

**BEFORE THE GUJARAT ELECTRICITY REGULATORY COMMISSION
GANDHINAGAR
PETITION NO. _____ OF 2023**

IN THE MATTER OF:

Petition 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.

Gujarat Urja Vikas Nigam Limited
Sardar Patel Vidyut Bhavan
Race Course,
Vadodara - 390 007

Petitioner

Versus

Gujarat Mineral Development Corporation Limited
Khanij Bhavan, 132 Feet Ring Road,
Near Gujarat University Ground, Vastrapur,
Ahmedabad, Gujarat 380 052 (Address)

Respondent

PETITION UNDER SECTION 86 (1) (B) 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

MOST RESPECTFULLY SHOWETH:

1. 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 re-organization scheme.
2. 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 (hereinafter

“GMDC”) 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”). A copy of the PPA dated 19.02.2000 is attached hereto and marked as Annexure A. The commencement of supply of power from ATPS started from May 2006.

3. 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.
4. The Hon'ble Gujarat Electricity Regulatory Commission (GERC), 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 regards 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.
5. 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.
6. 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. A copy of the

Supplementary Agreement dated 17.12.2014 is attached hereto and marked as Annexure B.

7. 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.
8. 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 Hon'ble 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.
9. 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 and accordingly
10. 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.
11. 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 recovery 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.

12. The submissions of GMDC as recorded in one the Minutes of Meeting is reproduced herein:

“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.”

13. 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. A copy of the Minutes of Meeting dated 12.08.2022 is attached hereto and marked as **Annexure C**.
14. In the meeting, discussions were held on additional capital expenditure claimed by GMDC wherein it was agreed that the GMDC shall approach this Hon'ble 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

15. It was agreed that GUVNL and GMDC shall seek approval of the Board of Directors and sign the Supplementary Agreement which shall be subject to the approval of this Hon'ble 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."

16. 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 the Hon'ble Commission for approval of the Supplementary Agreement:

"8.43. We note that the 'Minutes of Meeting-MoM' for meeting held on 12.08.2022 in presence of senior officials of the (i) the Energy & Petrochemicals Department, (ii) the Petitioner GMDC and (iii) the Respondent GUVNL is filed by the Petitioner. It is submitted during the hearing by the Respondent GUVNL that aforesaid MoM dated 12.08.2022 is forwarded to Government of Gujarat for approval, which is awaited. It is also admitted / consented on behalf of both the parties that the decision in said MoM dated 12.08.2022 is with their consent and is acceptable to both parties. Thus, it has so emerged in present matter that both parties are ready & willing to abide as per the decision recorded in Minutes of Meeting held on 12.08.2022 post approval of same by the Government of Gujarat, wherein it is recorded that as against the request of GMDC for allowance of one-time additional capital expenditure of Rs. 293 Crores, it has been agreed that GMDC shall approach GERC for approval of same. Further, regarding renegotiation of the PPA, it has been decided that both parties will seek approval of their respective Board of Directors and accordingly sign Supplementary Agreement, which shall be subject to approval by GERC for which GUVNL shall file Petition before GERC for approval of said Supplementary Agreement signed with the Petitioner GMDC. Pending filing of such Petition, if any, it is premature to express any views or decision on it. The parties may approach the Commission for the same, if so desired."

17. 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”

A copy of the Letter dated 06.01.2023 is attached hereto and marked as **Annexure D**.

18. That Article 19.1 of the PPA dated 19.02.2000 recognises that the PPA can be amended by written agreement. Article 19.1 reads as under:

“19.1 Amendments

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

19. 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. A copy of the Supplementary Agreement is being submitted for approval of this Hon'ble Commission which is attached hereto and marked as **Annexure E**.

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

(A)Operation and Maintenance Expenses

21. 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:

$$OME = \sum \left(\frac{CCu \times 0.02 \times d \times F_{ESC}}{365} \right) \times F_{ESC} + INS$$

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

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

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

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

whichever is lower for each succeeding Year

22. 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.
23. 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.
24. It is submitted that the Gujarat Electricity Regulatory Commission (Multi-Year Tariff) Regulations, 2016 (hereinafter "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>FY 2018-19</i>	<i>30.18</i>

FY 2019-20	31.90
FY 2020-21	33.72

25. Therefore 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.
26. Further the Operation and Maintenance expenses allowed to other lignite based generating stations are as under:
- GIPCL SLPP I : Rs. 35.61 lakh per MW for the FY 2021-22 with escalation based on WPI and CPI Index
 - GIPCL SLPP II : Rs. 37.73 lakh per MW for FY 2021-22 with escalation of 5.72% for subsequent years
 - BLTPS: Rs.35.65 lakh per MW for FY 2021-22 with escalation of 5.72% for subsequent years
 - GSECL KLTPS 3: Rs.22.74 lakh per MW for FY 2021-22 with escalation of 5.72% subsequent years
 - GSECL KLTPS 4 : Rs.26.44 lakh per MW for FY 2021-22 with escalation of 5.72% for subsequent years
27. 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.
28. The effective date for the above amendment for O&M expenses has been agreed to be considered from FY 2022-23.

(B)Return on Equity

29. 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:

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

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.”

30. 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.

31. MYT Regulations 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”:

32. 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

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

<i>Station Heat Rate</i>	<i>SHR</i>	<i>shall mean the Station Heat Rate of the Unitn 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>

34. 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.

35. 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 Indian Coal	2273	2267	2250	2151
Bituminous Imported Coal	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