameters of the PPA and resolution of the PPA related issues. The Negotiating Committee submitted their report to the Government of Gujarat and the same was approved by Government of Gujarat with certain modifications vide their letter No.PPA-2005-2949-K dated 6.10.2006.
- 3.5. It is submitted that accordingly, both GUVNL and GMDC have agreed to revise the certain technical parameters stated in the PPA and thereafter, the Supplementary Agreement was executed between the parties on 17.12.2014. It is submitted that power from the ATPS is amongst the lowest of lignite based stations in Gujarat as per the merit order despatch, the availability from the project is not optimal leading to GUVNL to procure electricity from other sources. GUVNL is required to procure the shortfall in power from incremental costlier sources such as marginal generating stations, short term markets including power exchanges which results in increase in overall power purchase cost which burdens the end consumers. If there is improvement in the plant performance, the resultant increase in incremental generation by the GMDC will be cheaper power and GUVNL can avoid buying costlier power from other sources.
- 3.6. The Respondent, GMDC had filed a petition being Petition No. 2127 of 2022 in regard to the approval of the additional capital expenditure in relation to the

compliances with the Notification dated 07.12.2015 issued by the Ministry of Environment, Forest and Climate Change (MOEFCC) notifying the Environment (Protection) Amendment Rules, 2015 and subsequent amendments thereto. The Commission passed the Order dated 17.01.2023 in the Petition no. 2127 of 2022 granted in principle approval for one time capital expenditure with certain directions including transparent and competitive procurement process.

- 3.7. It is submitted that GMDC in the said Petition had raised certain issues in regard to the inability of the station to achieve the desired parameters and that GMDC has suffered substantial loss. In this regard, GMDC had stated that it would approach Government of Gujarat with respect to normative performance parameters.
- 3.8. It is submitted that GMDC had approached the Government of Gujarat and various meetings was held between GMDC and GUVNL officials under the Chairmanship of the Principal Secretary, Energy and Petrochemical Department, Government of Gujarat, regarding additional capitalization and renegotiation of the PPA entered into between GMDC and GUVNL.
- 3.9. It is submitted that GMDC informed that it is not able to achieve its stipulated availability / generation and is barely able to supply 40-50% of the intended power supply in a year which would lead to GUVNL purchasing costlier power from other sources and GMDC itself is suffering heavy loss as it unable to recover its actual cost of generation. GMDC sought relaxation in order to improve its performance and availability and supply more reliable and continuous power to GUVNL.
- 3.10. It is submitted that on 12.08.2022, in the meeting held between GMDC and GUVNL officials under the Chairmanship of the Principal Secretary, Energy and Petrochemical Department, Government of Gujarat, various issues on the renegotiation of the terms of the PPA was discussed. It is submitted that in the meeting, discussions were held on additional capital expenditure claimed by GMDC wherein it was agreed that the GMDC shall approach the Commission for

approval which is the subject matter of Petition No. 2127 of 2022. Further in regard to renegotiation of the PPA, various parameters were discussed and the agreement was reached for revision on certain parameters whereas revision of other parameters were not accepted. The parameters to be revised were as under:

- a. Operation and Maintenance expenditure
- b. Return on Equity
- c. Station Heat Rate
- d. Auxiliary Consumption

3.11. It was agreed that Petitioner and the Respondent shall seek approval of the Board of Directors and sign the Supplementary Agreement which shall be subject to the approval of the Commission. The Minutes also recorded as under:

"Hon'ble Principal Secretary, EPD stated that GMDC shall endeavor to improve the performance parameters as well as the availability of the plant and bring them to better than normative levels in order to justify the additional capital cost and to increase the quantum of reliable power supply from Akrimota plant to GUVNL. "

3.12. The Order dated 17.01.2023 in the Petition No. 2127 of 2022 also records the Minutes of Meeting held on 12.08.2022 and it was held that the parties may approach to the Commission for approval of the Supplementary Agreement:

3.13. It is submitted that subsequent to the approval of the Board of Directors of GUVNL, the above revisions agreed in the Minutes of Meeting were sent to Government of Gujarat, Energy and Petrochemical Department for approval vide Letter dated 23.09.2022 and the Government of Gujarat vide Letter dated 06.01.2023 has stated as under:

"2. Accordingly, Government has accorded an approval to the proposal of GUVNL regarding Modification of terms of Power Purchase Agreement executed between GMDC and GUVNL for GMDC's Akrimota Thermal Power Station (ATPS) subject to the approval of Hon'ble Gujarat Electricity Regulatory Commission(GERC).

Further, in implementation of the the same, any direct or indirect financial assistance towards increase in the project cost will not be provided by the State Government"

3.14. It is submitted that Article 19.1 of the PPA dated 19.02.2000 recognises that the PPA can be amended by written agreement.

3.15. Accordingly, the Supplementary Agreement is entered into by GUVNL and GMDC on 06-09-2023 for amendments of the PPA dated 19.02.2000 read with Supplementary Agreement dated 17.12.2014.

3.16. The details of the revision of the parameters are as under:

(A) Operation and Maintenance Expenses

The existing clause in the PPA dated 19.02.2000 read with Supplementary Agreement dated 17.12.2014 was as under:

10.5.4 O&M Expenses and Insurance Expenses

The O&M Expenses and Insurance Expenses in any month "m" shall be calculated as under:

$$OME = \frac{\Sigma (CC_u \times 0.02 \times d \times F_{ESC})}{365} \times F_{esc} + INS$$

$$\text{Such that } OME \leq \frac{(0.03 \times CC_u) \times d \times F_{ESC}}{365}$$

$$INS \leq \frac{(0.01 \times CC_u) \times d}{365}$$

F_{ESC} = 1 for the first full year of operation after the Entry into Commercial Service of each Unit and

$$F_{ESC} = (0.7 WPI_n + 0.3 CPI_n) \div (0.7 WPI_1 + 0.3 CPI_1) \text{ or } (1.1)^{p-1}$$

Whichever is lower for each succeeding year.

3.17. In terms of the above, for the FY 2021-22, the operation and maintenance expenses was computed as per the formula to Rs. 24.04 lakh per MW.

3.18. The Respondent, GMDC has sought revision in Operation and Maintenance expenses from Rs. 24.04 lakh per MW for FY 2021-22 with escalation based on WPI and CPI index to Rs. 32.50 Lakh per MW for FY 2022-23 with escalation of 5.72% in subsequent years.

3.19. It is submitted that the Gujarat Electricity Regulatory Commission (Multi Year Tariff) Regulations, 2016 ("MYT Regulations 2016") provides as under for operation and maintenance expenses for thermal generating stations:

54. Operation and Maintenance expenses for thermal Generating Stations

Existing Generating Stations

a) *The Operation and Maintenance expenses excluding water charges and including insurance, shall be derived on the basis of the average of the actual Operation and Maintenance expenses excluding water charges and including insurance for the three (3) years ending March 31, 2015, subject to prudence check by the Commission.*

b) *The average of such operation and maintenance expenses excluding water charges and including insurance shall be considered as operation and maintenance expenses excluding water charges and including insurance for the financial year ended March 31, 2014 and shall be escalated year on year at the escalation factor of 5.72% to arrive at operation and maintenance expenses excluding water charges and including insurance for subsequent years up to FY 2020-21:*

Provided that water charges shall be allowed separately as per actuals, subject to prudence check:

Provided further that in case an existing generating station has been in operation for less than three (3) years as on the date of effectiveness of these Regulations, the O&M Expenses shall be allowed as specified under Regulation 55 for New Generating Stations.

55. New Generating Stations

b) For lignite based generating stations:

Table 11: O&M Expense Norms of New Lignite based Generating Stations for the Control Period(Rs. Lakh/MW)

| <i>Particulars</i> | <i>O&M Expense Norms</i> |
|--------------------|------------------------------|
| <i>FY 2016-17</i> | <i>27.00</i> |
| <i>FY 2017-18</i> | <i>28.54</i> |
| <i>FY2018-19</i> | <i>30.18</i> |
| <i>FY 2019-20</i> | <i>31.90</i> |
| <i>FY 2020-21</i> | <i>33.72</i> |

3.20. Based on above the Petitioner submitted that the operation and maintenance expenses as per the MYT Regulations was Rs. 33.72 lakhs per MW for new stations with escalation of

5.72%. GMDC had sought Rs. 32.50 lakhs per MW for FY 2022-23 which was lower.

3.21. Further the Operation and Maintenance expenses allowed to other lignite based generating stations are as under:

- a. GIPCL SLPP I : Rs. 35.61 lakh per MW for the FY 2021-22 with escalation based on WPI and CPI Index
- b. GIPCL SLPP II: Rs. 37.73 lakh per MW for FY 2021-22 with escalation of 5.72% for subsequent years
- c. BLTPS: Rs.35.65 lakh per MW for FY 2021-22 with escalation of 5.72% for subsequent years
- d. GSECL KLTPS 3: Rs.22.74 lakh per MW for FY 2021-22 with escalation of 5.72% subsequent years
- e. GSECL KLTPS 4 : Rs.26.44 lakh per MW for FY 2021-22 with escalation of 5.72% for subsequent years

3.22. Considering the Operation and Maintenance expenses allowed for other lignite based plants and the norms under the MYT Regulations, it had been agreed to revise Operation and Maintenance expenses to Rs. 32.50 Lakhs per MW for FY 2022-23 with escalation of 5.72% p.a. in subsequent years.

3.23. The effective date for the above amendment for O & M expenses in PPA has been agreed to be considered from FY 2022-23.

(B) Return on Equity

3.24. The existing clause in the PPA dated 19.02.2000 read with Supplementary Agreement dated 17, 12.2014 was as under:

“10.5.5 Return on Equity

The Return on Equity shall be 13% and calculated as follows:

$$RoE = \Sigma c([(Eq_c \times 0.13 \times d) \div 365]) \times F_{CAP}$$

At the end of every Year, the rate of return on Equity, on the basis of profit and loss account related to the operation of the Project, shall be verified and shall be adjusted such that it does not exceed 20% (Post Tax) of the equity amount. Any increase over 20% over the period of entire Year shall be adjusted from the first Monthly Tariff Payment of the subsequent Year.”

3.25. It is submitted that GMDC had sought for allowing the return on equity at 14% instead of 13% with effect from the date of signing of the Supplementary Agreement.

3.26. In terms of the MYT Regulations, 2016, the parties agreed to the return on equity at 14% with effect from the date of signing of the Supplementary Agreement.

(C) Station Heat Rate

3.27. The existing clause on SHR in the PPA dated 19.02.2000 read with Supplementary Agreement dated 17.12.2014 was as under:

| | | | |
|-------------------|-----|---|---------------------|
| Station Heat Rate | SHR | shall mean the Station Heat Rate of the Unit expressed in K. Cal. per KWh. The relevant values shall be as under: | |
| | | During Stabilisation Period | 2800 K. Cal per KWh |
| | | After Stabilisation Period | 2400 K. Cal per KWh |
| | | The values of SHR will be subject to correction as per following multiplying factors corresponding to different moisture contents of Lignite: | |
| | | Moisture Contents of Lignite | Multiplying Factor |
| | | 00.0 % | 1.00 |
| | | 30.0% | 1.04 |
| | | 40.0% | 1.07 |
| | | 50.0% | 1.10 |

3.28. The Respondent, GMDC had requested for revision in Station Heat rate from existing Station Heat Rate of 2400 KCal /KWh with moisture correction to 2900 KCal / KWh and 0.5% degradation every year.

3.29. The MYT Regulations provided for Station Heat Rate for existing coal based stations and further for new stations:

"53.4 Gross Station Heat Rate - For new Generating Units or stations achieving COD after the effectiveness of these Regulations:

(i) Coal-based and lignite-fired Thermal Generating Stations

= 1.045 X Design Heat Rate (kcal/kWh)

Where the Design Heat Rate of a generating unit means the unit heat rate guaranteed by the supplier at conditions of 100% MCR, zero percent make up, design coal and design cooling water temperature/ back pressure.

| | | | | |
|--|-------------------|----------------|----------------|----------------|
| Provided that the design heat rate shall not exceed the following maximum design unit heat rates depending upon the pressure and temperature ratings of the units: Pressure Rating (Kg/ cm ²) | 150 | 170 | 170 | 247 |
| SHT/RHT (OC) | 535/535 | 537/537 | 537/565 | 565/593 |
| Type of BFP | Electrical Driven | Turbine Driven | Turbine Driven | Turbine Driven |
| Max Turbine Heat Rate (kcal/ kWh) | 1955 | 1950 | 1935 | 1850 |
| Min. Boiler Efficiency | | | | |
| Sub-Bituminous Indian Coal | 0.86 | 0.86 | 0.86 | 0.86 |
| Bituminous Imported Coal | 0.89 | 0.89 | 0.89 | 0.89 |
| Maximum Design Unit Heat Rate (kcal/kWh) | | | | |
| Sub-Bituminous | 2273 | 2267 | 2250 | 2151 |

| | | | | |
|---------------------------------|------|------|------|------|
| <i>Indian Coal</i> | | | | |
| <i>Bituminous Imported Coal</i> | 2197 | 2191 | 2174 | 2078 |

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Provided also that in case of lignite-fired generating stations (including stations based on CFBC technology), maximum design heat rates shall be increased using the multiplying factors for moisture content as given below:

- (a) For lignite having 50% moisture: 1.10*
- (b) For lignite having 40% moisture: 1.07*
- (c) For lignite having 30% moisture: 1.04*
- (d) For other values of moisture content, multiplying factor shall be prorated for moisture content between 30-40% and 40-50% depending upon the rated values of multiplying factor for the respective range given under subclauses (a) to (c) above."*

3.30. It is submitted that GMDC's generating station was commissioned in 2006. The design heat rate was 2361.16 kcal/kwh and therefore the 1.045 X Design Heat Rate works out to 2467 kCal/Kwh.

3.31. It is submitted that the PPA as well as the MYT Regulations also provide for the moisture content and the design heat rate/station heat rate would have to be increased to account for the same. The multiplying factors in the PPA and the MYT Regulations are the same.

3.32. It is submitted that GMDC had represented that corrosive oxides of sulphur and chlorides are present in the coastal saline atmosphere and hence the plant is exposed to very high deterioration rate. GMDC had further stated that the plant is designed for GCV of 3200 KCal / Kg of lignite whereas they are actually receiving GCV in the range of 2800 to 2900 KCal / Kg.

3.33. The maximum station heat rate which can be considered for the ATPS considering the maximum moisture correction of 1.10 is Design Heat Rate X 1.045 X 1.10, i.e. 2361.16 X 1.045 X 1.10 = 2713 Kcal/KWh.

3.34. The SHR of other lignite based power plants as per PPA and/ or approved by the Commission are as under:

- 1)GIPCL SLPP: 2400 Kcal / KWh with moisture correction
- 2)GIPCL SLPP Expansion: 2461 Kcal / KWh with moisture correction
- 3)GSECL KLTPS-3 : 3231 Kcal /KWh
- 4)GSECL KLTPS-4 : 3000 Kcal /KWh
- 5)GSECL BLTPS: 2623 Kcal /KWh

In view of the above, the Petitioner, GUVNL had agreed to revise the Station Heat Rate to 2713 kcal/kwh irrespective of moisture content as against the proposal of GMDC being 2900 kcal/kWh with 0.5% degradation each year. This was agreed by the Respondent, GMDC and therefore the parties have agreed to revise Station Heat Rate to 2713 Kcal/KWh irrespective of moisture content for the balance period of the PPA with effect from the date of signing of the Supplementary Agreement.

(D)Auxiliary Consumption

3.35. The existing clause in the PPA dated 19.02.2000 read with Supplementary Agreement dated 17.12.2014 was as under:

Clause 10.10.1 of Article 10

| | | | |
|-----------------------|----|--|-------|
| Auxiliary Consumption | AC | shall mean the Energy consumed in the Auxiliaries of the Generating Station. The normative values will be as under : | |
| | | During Stabilisation Period | 10.0% |
| | | After Stabilisation Period | 11% |

3.36. The Respondent, GMDC has sought revision in Auxiliary Consumption from 11% to 12% from FY 2022-23 and 13% with effect from FY 2027-28 onwards. GMDC submitted that due to the issues already submitted relating to deterioration and life of the plant, the Auxiliary Consumption had increased heavily.

3.37. MYT Regulations provided for Station Heat Rate for existing coal-based stations and further for new stations including lignite based stations:

53.7 Auxiliary Energy Consumption:

(e) New lignite-fired thermal generating stations:

(i) All generating stations with below 200 MW sets: 12%;

(ii) All generating stations with 200 MW sets and above: 0.50% more than that allowed for coal based generating stations under Table 8 above:

Provided that for the lignite fired stations using CFBC technology, the auxiliary energy consumption norms shall be 1.50% more than the auxiliary energy consumption norms of coal based generating stations as specified above.

3.38. In terms of the above, the auxiliary consumption for new lignite fired thermal generating stations is 12%. The ATPS was commissioned in 2006.

3.39. Initially, the Petitioner, GUVNL had not agreed to the revision as Respondent, GMDC had proposed capital expenditure to improve the performance parameters and therefore the Respondent GMDC should be in a position to improve its auxiliary consumption; however, the Respondent, GMDC had insisted on the revision.

3.40. The Auxiliary Consumption allowed to other lignite based generating stations are as under:

- a. GIPCL SLPP II : 11.5%
- b. GSECL KLTPS 3 and 4 : 12%

3.41. In view of the above, the Petitioner, GUVNL had agreed to revision limited to 11.5% as against 12% and 13% sought by the Respondent, GMDC. The Respondent, GMDC accepted the revision to 1 1.5%. The same is agreed to be with effect from the date of signing of the Supplementary Agreement.

(E) Effective date of the Supplementary Agreement

3.42. It is submitted that the parties have agreed that the Effective date of the Supplementary Agreement shall be date of signing of the agreement with regard to the aspects of Station Heat Rate, Auxiliary Consumption and Return on Equity and 01.04.2022 with regard to O & M expenses.

3.43. It is submitted that even with the amended terms agreed to between the parties, it is anticipated that the power from the ATPS would be cheaper power as compared to other lignite based power stations and would fall within the merit order despatch.

3.44. It is submitted that the Supplementary Agreement is subject to the approval of the Commission. Under the Electricity Act, 2003, the Commission is empowered to regulate the procurement process of the distribution licensees.

3.45. Based on the above, the Petitioner, GUVNL filed the present Petition before the Commission under Section 86 (1) (b) of the Electricity Act 2003 for approval of the Supplementary Agreement executed between the Petitioner, GUVNL and the Respondent, GMDC in relation to amendments to the Power Purchase Agreement dated 19.02.2000 read with Supplementary Agreement dated 17.12.2014. The above Supplementary Agreement shall be subject to approval by GERC.

4. The Commission vide Daily Order dated 29.12.2023 directed to the Petitioner to issue a public notice in two daily Gujarati Newspapers and one English Newspaper having wide circulation in the State and also upload the present petition with all relevant documents on their website and invite

comments/suggestions/objections from the stakeholders on affidavit within 21 days from the date of issue of public notice.

5. In response to the aforesaid direction the Petitioner vide on affidavit dated 4.01.2024 stating that as per the directive of the Commission the Petitioner has issued public notice in two daily Gujarati Newspaper (Gujarat Samachar and Sandesh) and one English Newspaper (Indian Express) dated 3.01.2024 and uploaded on website all necessary documents of Petition.
6. The matter was kept for hearing on 21.02.2024. On that day the representative of the Petitioner reiterated the facts stated in para 3 above and submitted that the Commission may approve the supplementary PPA executed between the parties.
7. Learned Advocate Shri Ld. Adv. Mr. Gursharan H. Virk on behalf of the Respondent submitted that the Commission may grant approval of the prayer of the Petitioner.
8. The Commission vide Daily Order dated 5.03.2024, directed the parties to file submission on part of details of SHR, Auxiliary Consumption as well as O & M cost incurred for the last 5/7 years of the 2 x 125 MW lignite based Power Plant along with comments on part of O&M expenses to the tariff components to the retail consumers.
9. In response the aforesaid directions, the Petitioner and the Respondent have submitted the details regarding O & M cost as per the agreement between the parties and actual cost incurred by GMDC. SHR, Auxiliary Consumption and O & M cost incurred for the last 10 years of the 2x125 MW lignite based Power Plant on affidavit dated 7.03.2024 as under:

| Financial Year | Heat Rate | | APC | | O & M Cost | |
|----------------|---------------------|-------------------|--------------|------------|---------------------|-------------------|
| | Approved (kCal/kWh) | Actual (kCal/kWh) | Approved (%) | Actual (%) | Approved (Rs. Crs.) | Actual (Rs. Crs.) |
| 2013-14 | 2553 | 2528 | 11.00 | 16.60 | 23.84 | 54.24 |

| Financial Year | Heat Rate | | APC | | O & M Cost | |
|----------------|---------------------|-------------------|--------------|------------|---------------------|-------------------|
| | Approved (kCal/kWh) | Actual (kCal/kWh) | Approved (%) | Actual (%) | Approved (Rs. Crs.) | Actual (Rs. Crs.) |
| 2014-15 | 2563 | 2571 | 11.00 | 15.11 | 35.70 | 56.40 |
| 2015-16 | 2562 | 2714 | 11.00 | 15.31 | 38.58 | 57.86 |
| 2016-17 | 2556 | 2756 | 11.00 | 15.59 | 38.46 | 57.76 |
| 2017-18 | 2558 | 2653 | 11.00 | 15.60 | 38.08 | 95.90 |
| 2018-19 | 2527 | 2957 | 11.00 | 17.75 | 33.17 | 59.39 |
| 2019-20 | 2502 | 3590 | 11.00 | 25.26 | 19.85 | 49.02 |
| 2020-21 | 2500 | 3867 | 11.00 | 32.51 | 11.09 | 50.95 |
| 2021-22 | 2516 | 3165 | 11.00 | 22.06 | 18.20 | 55.19 |
| 2022-23 | 2534 | 2929 | 11.00 | 19.86 | 28.41 | 81.42 |

10. In response to query raised by the Commission in Daily Order 5.03.2024, the Petitioner GUVNL has filed its response to query of the Commission as under:

10.1. It is submitted that in pursuance to the Daily Order dated 05.03.2024, wherein the Commission has sought details regarding the working of O&M cost in terms of the Supplementary Agreement and details of past SHR, Auxiliary Power Consumption as well as O&M cost incurred by the 2 x 125 MW lignite based power plant of the Respondent, Gujarat Mineral Development Corporation (hereinafter 'GMDC').

10.2. It is submitted that renegotiation of the Power Purchase Agreement dated 19.02.2000 read with Supplementary Agreement dated 17.12.2014 (hereinafter collectively 'PPA') is being done by GUVNL with GMDC in line with approval accorded vide letter dated 06.01.2023 by the Government of Gujarat read with the Minutes of Meeting dated 12.08.2022 held between the Government of Gujarat, GUVNL and GMDC. The renegotiation of the following parameters has been agreed to by the Government of Gujarat:

- a. Operation and Maintenance expenditure
- b. Return on Equity
- c. Station Heat Rate
- d. Auxiliary Consumption

- 10.3. It is submitted that in terms of the above that the Supplementary Agreement is entered into by GUVNL and GMDC on 05.09.2023 for amendments of the PPA dated 19.02.2000 read with Supplementary Agreement dated 17.12.2014.
- 10.4. The operation and maintenance expenses of the Project were as per the formula in the PPA to Rs. 24.04 lakh per MW for FY 2021-2022. GMDC has sought revision in Operation and Maintenance expenses from Rs. 24.04 lakh per MW for FY 2021-22 with escalation based on WPI and CPI index to Rs. 32.50 Lakh per MW for FY 2022-23 with escalation of 5.72% in subsequent years.
- 10.5. In terms of the Gujarat Electricity Regulatory Commission (Multi-Year Tariff) Regulations, 2016 the MYT Regulations, O & M expenses was Rs. 33.72 lakhs per MW for new stations with escalation of 5.72%. GMDC has sought Rs. 32.50 lakhs per MW for FY 2022-23 which was lower.
- 10.6. The differential fixed cost payable on account of revised O&M cost of Rs, 32.50 lakhs per MW for FY 2022-23 & (Rs.32.50 lakhs per MW plus annual escalation of 5.72% p.a. in subsequent years) is about Rs. 14 Crores (around 8.70 Crore for FY 2022-23 & around Rs. 5.31 Crore for FY 2023-24).
- 10.7. The effective date of the SPPA has been agreed to be 01.04.2022, in the event of the Approval of the Supplementary Agreement by the Commission, the eligible differential Fixed Cost for the past period would be raised by GMDC in its monthly invoice and same shall be passed on to end consumer as a past period dues in FPPPA calculated / claimed by GUVNL for respective period. Average generation of all generators under GUVNL for 1 quarter (3 months) during last 2 years is around 30498 MUs. Hence the impact on 30498 MUs of Rs. 14 Crores (differential Fixed Cost payable on account of revised O&M cost as per SPPA) would lead to increase of Rs. 0.0046 per KWh. The incremental financial implication on account of increase in O&M Cost from Rs. 24.04 lakh

per MW to Rs. 32.50 Lakh per MW in regular monthly invoices of GMDC w.e.f. FY 2024-25 will even lower than that of Rs.0.0046 per KWh i.e. diff Fixed Cost payable for FY 22-23 & FY 23-24 on account of revised O&M cost as per SPPA.

10.8. It is submitted that power from GMDC's 2 x 125 MW lignite based power plant is amongst the lowest of lignite based stations in Gujarat as per the merit order dispatch Protocol, however, the availability from the project is not optimal leading to GUVNL to procure electricity from other sources. GUVNL is required to procure the shortfall in power from incremental costlier sources such as marginal generating stations, short term markets including power exchanges which results in increase in overall power purchase cost which burdens the end consumers. If there is improvement in the plant performance in terms of SPPA, the resultant increase in incremental generation by the GMDC will be cheaper power and GUVNL can avoid buying costlier power from other sources.

11. Heard the parties. The present Petition has been filed by the Petitioner for approval of amendment to the Power Purchase Agreement dated 19.02.2000 read with supplemental agreement dated 17.12.2014 executed between the Petitioner and the Respondent for procurement of power from 2x125 MW lignite based thermal plant established by the Respondent GMDC at Akrimota, Kutchh, Gujarat.

11.1. The original PPA executed between the Petitioner and the Respondent on 19.02.2000 and commencement of the supply as per the PPA started from May 2006. The Commission in its Order dated 10.10.2000 in case no. 19 of 1999 directed the Petitioner to attempt to reduce the cost of power procurement from the IPP through consultative process. In response to above, the Government of Gujarat constituted negotiation committee to discuss various parameters of the PPAs with IPPs, the negotiation committee and GMDC, Respondent have discussed and reached on modifications of certain parameters of PPAs. The committee has submitted its report to the

Government of Gujarat and the same was approved by the Government of Gujarat. Accordingly, both Petitioner and the Respondent agreed to revise certain technical parameters stated in the PPAs and thereafter signed supplemental PPA dated 17.02.2014 was executed.

11.2. The Respondent has approached to Government of Gujarat and stated that various parameters in PPA are not achievable by the GMDC and it suffer facing substantial loss. The various meetings held regarding additional capitalization and renegotiation of the PPA entered into between GMDC and GUVNL officials under the chairmanship of Principal Secretary, Energy and Petrochemicals Dept., GoG.

11.3. In their renegotiation of the PPA various following parameters were discussed and reached an agreement between the parties for revision of parameters. The same are stated below:

1. Operation and maintenance expenditure
2. Return on Equity
3. Station Heat Rate
4. Auxiliary Consumption

11.4. It was also agreed that the Petitioner and the Respondent shall seek approval of the Board of Directors of the their companies and signed supplementary agreement which shall be subject to approval of the Commission. After obtaining of approvals from the boards of the Petitioner and the Respondent, they approached to Government of Gujarat, E&PD wherein E&PD has vide its letter dated 6.01.2023 informed as under:

"2. Accordingly, Government has accorded an approval to the proposal of GUVNL regarding Modification of terms of Power Purchase Agreement executed between GMDC and GUVNL for GMDC's Akrimota Thermal Power Station (ATPS) subject to the approval of Hon'ble Gujarat Electricity Regulatory Commission(GERC).

Further, in implementation of the same, any direct or indirect financial assistance towards increase in the project cost will not be provided by the State Government"

In the aforesaid letter the Government of Gujarat accorded an approval for modification with terms and conditions of PPA executed between GMDC and GUVNL subject to approval of the Commission. Further, it is stated that an implementation of the same any direct and indirect financial assistance towards increase in the project cost will not be provided by the State Government.

11.5. The Petitioner and Respondent have entered into supplemental PPA dated 6.09.2023 after approval from the Government of Gujarat, E&PD.

11.6. The Petitioner has thereafter, by way of the present petition approached the Commission for approval of supplemental PPA dated 6.09.2023 executed between Petitioner and the Respondent.

11.7. As the Petitioner and the Respondent have approached the Commission by way of the present Petition, the Commission vide its Order dated 29.12.2023 directed to the Petitioner to issue public notice in two daily newspapers and one English newspaper and upload the present petition on website of the Petitioner and invite comments and suggestions from the stakeholders.

11.8. The Petitioner has in compliance of aforesaid decision/directives issued public notice in two Gujarati Newspaper i.e. Gujarat Samachar and Sandesh dated 3.01.2024 and one English newspaper, i.e. Indian Express on dated 3.01.2024 and uploaded Petition on its website. The Petitioner has filed an affidavit in support of aforesaid submission. Thus, the Petitioner has complied with the directives of the Commission. The Petition was also uploaded on the website of the Commission and invited comments and suggestions on it.

11.9. Neither the Petitioner nor the Commission received any objections/suggestions on the Petition and amendment in various clauses of PPA agreed by way of supplemental PPA.

11.10. Now we deal with the issue pertaining to amendment of PPA dated 19.02.2000 read with supplemental PPA dated 17.12.2014 executed between the Petitioner and the Respondent with consideration of provisions of PPA and other aspects.

11.11. It is submitted by the Petitioner that it is anticipated that power from the Respondent's plant would be cheaper in compared to other lignite based power station and would fall with merit Order dispatched.

11.12. We note that the Supplemental PPA executed between the parties are subject to approval of the Commission in terms of clause 19 of the PPA and Section 86 (1) (b) of the Electricity Act, 2003, which reads as under:

“.....

Article 19.1 of PPA

“ 19.1 AMENDMENTS

“This PPA shall not be amended except by written agreement between the Parties and no other purported amendment shall be effective.”

As per aforesaid provision the PPA shall be amended by written agreement between the parties.

Section 86 (1) (b)

“Section 86. (Functions of State Commission): --- (1) The State Commission shall discharge the following functions, namely: -

(b) regulate electricity purchase and procurement process of distribution licensees including the price at which electricity shall be procured from the generating companies or licensees or from other sources through agreements for purchase of power for distribution and supply within the State;"

The aforesaid provision provides that the power procurement of the Distribution Licensee is a regulated activity. The State Commission is required to Regulate the procurement of power consist of quantum, price and source of the power. Thus, it is mandatory condition to approve the power procurement if any carried out by the distribution licensee. In the present case the Petitioner and the Respondent agreed for amendment in the PPA by signing the Supplemental PPA as per the Minutes of Meeting of 12 August 2022 under Chairmanship of Principal Secretary, EPD and Representative of GUVNL and GMDC.

11.13. Now we deal with the agreed parameters revised between the parties one by one.

1. Operation and Maintenance Expresses:

Article 10.5.4 of the PPA dated 19.02.2000 readwith supplemental PPA dated 17.12.2014 provides for operation and maintenance expenses and insurance expenses as under:

"10.5.4 O&M Expenses and Insurance Expenses

The O&M Expenses and Insurance Expenses in any month "m" shall be calculated as under:

$$OME = \frac{\Sigma (CC_u \times 0.02 \times d \times F_{ESC})}{365} \times F_{esc} + INS$$

$$Such\ that\ OME \leq \frac{(0.03 \times CC_u) \times d \times F_{ESC}}{365}$$

$$INS \leq \frac{(0.01 \times CC_u) \times d}{365}$$

F_{ESC} = 1 for the first full year of operation after the Entry into Commercial Service of each Unit and

$$F_{ESC} = (0.7 WPln + 0.3 CPln) \div (0.7 WPln + 0.3 CPln) \text{ or } (1.1)^{p-1}$$

Whichever is lower for each succeeding year.”

As per aforesaid provisions the Petitioner has submitted that the O&M expenses computed with aforesaid formula works out to Rs. 24.04 Lakhs/MW for FY 2021-22.

The Respondent sought revision in the said expenses from Rs. 24.04 Lakhs/MW for FY 2021-22 with escalation raised by WPI and CPI Index to Rs. 32.50 Lakhs/MW for FY 2022-23 with escalation of 5.72% in subsequent year.

The Petitioner has relied upon the GERC (MYT) Regulations, 2016 and stated that O&M expenses for new lignite based power-stations for FY 2020-21 is Rs. 33.72 Lakhs/MW. However, the Respondent has sought the O&M charges as Rs. 32.50 Lakhs/MW for FY 2022-23, which was lower. The escalation rate of 5.72% per annum in sub-subsequent year is in accordance with GERC (MYT) Regulations, 2016. The parties agreed that the O&M expenses of Rs. 32.50 Lakhs per MW for FY 2022-23 with escalation of 5.72% per annum in sub-subsequent year.

The O&M expenses allowed by the Commission for other lignite based generating station in FY 2021-22 are as under:

- a. *GIPCL SLPP I : Rs. 35.61 lakh per MW for the FY 2021-22 with escalation based on WPI and CPI Index*
- b. *GIPCL SLPP II : Rs. 37.73 lakh per MW for FY 2021-22 with escalation of 5.72% for subsequent years*
- c. *BLTPS: Rs.35.65 lakh per MW for FY 2021-22 with escalation of 5.72% for subsequent years*
- d. *GSECL KLTPS 3: Rs.22.74 lakh per MW for FY 2021-22 with escalation of 5.72% subsequent years*
- e. *GSECL KLTPS4 : Rs.26.44 lakh per MW for FY 2021-22 with escalation of 5.72% for subsequent years*

From the above, the following observations are made,

- O&M expenses approved for (i) GIPCL SLPP I, (ii) GIPCL SLPP II and (iii) BLTPS for FY 2021-22 are higher than that agreed between the

parties by way of amendment O&M expenses of Rs. 32.50 Lakhs per MW for the Respondent Power Plant.

- In case of GSECL KLTPS III the same is allowed Rs. 22.74 per MW for FY 2021-22 with escalation of 5.72% p.a., it works out to Rs. 24.04 Lakhs/MW for FY 2022-23.
- While in case of GSECL KLTPS IV the same is allowed Rs. 26.44 per MW for FY 2021-22 with escalation of 5.72% p.a., it works out to Rs. 27.95 Lakhs/MW for FY 2022-23.

11.14. Thus, it is clear that O&M expenses allowed by the Commission for lignite-based power plant in the State for State PSU are different and distinct from each other and it varies between Rs. 22.74 lakhs/MW to 37.73 lakhs/MW for FY 2021-22.

11.15. We also note that the plant/unit capacity of KLTPS III and KLTPS IV is of 75 MW. While the plant/unit capacity of GIPCL SLPP I & II is of 125 MW. Further, the capacity of BLTPS is of 250 MW.

11.16. The Petitioner and the Respondent have also submitted the O&M expenses, Auxiliary Consumption and Station Heat Rate allowed by the Commission for the Respondent lignite based power plants are in variance FY 2013-14 to 2023-24 which are stated in Table below:

| Financial Year | Heat Rate | | APC | | O & M Cost | |
|----------------|---------------------|-------------------|--------------|------------|---------------------|-------------------|
| | Approved (kCal/kWh) | Actual (kCal/kWh) | Approved (%) | Actual (%) | Approved (Rs. Crs.) | Actual (Rs. Crs.) |
| 2013-14 | 2553 | 2528 | 11.00 | 16.60 | 23.84 | 54.24 |
| 2014-15 | 2563 | 2571 | 11.00 | 15.11 | 35.70 | 56.40 |
| 2015-16 | 2562 | 2714 | 11.00 | 15.31 | 38.58 | 57.86 |
| 2016-17 | 2556 | 2756 | 11.00 | 15.59 | 38.46 | 57.76 |
| 2017-18 | 2558 | 2653 | 11.00 | 15.60 | 38.08 | 95.90 |
| 2018-19 | 2527 | 2957 | 11.00 | 17.75 | 33.17 | 59.39 |
| 2019-20 | 2502 | 3590 | 11.00 | 25.26 | 19.85 | 49.02 |
| 2020-21 | 2500 | 3867 | 11.00 | 32.51 | 11.09 | 50.95 |
| 2021-22 | 2516 | 3165 | 11.00 | 22.06 | 18.20 | 55.19 |

| Financial Year | Heat Rate | | APC | | O & M Cost | |
|----------------|---------------------|-------------------|--------------|------------|---------------------|-------------------|
| | Approved (kCal/kWh) | Actual (kCal/kWh) | Approved (%) | Actual (%) | Approved (Rs. Crs.) | Actual (Rs. Crs.) |
| 2022-23 | 2534 | 2929 | 11.00 | 19.86 | 28.41 | 81.42 |

11.17. As per aforesaid table it seems that the O&M cost approved vs. actual expenses done by the Respondent are in variance from year to year. Following inferences are drawn from the aforesaid details.

- 1) The O&M cost approved in FY 2013-14 as Rs. 23.84 Crores while actual expenses were Rs. 54.24 Crores. The same was increased upto FY 2016-17 on year to year basis, so far as approved cost is concerned and actual cost is increased upto FY 2015-16.
- 2) The approved actual expenses for FY 2017-18 was Rs. 38.08 Crores while actual expenses was substantial high in comparison to earlier year i.e. Rs. 95.90 Crores.
- 3) For FY 2018-19 it was Rs. 33.17 Crores approved, while actual is Rs. 59.39 Crores, which is substantially lower than actual expenses done in FY 2017-18 by the Respondent.
- 4) For FY 2019-20 the O&M expenses approved as Rs. 19.85 Crores while actual was further reduced to Rs. 49.02 Crores from previous year i.e. FY 2018-19 by the Respondent.
- 5) In FY 2020-21 approved O&M expenses was Rs. 11.19 Crores while actual was Rs. 50.95 Crores, which is higher than previous year, so far as actual expenses is concerned and approved expenses are lower in comparison to previous year, i.e. FY 2018-19.
- 6) In FY 2021-22 the O&M expenses approved as Rs. 18.20 Crores while actual expenses by the Respondent is higher in comparison to previous year, i.e. FY 2021-22.
- 7) In FY 2022-23 the approved O&M expenses was Rs. 28.41 Crores, while actual O&M expenses was Rs. 81.42 Crores.

From the above, it is clear that the approved O&M expenses are vary from year to year initially from FY 2013-14, it was increased for 4 years. Thereafter, it is reduced for 4 years and thereafter, it is further increased for 2 years. Similarly, in case of actual expenses for initial 4 years, it is incremental expenses seems while in 5th year huge O&M actual expenses stated which is abnormal and quite higher and thereafter, it was reduced for 2 years and thereafter, it is further increase for further 3 years.

11.18. It is noted that O&M expense for FY: 2017-18 and FY: 2022-23 are on higher side and as such no reasons were provided either by the Petitioner or Respondent.

11.19. We note that the O&M expenses which was agreed between the parties in the PPA are specify as under:

“10.5.4 O&M Expenses and Insurance Expenses

The O&M Expenses and Insurance Expenses in any month "m" shall be calculated as under:

$$OME = \Sigma \left(\frac{CC_u \times 0.02 \times d \times F_{ESC}}{365} \right) \times F_{esc} + INS$$

$$\text{Such that } OME \leq \frac{(0.03 \times CC_u) \times d \times F_{ESC}}{365}$$

$$INS \leq \frac{(0.01 \times CC_u) \times d}{365}$$

F_{ESC} = 1 for the first full year of operation after the Entry into Commercial Service of each Unit and

$$F_{ESC} = (0.7 WPln + 0.3 CPln) \div (0.7 WPln + 0.3 CPln) \text{ or } (1.1)^{p-1}$$

Whichever is lower for each succeeding year.”

11.20. We note that the aforesaid formula is agreed by the Petitioner and the Respondent to make applicable upto 31.03.2022 which is a formula provided in the PPA dated 19.02.2000 agreed between the parties and thereafter, they have agreed in Supplemental PPA dated 06.09.2023 that from 1.04.2022 the

O&M expenses shall be Rs. 32.50 lakhs/MW for FY 2022-23 with escalation of 5.72% per annum for subsequent year.

11.21. We note that the O&M expenses is one of the important components of the tariff provided for carryout expenses by the generator to maintain its plant in proper and efficient manner.

11.22. The O&M expenses consist of (i) Administrative & General Expenses and (ii) R & M components.

11.23. We note that from the data submitted by the Petitioner and the Respondent the O&M expenses approved on year-to-year basis declining after FY 2019-20 to FY 2021-22, while the expenses incurred by the Respondent are higher in comparison to approved O&M expenses. However, the reasons for such variance is neither given by the Petitioner nor Respondent.

11.24. The lower O&M expenses may affect the O&M activity carried out by the Respondent to maintain its plant in efficient manner.

11.25. The Respondent has sought relaxation in operational and tariff parameters by way of re-negotiation of PPA executed by it with Petitioner. A committee under the chairmanship of principle secretary, E&PD, GoG held the meeting with the official of E&PD, GUVNL and GMDC, who have re-negotiated on PPA parameters and agreed to following conditions:

Annexure – C

MINUTES OF MEETING HELD on 12 August 2022 under the chairmanship of Principle Secretary - EPD at Energy & Petrochemical Department (EPD), Block No:5, 5th Floor, Sachivalaya, Gandhinagar to discuss the matter of Re-negotiation of Terms of Power Purchase Agreement executed between GMDC and GUVNL for GMDC's Akrimota Thermal Power Station (ATPS).*

Following official of EPD, GUVNL, GMDC were present.

| | | |
|---|--|--|
| <p>EPD Smt. Mamta Verma, IAS, Principal Secretary-Energy & Petrochemical Department</p> | <p>GUVNL Shri Jai Prakash Shivahare, IAS, M.D. GUVNL</p> | <p>GMDC Shri Roopwant Singh, IAS, M.D. GMDC</p> |
| <p>Shri Dipesh Raj, Section Officer, Energy & Petrochemical Department</p> | <p>Smt. Sailaja Vachhrajani, GM (RE& IPP)</p> | <p>Shri H.K.Joshi, Sr.GM (Tech) Shri J N Dave, GM (Power) Smt Anupama Iyer, GM (Fin)</p> |

GUVNL has executed a Power Purchase Agreement with GMDC on 19th February 2000 for their 2x125 MW Lignite based power plant located at Akrimota, Kutchh on cost plus based tariff mechanism. MD, GMDC informed that they have been supplying power to GUVNL since 2006/2007 and the tariff has been the lowest amongst the overall power procurement portfolio of GUVNL. He further submitted that on account of the stringent terms in PPA and technical issues faced by GMDC the PPA has not been able to achieve its stipulated objectives. GMDC is barely able to supply 40 - 50% of the intended power supply in a year. Hence GUVNL would have purchased costlier power in the last 15 years. On the other side, GMDC has not been able to recover its actual cost of generation leading to heavy loss. It was further stated that given the grave difficulties in managing reliable supply in the recent past, it is critical that the state must ensure self-sufficiency in its fuel and power related requirements. Therefore GMDC sought relaxation in operational and tariff parameters by way of renegotiation of the PPA executed with GUVNL. GMDC has also proposed to incur additional capital cost of about Rs.293 Crores in order to improve the availability and performance of the plant and supply more reliable and continuous power to GUVNL.

In this context, a meeting was held on 2-6-2022 under the chairmanship of Hon'ble Principle Secretary (EPD) wherein the various problems faced by GMDC were discussed and GMDC requested for renegotiation of the PPA executed with GUVNL. In view of the various difficulties being faced by GMDC and GUVNL's need for more firm and reliable supply of power from base load stations, it was felt that it is imperative to improve the performance of GMDC's ATPS at the earliest. Hon'ble PS(EPD) directed GUVNL and GMDC to discuss their issues and come to an amicable solution. Thus a meeting was held on 8-6-2022 in the chamber of M.D., GUVNL Detailed discussion was held in the matter of various aspects of PPA. Subsequently another meeting was held on 12-08-2022 in the chamber of Principal Secretary - Energy & Petrochemical Department wherein the following issues were discussed in the matter of Renegotiation of Terms of PPA executed between GMDC and GUVNL.

- 1. Renegotiation of PPA between GMDC and GUVNL: GMDC submitted that the power supply from their plant is cheapest in merit order in the state and their plant is one of the best machines available for lignite based power generation. However, stringent norms of PPA executed with GUVNL and certain technical constraints lead to techno commercial issues which impacted the availability of their station. As a consequences, GMDC was not able to recover its Fixed Charges and at the same time GUVNL had to rely on costly power purchase from marginal supplier. GMDC has submitted broad summary of their proposal and*

compared various operational & tariff parameters of their plant with other lignite based power plants in the state. A statement showing comparison of parameters of different lignite based power plants, GMDC's request and applicable GERC norms was submitted by GUVNL.

1.1. GMDC has sought revision in O&M expenses from Rs. 24.04 lakh / MW for FY 2021-22 with escalation based on WPI & CPI index to Rs. 32.50 Lakh / MW for FY 2022-23 with escalation of 5.72% in subsequent years. Considering the O&M expenses allowed for other lignite based plant such as GIPCL SLPP - I & II, BLTPS and GERC norms for the same under GERC Multi Year Tariff Regulation 2016 dated 27-3-2016, it was agreed to revise O&M expenses to Rs. 32.50 Lakh / MW for FY 2022-23 with escalation of 5.72% p.a. in subsequent years.

1.2. As regards to GMDC's request to allow Return on Equity @ 14% instead of 13%, the same was agreed keeping in view the existing GERC MYT 2016 Regulation.

*1.3. GMDC has requested for revision in Station Heat rate from existing SHR of 2400 KCal /KWh with moisture correction to 2900 KCal /KWh and 0.5% degradation every year. GUVNL informed that the normative SHR as per GERC MYT Regulation 2016 is equal to 1.045 * Design Heat Rate. Since the design heat rate of GMDC is 2361.16 KCal /Kwh the allowable heat rate works out to 2467 KCal / KWh. GMDC represented that corrosive oxides of sulphur and chlorides are present in the coastal saline atmosphere and hence the plant is exposed to very high deterioration rate. It was further informed that the plant is designed for GCV of 3200 KCal / Kg of lignite whereas they are actually receiving GCV in the range of 2800 to 2900 KCal / Kg. GUVNL stated that the maximum SHR considering moisture correction as per the terms of the PPA works out to 2713 Kcal KWh (2467 * 1.10). It was therefore agreed to revise SHR to 2713 KCal /KWh irrespective of moisture content for the balance period of the PPA.*

1.4. GMDC has sought revision in Auxiliary Consumption from 11% to 12% from FY 2022-23 & 13% w.e.f. FY 2027-28 onwards, GMDC once again submitted that due to the above stated issues relating to deterioration and life of the plant, the Auxiliary Consumption increased heavily. GUVNL stated that since huge capital expenditure is being proposed for improvement for performance parameters, GMDC should be in a position to improve the Auxiliary Consumption. In view of the same, no increase can be allowed.

However upon insistence by GMDC and considering the Auxiliary Consumption allowed for other lignite based plant such as GIPCL SLPP II, GSECL KLTPS- 3 & 4, it was agreed to revise Auxiliary Consumption to 11.5%.

1.5. As against GMDC's request for allowance of one time capital expenditure of Rs. 293 Crores in FY 2022-23 and recurring additional expense of Rs. 1 crores per month with a limit of Rs. 12 Crores per annum from FY 2023-24 onwards, GMDC was advised to approach GERC for the approval for one time capital expenditure of Rs.293 Crores in FY 2022-23. With regard to proposal of recurring capital expenditure of Rs.12 crores per annum, it was agreed that there cannot be such recurring capex in cost plus PPAs. Since GUVNL has agreed to increase the payment towards O&M expenses substantially, such expenses may be met out of the same.

1.6. It is agreed that GMDC shall approach GERC for approval of additional capital expenditure of Rs.293 Crores. As far as renegotiation of PPA with GMDC is concerned,

GUVNL and GMDC will seek approval of Board of Directors and accordingly sign supplementary agreement with GMDC which shall be subject to GERC's approval. GUVNL shall file petition before GERC for approval of the Supplementary Agreement signed with GMDC.

A summary of the negotiated parameters agreed during the meeting is as under:

| No. | Parameter | Decision |
|-----|--|---|
| 01 | GMDC requested for O&M Expenses (including Insurance Expense) to be provided as per GERC tariff regulation 2016 | It was agreed to increase the O&M expenses to Rs. 32.50 Lakh/MW for FY 2022-23 (plus annual escalation of 5.72% p.a in subsequent years) |
| 02 | GMDC requested for Return on Equity to be revised to 14% from current level of 13% | All Members agreed to increase Return on Equity to 14%. |
| 03 | GMDC requested for relaxation in Station Heat Rate (SHR) to 2900 kCal/kWh from current level of 2400 kCal/kWh | All Members present agreed to revise SHR to a fixed rate of 2713 kCal/kWh including moisture correction |
| 04 | GMDC requested for relaxation in Auxiliary Power Consumption (APC) to 12% from current level of 11% | All Members present agreed to revise APC to 11.5% |
| 05 | GMDC requested to approve one-time additional Capital Expenditure of about Rs. 300 Cr | It was agreed that GMDC shall seek approval of Hon'ble GERC for additional project cost. |
| 06 | GMDC requested to approve additional CAPEX of Rs 1 Cr/Month for regular upkeep of power plant from FY2023-24 onwards | GUVNL stated that there cannot be recurring cape in cost plus PPAs. It was agreed that GMDC shall meet such expenses out of the increased O&M expenses already agreed by GUVNL. |
| 07 | GMDC requested for relaxation in Rebate of 2.0% if payment within 7 days | GUVNL did not agree to the same. |

Hon'ble Principal Secretary, EPD stated that GMDC shall endeavour to improve the performance parameters as well as the availability of the plant and bring them to better than normative levels in order to justify the additional capital cost and to increase the quantum of reliable power supply from Akrimota plant to GUVNL.

The meeting was concluded with vote of thanks.

EPD

Sd/-

Smt. Mamta Verma, IAS,

Principal Secretary-Energy &
Petrochemical Department

GUVNL

Sd/-

Shri Jai Prakash Shivahare,
IAS,

M.D. GUVNL

Sd/-

GMDC

Sd/-

Shri Roopwant Singh, IAS,

M.D. GMDC

Sd/-

*Smt. Sailaja Vachhrajani,
GM (RE& IPP)*

Shri H.K.Joshi, Sr.GM (Tech)

*Sd/-
Shri Dipesh Raj,*

*Sd/-
Shri J N Dave, GM (Power)*

*Section Officer, Energy &
Petrochemical Department*

*Sd/-
Smt Anupama Iyer, GM (Fin)*

11.26. From the above, it is clear that the committee has recorded that O&M expenses increased of the Petitioner plant to Rs. 32.50 lakhs/MW for FY 2022-23 with escalation of 5.72% per annum for sub-sequent year.

11.27. We note that the provision made for O&M expenses in MYT Regulations 2016 are as under:

54. Operation and Maintenance expenses for thermal Generating Stations

Existing Generating Stations

c) The Operation and Maintenance expenses excluding water charges and including insurance, shall be derived on the basis of the average of the actual Operation and Maintenance expenses excluding water charges and including insurance for the three (3) years ending March 31, 2015, subject to prudence check by the Commission.

d) The average of such operation and maintenance expenses excluding water charges and including insurance shall be considered as operation and maintenance expenses excluding water charges and including insurance for the financial year ended March 31, 2014 and shall be escalated year on year at the escalation factor of 5.72% to arrive at operation and maintenance expenses excluding water charges and including insurance for subsequent years up to FY 2020-21:

Provided that water charges shall be allowed separately as per actuals, subject to prudence check:

Provided further that in case an existing generating station has been in operation for less than three (3) years as on the date of effectiveness of these Regulations, the O&M Expenses shall be allowed as specified under Regulation 55 for New Generating Stations.

55. New Generating Stations

b) For lignite based generating stations:

Table 11: O&M Expense Norms of New Lignite based Generating

Stations for the Control Period(Rs. Lakh/MW)

| <i>Particulars</i> | <i>O&M Expense Norms</i> |
|--------------------|------------------------------|
| <i>FY 2016-17</i> | <i>27.00</i> |
| <i>FY 2017-18</i> | <i>28.54</i> |
| <i>FY2018-19</i> | <i>30.18</i> |
| <i>FY 2019-20</i> | <i>31.90</i> |
| <i>FY 2020-21</i> | <i>33.72</i> |

11.28. As per aforesaid Regulations the O&M expenses for new lignite-based power plant works out to Rs. 33.72 lakhs per MW for FY 2020-21. The escalation factor for such plant is 5.72 %. The Respondent has sought O&M expenses of Rs. 32.50 lakhs per MW for FY 2022-23 and it was agreed by the Petitioner.

11.29. We also note that the Petitioner has submitted the O&M expenses allowed by them for different power plant in the State are as under:

- a. GIPCL SLPP I : Rs. 35.61 lakh per MW for the FY 2021-22 with escalation based on WPI and CPI Index
- b. GIPCL SLPP II : Rs. 37.73 lakh per MW for FY 2021-22 with escalation of 5.72% for subsequent years
- c. BLTPS: Rs.35.65 lakh per MW for FY 2021-22 with escalation of 5.72% for subsequent years
- d. GSECL KLTPS 3: Rs.22.74 lakh per MW for FY 2021-22 with escalation of 5.72% subsequent years
- e. GSECL KLTPS 4 : Rs.26.44 lakh per MW for FY 2021-22 with escalation of 5.72% for subsequent years

11.30. From the above, it is clear that the O&M expenses for lignite based power plant of GIPCL SLPP I was higher in FY 2020-21 than the allowed O&M expenses to the Respondent plant. The escalation factor is based on WPI and CPI index. While in case of GIPCL (SLPP II) and BLTPS the O&M expenses are higher than the Respondent plant during FY 2021-22 and its escalation factor for subsequent year is 5.72%, which is seems as per MYT Regulations 2016 of the Commission. Similarly, in case of GSECL KLTPS III & IV, the O&M expenses allowed for the Respondent plant is higher and escalation on it

granted 5.72%, which seems as per MYT Regulations, 2016 notified by the Commission. Thus, it seems that the O&M expenses allowed to lignite-based plant by the Petitioner is higher than the O&M expenses granted to the Respondent plant during FY 2021-22. Further, in four power plant the escalation is given at the rate of 5.72% for subsequent years up to FY 2023-24.

11.31. We note that as stated above, in the negotiation committee the Petitioner and the Respondent have agreed for O&M expenses for the Respondent plant is Rs. 32.50 lakhs/MW for FY 2022-23 with escalation of 5.72% for subsequent year. We note that the aforesaid rate is higher than the O&M expenses approved for the KLTPS III and IV unit of 75 MW, while it is lower in comparison to the rates allowed for GIPCL SLPP I & II unit of 125 MW and BLTPS units. We note that the O&M cost agreed between the parties is helpful for maintaining the power plant in good condition and generate electricity with desired/envisage efficiency, PLF which is helpful to receive the electricity at lower rate by the Petitioner. Hence, we are of view that the proposed O&M of Rs. 32.50 lakhs/MW for FY 2022-23 is approved as prayed by the Petitioner and Respondent in supplemental PPA.

11.32. The Petitioner and the Respondent have agreed as per MoM, O & M cost and escalation unit at the rate of 5.72% per annum as per MYT Regulations, 2016. As the parties agreed to escalation factor of 5.72% as per MYT Regulations, 2016 the same shall be as per MYT Regulations only and not as agreed between the Petitioner and the Respondent at the rate of 5.72% per annum for rest of the life of plant. It must be as per MYT Regulations notified and effective prevalent at relevant time. Hence, the Petitioner and the Respondent required to revise the escalation on O & M cost shall be as per prevalent MYT Regulations provision and not at the rate of 5.72% per annum fixed for life of the project/plant.

11.33. We note that the Petitioner and the Respondent have agreed for amendment in O&M expenses and escalation on it in the supplemental PPA dated 06.09.2023 from 1.04.2022, while in case of other parameters it was agreed to amend from the date of agreement i.e. 06.09.2022. Thus, except the O&M cost which was agreed to amend from 01.04.2022. We note that the retrospective effect in O&M expenses will lead to payment of differential amount of O&M expenses by Petitioner and the same is also reflected in the ARR/True-up of the licensee, which affect consumer tariff. Hence, we are of the view that the effective date of O&M expenses shall be as per the effective date of the PPA i.e. 6.09.2023.

11.34. Based on above, we decide that the O&M cost for the Respondent plant is Rs. 32.50 lakhs per MW with escalation on it as per the prevalent MYT Regulations. The effective date of the aforesaid provisions is from the date of supplemental agreement, i.e. 06.09.2023. The Petitioner and the Respondent are directed to make necessary changes in the supplemental agreement as decided above.

11.35. Now we deal with the issue Return on Equity (RoE) agreed between the parties and requested to approve the Return on Equity as 14% instead of 13% as per the PPA between the parties.

11.36. The Petitioner has submitted that as per the re-negotiation of the PPA between the Petitioner and the Respondent the RoE approved was 13%. The lower RoE in comparison to 14% provided in the Tariff Regulations of the Commission affected to the Respondent.

11.37. The Respondent requested for allowing 14% RoE as per the MYT Regulations of the Commission and the Petitioner was agreed for the same. It is necessary

to refer the provisions of RoE provided in the PPA and Regulations notified by the Commission are stated below:

“10.5.5 Return on Equity

The Return on Equity shall be 13% and calculated as follows:

$$RoE = \Sigma c([(Eq_c \times 0.13 \times d) \div 365]) \times F_{CAP}$$

At the end of every Year, the rate of return on Equity, on the basis of profit and loss account related to the operation of the Project, shall be verified and shall be adjusted such that it does not exceed 20% (Post Tax) of the equity amount. Any increase over 20% over the period of entire Year shall be adjusted from the first Monthly Tariff Payment of the subsequent Year.”

11.38. It is submitted that GMDC had sought for allowing the return on equity at 14% instead of 13% with effect from the date of signing of the Supplementary Agreement.

11.39. MYT Regulations, 2016 notified by the Commission provides as under for return on equity:

“37. 1 Return on equity shall be computed on the paid up equity capital determined in accordance with Regulation 33 on the assets put to use, for the Generating Company, Transmission Licensee, SLDC and Distribution Licensee as the case may be and shall be allowed at the rate of 14% for Generating Companies, including hydro generation stations above 25 MW, Transmission Licensee, SLDC and Distribution Licensee”

11.40. As per the PPA executed between the parties it is clear that the RoE at the rate of 13% available to the Petitioner. It is also necessary to refer the MYT Regulation 2016 notified by the Commission provided that RoE for the generating, company, transmission licensee, distribution licensee, SLDC shall be at the rate of 14% on equity. Thus, the agreed RoE between the parties is in accordance with the provisions of GERC (MYT) Regulations, 2016. Hence, we are of the view that the supplemental PPA executed between the parties wherein it was agreed between the parties that RoE of the Respondent plant is as 14% is approved by the Commission.

11.41. It may also be noted that as directed through Commission's Order dated 17.01.2023 in the Petition No. 2127 of 2023, the Respondent GMDC shall require to approach the Commission for approval of additional capital cost of approximately INR 293 Crore, once the work in this regard is completed.

11.42. Now we deal with the issue regarding Station Heat Rate of the plant agreed to amend by the Petitioner and the Respondent in supplemental PPA which is 2400 kCal/kWh. The Petitioner has submitted that the Respondent has claimed SHR of 2900 kCal/kWh with moisture correction and 0.5% degradation every year.

11.43. We note that the Petitioner has submitted that the lignite based power plant situated in the State which are having PPA and/or approved SHR as under:

"The SHR of other lignite based power plants as per PPA and/ or approved by the Commission are as under:

- 1)GIPCL SLPP: 2400 Kcal / KWh with moisture correction*
- 2)GIPCL SLPP Expansion: 2461 Kcal / KWh with moisture correction*
- 3)GSECL KLTPS-3 : 3231 Kcal /KWh*
- 4)GSECL KLTPS-4 : 3000 Kcal /KWh*
- 5)GSECL BLTPS: 2623 Kcal /KWh"*

11.44. It seems that the SHR of GIPCL SLPP-1 is 2400 kCal/kWh while in case of GIPCL SLPP Stage II SHR is 2461 kCal/kWh both above power plant size as of 125 MW like the GMDC plant, in case of GSECL KLTPS-3 SHR is 3221 kCal/kWh, in case of GSECL KLTPS- 4 SHR is 3000 kCal/kWh, both GSECL two plant capacity is 75 MW only, we also note that in case of GSECL BLTPS SHR is 2623 kCal/Kwh, which having plant size of 250 MW. From the above, it is clear that the SHR of GIPCL SLPP 1 and 2 are quite lower than the SHR claimed by the Respondent of the same size of power plant. Further, it is lower in comparison to SHR of GSECL KLTPS III and IV unit. However, it is higher in comparison to GSECL BLTPS unit. The SHR of the plant is

dependent on the designed heat rate as per OEM manual and also on the moisture content of the fuel used for generation of electricity.

11.45. It is necessary to refer the existing clause with regard to Station Heat Rate in PPA dated 19.02.2000 readwith supplemental agreement dated 17.12.2014 reads as under:

| | | | |
|--------------------------|------------|--|----------------------------|
| <i>Station Heat Rate</i> | <i>SHR</i> | <i>shall mean the Station Heat Rate of the Unit expressed in K. Cal. per KWh. The relevant values shall be as under:</i> | |
| | | <i>During Stabilisation Period</i> | <i>2800 K. Cal per KWh</i> |
| | | <i>After Stabilisation Period</i> | <i>2400 K. Cal per KWh</i> |
| | | <i>The values of SHR will be subject to correction as per following multiplying factors corresponding to different moisture contents of Lignite:</i> | |
| | | <i>Moisture Contents of Lignite</i> | <i>Multiplying Factor</i> |
| | | <i>00.0 %</i> | <i>1.00</i> |
| | | <i>30.0%</i> | <i>1.04</i> |
| | | <i>40.0%</i> | <i>1.07</i> |
| | | <i>50.0%</i> | <i>1.10</i> |

11.46. The Petitioner has referred MYT Regulations 2016 wherein the SHR for existing coal based plant and lignite based plant provided as under:

"53.4 Gross Station Heat Rate - For new Generating Units or stations achieving COD after the effectiveness of these Regulations:

(i) Coal-based and lignite-fired Thermal Generating Stations

= 1.045 X Design Heat Rate (kcal/kWh)

Where the Design Heat Rate of a generating unit means the unit heat rate guaranteed by the supplier at conditions of 100% MCR, zero percent make up, design coal and design cooling water temperature/ back pressure.

| | | | | |
|--|--------------------------|-----------------------|-----------------------|-----------------------|
| <i>Provided that the design heat rate shall not exceed the following maximum design unit heat rates depending upon the pressure and temperature ratings of the units: Pressure Rating (Kg/ cm²)</i> | 150 | 170 | 170 | 247 |
| <i>SHT/RHT</i> | <i>535/535</i> | <i>537/537</i> | <i>537/565</i> | <i>565/593</i> |
| <i>Type of BFP</i> | <i>Electrical Driven</i> | <i>Turbine Driven</i> | <i>Turbine Driven</i> | <i>Turbine Driven</i> |
| <i>Max Turbine Heat Rate (kcal/ kWh)</i> | <i>1955</i> | <i>1950</i> | <i>1935</i> | <i>1850</i> |
| <i>Min. Boiler Efficiency</i> | | | | |
| <i>Sub-Bituminous Indian Coal</i> | <i>0.86</i> | <i>0.86</i> | <i>0.86</i> | <i>0.86</i> |
| <i>Bituminous Imported Coal</i> | <i>0.89</i> | <i>0.89</i> | <i>0.89</i> | <i>0.89</i> |
| <i>Maximum Design Unit Heat Rate (kcal/kWh)</i> | | | | |
| <i>Sub-Bituminous Indian Coal</i> | <i>2273</i> | <i>2267</i> | <i>2250</i> | <i>2151</i> |
| <i>Bituminous Imported Coal</i> | <i>2197</i> | <i>2191</i> | <i>2174</i> | <i>2078</i> |

.....

Provided also that in case of lignite-fired generating stations (including stations based on CFBC technology), maximum design heat rates shall be increased using the multiplying factors for moisture content as given below:

- (a) For lignite having 50% moisture: 1.10*
(b) For lignite having 40% moisture: 1.07
(c) For lignite having 30% moisture: 1.04
(d) For other values of moisture content, multiplying factor shall be prorated for moisture content between 30-40% and 40-50% depending upon the rated values of multiplying factor for the respective range given under subclauses (a) to (c) above."

11.47. As per aforesaid provision of MYT Regulations, 2016 notified by the Commission provides that while deciding the SHR of new generating station or station achieved SCOD after the aforesaid Regulations the same is worked out = $1.045 \times \text{designed heat rate (kCal/kWh)}$.

11.48. Further, it is also provided that in case of lignite based generating station maximum heat rate shall be using multiplying factor for moisture content as 1.10 for lignite having 50% moisture while in case of lignite having 40% moisture the same is 1.07% while in case of lignite having 30% moisture it is 1.04%. It is also provided that other value of moisture content between 30% - 40% and 40% - 50% shall be pro-rata basis multiplying factor as stated above apply.

11.49. The Petitioner has submitted that the Respondent station was commissioned in 2006 and designed heat rate was 2361.16 kCal/kWh as per submissions by the Petitioner, GUVNL and therefore, the heat rate works out to $1.045 \times 2361.16 \text{ kCal/kWh}$ equal to 2467.4122 kCal/kWh. The Petitioner and the Respondent have agreed on aforesaid parameters which is also considered and approved by the committee constituted under Principal Secretary E&PD, GoG and Government of Gujarat has also accorded the proposal of the parties. Hence, we considered and approved the same.

11.50. We note that the Petitioner and the Respondent have agreed to give effect of the moisture content if any in the lignite utilized in the Respondent's plant while determining/deciding the SHR of the Plant. As neither the Petitioner

nor the Respondent have given any data or details of the moisture content of the lignite utilised at the Respondent's plant it is incorrect to consider 50% moisture content which is highest provided in MYT Regulations, 2016 of the Commission. The range of moisture content is given between 0% to 50% in the MYT Regulations 2016 of the Commission and accordingly multiplying factor is considered to apply as 1 to 1.10. It is also necessary to consider that the lignite which is used for generation in the plant must requires to be verified with regard to GCV and moisture content.

11.51. The Petitioner has not clarified that how the impact of moisture content of the lignite based power plant, i.e. GIPCL, KLTPS and BLTPS which all are Govt. PSU is given to the SHR of aforesaid power plant. If any deviation from it is given in that case it is a discriminatory treatment given by the Petitioner by the Respondent. Further, when the MYT Regulations 2016 on which the parties relies is a sub-legislation needs to be given effect by the person who are governed by it.

11.52. It is also necessary to keep record of such data by the Respondent and submit to the Petitioner while claiming the energy charges from the Petitioner. The moisture content as well as GCV of the lignite vary from time to time due to various reasons. However, while passing the energy charges by the Petitioner on claim of the Respondent it is necessary to verify the same. We therefore, decide and direct that the moisture content of the lignite needs to check and verified by the Petitioner and the Respondent along with GCV of the lignite and necessary certificates / test reports of lignite GCV and moisture content of lignite used for generation of electricity. With consideration of provisions of the MYT Regulations, we decide and approve correction factor for SHR value determination for different moisture content consist by the lignite used in the generation of electricity be as under:

| <u>Moisture Contents of Lignite</u> | <u>Multipling Factor</u> |
|--|---------------------------------|
| <u>00.0%</u> | <u>1.00</u> |

| | |
|---------------------|--------------------|
| <u>30.0%</u> | <u>1.04</u> |
| <u>40.0%</u> | <u>1.07</u> |
| <u>50.0%</u> | <u>1.10</u> |

11.53. Based on the above, we decide the SHR of the Petitioner's plant as 2467.4122 kCal/kWh and subject to correction as per the multiplying factor corresponding to different moisture content in the lignite used in generation of electricity stated in table above.

Auxiliary Consumption :

11.54. The Petitioner has submitted that the existing clause in the PPA dated 19.02.2000 read with Supplementary Agreement dated 17.12.2014 was as under:

| | | | |
|-----------------------|----|--|-------|
| Auxiliary Consumption | AC | shall mean the Energy consumed in the Auxiliaries of the Generating Station. The normative values will be as under : | |
| | | During Stabilisation Period | 10.0% |
| | | After Stabilisation Period | 11% |

11.55. The Respondent, GMDC has sought revision in Auxiliary Consumption from 11% to 12% from FY 2022-23 and 13% with effect from FY 2027-28 onwards. GMDC submitted that due to the issues already submitted relating to deterioration and life of the plant, the Auxiliary Consumption had increased heavily.

11.56. It is necessary to see the provisions for Auxiliary Consumption provided in the MYT Regulations. We note that MYT Regulations, 2016 provided for Station Heat Rate for existing coal-based stations and further for new stations including lignite-based stations as under:

53.7 Auxiliary Energy Consumption:

(e) New lignite-fired thermal generating stations:

(i) All generating stations with below 200 MW sets: 12%;

(ii) All generating stations with 200 MW sets and above: 0.50% more than that allowed for coal based generating stations under Table 8 above:

Provided that for the lignite fired stations using CFBC technology, the auxiliary energy consumption norms shall be 1.50% more than the auxiliary energy consumption norms of coal based generating stations as specified above.

11.57. As per aforesaid provisions the Auxiliary Consumption in lignite based power plant having capacity below 200 MW is 12% while the station with 200 MW and above is 0.50% more than the auxiliary consumption allowed for coal based power plant. The proviso provides that in the lignite fire station using CFBC technology the Auxiliary Consumption norms shall be 1.50% more than the Auxiliary Consumption of coal based generating station.

11.58. It is also necessary to see the Auxiliary Consumption of the lignite based power plant operating in the State which are as under:

GIPCL SLPP II – 11.5%

GSECL KLTPS III & IV – 12%

11.59. From the above, it is clear that the Auxiliary Consumption allowed either in PPA or by the Commission in its Order vary between 11.5% to 12%. The Petitioner and Respondent agreed the committee has recommended for revision in Auxiliary Consumption as 11.5% seems is in line with the Auxiliary Consumption of GIPCL plants.

11.60. The Petitioner and the Respondent have given the data of Auxiliary Consumption of the Respondent plant units and actual Auxiliary Consumption which are stated in earlier part of this Order:

| Financial Year | Heat Rate | | APC | | O & M Cost | |
|----------------|---------------------|-------------------|--------------|------------|---------------------|-------------------|
| | Approved (kCal/kWh) | Actual (kCal/kWh) | Approved (%) | Actual (%) | Approved (Rs. Crs.) | Actual (Rs. Crs.) |
| 2013-14 | 2553 | 2528 | 11.00 | 16.60 | 23.84 | 54.24 |
| 2014-15 | 2563 | 2571 | 11.00 | 15.11 | 35.70 | 56.40 |
| 2015-16 | 2562 | 2714 | 11.00 | 15.31 | 38.58 | 57.86 |
| 2016-17 | 2556 | 2756 | 11.00 | 15.59 | 38.46 | 57.76 |
| 2017-18 | 2558 | 2653 | 11.00 | 15.60 | 38.08 | 95.90 |
| 2018-19 | 2527 | 2957 | 11.00 | 17.75 | 33.17 | 59.39 |
| 2019-20 | 2502 | 3590 | 11.00 | 25.26 | 19.85 | 49.02 |
| 2020-21 | 2500 | 3867 | 11.00 | 32.51 | 11.09 | 50.95 |
| 2021-22 | 2516 | 3165 | 11.00 | 22.06 | 18.20 | 55.19 |
| 2022-23 | 2534 | 2929 | 11.00 | 19.86 | 28.41 | 81.42 |

11.61. It seems from the said Table that the GUVNL has approved and paid Auxiliary Consumption at the rate of 11% while actual Auxiliary Consumption may vary from year to year in year 2021 it was 32.51% which is highest. Similarly, lowest Auxiliary Consumption was 15.11% in FY 2014-15. The Auxiliary Consumption is dependent on the utilization of the plant i.e. PLF of the plant. If the PLF of the plant is lower and generation of electricity from the plant with underutilisation in that case the Auxiliary Consumption will be increased while in case of fully utilization of the plant at designed capacity with higher PLF the Auxiliary Consumption shall be achievable at design rate.

11.62. Considering the above, we are of the view that the Auxiliary consumption agreed between the Petitioner and the Respondent as 11.5% is valid and accordingly the same is approved from 06.09.2023.

Effective date of Supplementary Agreement

11.63. Now we deal with the date of Supplemental PPA between the parties stating that the effective date of the agreement, i.e. 06.09.2023 shall be date of signing of the agreement with regard to Station Heat Rate, Auxiliary Consumption and Return on Equity, while O & M expenses the same is 01.04.2022.

11.64. We note that the Petitioner and the Respondent agreed the effective date of the Agreement shall be the date of signing of agreement i.e., 06.09.2023 while in case of O & M expenses the same is 01.04.2022. The same is in accordance with the minutes of meeting dated 12.08.2022 held by the Principal Secretary EPD with the officials of GUNVL and GMDC.

11.65. We note that the effective date of the supplemental PPA consists of two different dates i.e., 1) 06.09.2023 for Station Heat Rate, Auxiliary Consumption and ROE and 2) 01.04.2022 for O & M expenses. It means that the Supplemental PPA becomes effective with regard to amendment in earlier Supplemental PPA dated 17.12.2014 for the parameters of Station Heat Rate, Auxiliary Consumption and ROE from 06.09.2023. The provision of O&M expenses be amended from 01.04.2022. Thus, the O&M expenses are amended prior to date of signing of Supplemental PPA i.e., 06.09.2023 which is in accordance with the minutes of meeting held on 12.08.2022.

11.66. We note that so far as the effective date for Supplemental PPA on the parameter of Station Heat Rate, Auxiliary Consumption and ROE are from 06.09.2023 is as per the MoM held on 12.08.2022 by the Principal Secretary EPD. We also note that it was agreed between the parties and stated in MoM that O&M Expenses of the PPA are amended from 01.04.2022 which are not approved by the Commission as recorded in earlier para of this Order. We have already recorded in earlier para in this Order that amendment in O&M Expenses of the PPA is approved from 06.09.2023. Accordingly, the Petitioner and the Respondent are directed to make necessary corrections in the Supplemental PPA i.e., Article 10.5.4 of the PPA.

| Particulars | PPA | GMDC Prayer | Approved by the Commission |
|---------------------------------------|---|---|---|
| Operation and Maintenance expenditure | In terms of FY 2021-22, O&M expenses computed as per formula to Rs. 24.04 | Rs. 24.04 lakhs/MW for FY 2021-22 with escalation | Rs. 24.04 lakhs/MW for FY 2021-22 with escalation |

| | | | |
|-----------------------|---|--|---|
| | lakhs/MW | based on WPI and CPI index to Rs. 32.50 lakhs per MW for FY 2022-23 with escalation of 5.72% in subsequent years. | based on WPI and CPI index to Rs. 32.50 lakhs per MW for FY 2022-23 with escalation at the rate provided in the prevalent MYT Regulations after FY 2022-23. The effective date of amendment is 06.09.2023. |
| Return on Equity | Return on equity shall be 13% | Return on Equity at 14% instead of 13% with effect from the date of signing of the Supplemental Agreement. | Return on Equity at 14% instead of 13% with effect from the date of signing of the Supplemental Agreement i.e., 06.09.2023. |
| Station Heat Rate | SHR at station heat rate of 2400 kCal/kWh | Revision in SHR from existing station heat rate of 2400 kCal/kWh with moisture content to 2900 kCal/kWh and 0.5% degradation every year. | Revision in SHR from existing station heat rate of 2400 kCal/kWh with moisture content to <u>2467.4122 kCal/kWh</u> and correction multiplying factor corresponding to different moisture content of lignite as stated in table above as per MYT Regulations 2016. The effective date of the same from 6.09.2023 |
| Auxiliary Consumption | During stabilization period at 10% and after stabilization period 11% | Revision in auxiliary consumption from 11% to 12% from FY 2022-23 and 13% with effect from FY 2027- | Revision in auxiliary consumption from 11% to 11.5% from 06.09.2023. |

| | | | |
|--|--|-------------|--|
| | | 28 onwards. | |
|--|--|-------------|--|

11.67. The Petitioner and the Respondent are directed to make necessary changes in the supplemental agreement dated 6.09.2023 executed between them and submit the copy of the same to the Commission.

11.68. Based on above, the preset Petition succeed and we decide to approve amendment in the Power Purchase Agreement dated 19.02.2000 readwith supplemental agreement dated 17.12.2014 executed between the Petitioner and the Respondent as per aforesaid decision.

ORDER

12. Summary of the amendment in the supplemental PPA approved by the Commission is stated in table below:

| Particulars | PPA | GMDC Prayer | Approved by the Commission |
|---------------------------------------|--|---|--|
| Operation and Maintenance expenditure | In terms of FY 2021-22, O&M expenses computed as per formula to Rs. 24.04 lakhs/MW | Rs. 24.04 lakhs/MW for FY 2021-22 with escalation based on WPI and CPI index to Rs. 32.50 lakhs per MW for FY 2022-23 with escalation of 5.72% in subsequent years. | Rs. 24.04 lakhs/MW for FY 2021-22 with consideration of escalation on it the same be considered as Rs. 32.50 lakhs per MW for FY 2022-23, thereafter the escalation at the rate provided in the prevalent MYT Regulations after FY 2022-23. The effective date of amendment is 06.09.2023. |
| Return on Equity | Return on equity shall be 13% | Return on Equity at 14% instead of 13% with effect from the date of signing of the | Return on Equity at 14% instead of 13% with effect from the date of signing of the |

| | | Supplemental Agreement. | Supplemental Agreement i.e., 06.09.2023. |
|-----------------------|---|--|---|
| Station Heat Rate | SHR at station heat rate of 2400 kCal/kWh | Revision in SHR from existing station heat rate of 2400 kCal/kWh with moisture content to 2900 kCal/kWh and 0.5% degradation every year. | Revision in SHR from existing station heat rate of 2400 kCal/kWh with moisture content to <u>2467.4122 kCal/kWh</u> and correction multiplying factor corresponding to different moisture content of lignite as stated in table above as per MYT Regulations 2016. The effective date of the same from 06.09.2023. |
| Auxiliary Consumption | During stabilization period at 10% and after stabilization period 11% | Revision in auxiliary consumption from 11% to 12% from FY 2022-23 and 13% with effect from FY 2027-28 onwards. | Revision in auxiliary consumption from 11% to 11.5% from 06.09.2023 |

13. With this Order present Petition stands disposed of.

14. We Order accordingly.

Sd/-
[S. R. Pandey]
Member

Sd/-
[Mehul M. Gandhi]
Member

Sd/-
[Anil Mukim]
Chairman

Place: Gandhinagar.
Date: 06/07/2024.