

**ODISHA ELECTRICITY REGULATORY COMMISSION  
PLOT NO. 4, CHUNUKOLI, SHAILASHREE VIHAR,  
CHANDRASEKHARPUR,  
BHUBANESWAR-751021  
\*\*\*\*\***

**Present :      Shri S. P. Nanda, Chairperson  
                     Shri S. P. Swain, Member  
                     Shri A. K. Das, Member**

**Case No. 21/2016**

|                                                                                            |       |             |
|--------------------------------------------------------------------------------------------|-------|-------------|
| M/s Ind-Barath Energy (Utkal) Ltd.                                                         | ..... | Petitioner  |
| Vrs.                                                                                       |       |             |
| 1.      The Govt. of Odisha, represented by Secretary to the Govt. , Department of Energy. |       |             |
| 2.      M/s. GRIDCO Ltd.                                                                   | ..... | Respondents |

**In the matter of:**      **An application for determination of variable Cost (Energy Charge Rate) for supply of infirm and 12% power to GRIDCO in accordance with OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014 and Clause 2.2.1 and 6.3 of the Revised Power Purchase Agreement dated 04.01.2011.**

**For Petitioner:**      Shri R. P. Mahapatra, the authorized representative of M/s. Ind-Bharath Energy (Utkal) Limited, Shri R. C. Mohapatra, Advisor of M/s. IBEUL, Shri S. K. Dash, Executive Engineer, M/s. IBEUL

**For Respondents:**      Shri Sukanta Panda, DGM (Elect.), GRIDCO Ltd. and Ms. Harapriya Behera, Manager (Elect.), GRIDCO Ltd.

Nobody is present on behalf of the DoE, GoO.

**Hearing Date: 17.06.2016**

**Date of Order: 30.07.2016**

**ORDER**

1.      M/s. Ind-Barath Energy (Utkal) Ltd. (IBEUL) had filed an application before the Commission for determination of variable Cost (Energy Charge Rate) for supply of infirm and 12% power from its IPP to GRIDCO in accordance with OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014 and Clause 2.2.1 and 6.3 of the Revised Power Purchase Agreement executed with GRIDCO on dated 04.01.2011. The said application was registered as Case No. 21/2016.
2.      The Petitioner, M/s. Ind-Barath Energy (Utkal) Ltd. (IBEUL) have stated that they are setting up a Coal based Thermal Power Plant at Sahajabahal, District Jharsuguda in the State of Odisha having an installed capacity of 1360 MW (2 x 350 + 1 x 660) based on the Principal MoU dated 07.02.2009, the 1<sup>st</sup> Supplemental MoU dated 03.01.2011 and the

MoU dated 28.01.2014 signed with the Govt. of Odisha. M/s IBEUL has executed revised Power Purchase Agreement between with GRIDCO Ltd on 04.01.2011. In accordance with Clause 2.2.1 of the said Power Purchase Agreement dated 04.01.2011, GRIDCO shall at all times have the rights on behalf of the Govt. of Odisha to receive 12 (Twelve) percent of the power sent out from the subject Thermal Power Station of the Petitioner, as no Coal Block(s) has been allotted within the State of Odisha. The start-up activities of the first 350 MW Unit of the IBEUL generating station have already started and the Unit is expected to achieve Commercial Operation date shortly.

3. Further, the Petitioner has stated that as per Clause 6.0 of PPA dated 04.01.2011, the charges payable by GRIDCO to the generator shall be restricted to variable cost with regard to 14%/ 12% capacity entitlement to GRIDCO and also for the infirm power. The variable cost shall cover fuel cost and shall be worked out on the basis of ex-bus energy sent out from the generating station proportionate to the energy delivered to GRIDCO against 14% / 12% entitlement of GRIDCO. The methodology for determining the fuel cost i.e. variable cost shall be as per the applicable norms, guidelines and directions of the Appropriate Commission.
4. Accordingly, the Petitioner has prayed to the Commission to approve the Energy Charge Rate (ECR) for the infirm power and 12% entitlement of the State Govt. as 163.95 P/Kwh, subject to adjustment based on actual average cost & GCV of the Coal utilized during the month and reimbursement of the share of other charges like water cess, electricity duty, SLDC charges actually paid by the generator as per Regulation 4.28 (e) of OERC Generation Tariff Regulations, 2014.
5. In its reply, GRIDCO has stated that, the MoU signed with the Govt. of Odisha on 28.01.2014 has already expired on 27.01.2016 where as IBEUL has not yet commissioned a single unit out of its 3 proposed units till date. Further whatsoever reason may be, it has not taken any step for renewal/extension/modification of MoU in spite of significant delay in completion of the project.
6. Further, GRIDCO has stated that regarding the matter of non allotment of coal block to IBEUL within the State of Odisha, the petitioner should submit the details of steps taken towards allocation of coal block.
7. Further, GRIDCO stated that, the petitioner in its letter dated 18.01.2016 and 08.02.2016 has intimated that they would supply the State's share through CTU by Long term Open Access (LTOA). A meeting was held on 29.02.2016 between the petitioner, GRIDCO and SLDC. The petitioner had committed to take necessary permission from State

Government and amend the PPA accordingly. However till date the petitioner has not communicated to GRIDCO in this regards.

8. Further GRIDCO stated that, based on the terms of PPA, the petitioner is entitled to get variable cost of 14%/12% capacity from GRIDCO and such variable cost of power is to be determined as per norms of operation of the existing regulation of the appropriate Commission. Other than the variable cost, any charges as proposed by the petitioner to claim on actual basis are completely violating the terms and conditions of PPA and outside the contractual obligation. Further, as per Regulation 4.28 (e) of OERC Generation Tariff Regulations, 2014, the water charges as paid by the thermal generating stations is apart of O & M expenses and should be borne by those beneficiaries who are entitled to pay annual fixed cost. Hence proposed claims towards other charges may be out rightly rejected.
9. Further GRIDCO stated that, the petitioner has considered much lower Gross Calorific Value (GCV) of coal @ 2881.7 Kcal/Kg, but higher rate for coal, which is not acceptable by GRIDCO without any authenticated supporting document. In absence of authenticated document, GRIDCO has proposed to consider average GCV of coal @ 3550 Kcal/kg on the basis of Tax invoice cum coal bill of MCL submitted by the Petitioner.
10. Heard the parties at length and written notes are taken on record. During the hearing on 17.06.2016, the Commission has directed both the parties to sit with the Director (Tariff) & Director (RA) of OERC and provide the required information for determination of variable cost in accordance with OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014. Accordingly, a meeting was held with the concerned officials of M/s IBEUL and GRIDCO on 22.06.2016 in OERC Conference hall. The information / data submitted by them during the discussion and subsequently have been taken into record.
11. The Commission has notified the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014, which was published in the Odisha Gazette Extraordinary on 10th October 2014. Hence, the Commission shall adopt the principles laid down in the said Regulations for approval of generation tariff of M/s IBUEL.

**Determination of Plant Availability:**

12. M/s. IBEUL has considered the Normative Annual Plant Availability Factor (NAPAF) at 85% as per Regulation 5.3(a) (i) of OERC Tariff Regulations, 2014 and accordingly computed the gross generation for determination annual Coal requirement. GRIDCO has

also accepted the same. Therefore, the Commission approves the NAPAF of 85% for the subject Thermal Power Station of M/s. IBEUL.

**Determination of Auxiliary Consumption:**

13. M/s. IBEUL has considered auxiliary consumption @ 9% as per Regulation 5.3(e) (i) of OERC Tariff Regulations, 2014 and accordingly computed the energy charge rate. GRIDCO has also accepted the same. Therefore, the Commission approves the auxiliary consumption @ 9% for the subject Thermal Power Station of M/s. IBEUL.

**Determination of Station Heat Rate**

14. As per Regulation 5.3 (c) (iii) of OERC Tariff Regulations, 2014 the Heat Rate norms for coal-based thermal generating stations is defined as follows.

(iii) *The Gross Station Heat Rate for all coal based thermal generating stations achieving COD on or after 01.04.2014, is to be calculated based on the following formula:*

$$= 1.045 \times \text{Design Heat Rate (kCal/kWh)}$$

*Where the Design Heat Rate of a 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..*

15. M/s. IBEUL has stated that as per the above stated provision of the Regulations, M/s IBEUL qualifies for the Gross Station Heat Rate of 2369.015 Kcal/Kwh. GRIDCO in its submission dated 02.07.2016 has accepted the same. Considering the submissions of IBEUL, GRIDCO and OERC norms, the Commission approves the Station Heat Rate as 2369.015 Kcal/Kwh i.e.  $1.045 \times \text{Design Heat Rate of } 2267 \text{ Kcal/Kwh}$ .

**Determination of Specific Secondary fuel oil Consumption**

16. M/s IBEUL submitted that the cost of secondary fuel oil has been computed in line with Regulation 5.3(d) (i) of OERC Tariff Regulations, 2014. Since both M/s IBEUL & GRIDCO accept the said OERC norm, the Commission approves the Specific Secondary Fuel Oil consumption as 0.5 ml/Kwh for the subject Thermal Power Station of M/s. IBEUL.

**Energy /Variable Charge**

17. The energy charge is to be calculated and billed by the generator on month to month basis as per Regulations 4.32, 4.33 and 4.34 of the OERC generation Tariff Regulations, 2014. Regulation 4.33 of the OERC Generation Tariff Regulations, 2014 provides that the Energy Charge Rate (ECR) in Rupees per kWh on ex-power plant basis shall be determined to three decimal places in accordance with the formulae as under:

*For coal based and lignite fired based stations*

$$ECR = \{(GHR - SFC \times CVSF) \times LPPF / CVPF + SFC \times LPSFi + LC \times LPL\} \times 100 / (100 - AUX)$$

*Where,*

*AUX = Normative auxiliary energy consumption in percentage.*

*CVPF=Gross calorific value of coal as fired in kCal per kg for coal based stations*

*CVSF = Calorific value of secondary fuel, in kCal per ml.*

*ECR = Energy charge rate in Rupees per kWh sent out.*

*GHR = Gross station heat rate in kCal per kWh.*

*LC = Normative limestone consumption in kg per kWh.*

*LPL = Weighted average landed price of limestone in Rupees per kg.*

*SFC = Specific fuel oil consumption in ml per kWh.*

*LPPF =Weighted average landed price of primary fuel, in Rupees per kg, per liter or per standard cubic meter, as applicable, during the month. (In case of blending of fuel from different sources, the weighted average landed price of primary fuel shall be arrived in proportion to blending ratio)*

*LPSFi=Weighted Average Landed Price of Secondary Fuel in Rs./ml during the month*

*Provided that generating company shall provide to the beneficiaries of the generating station the details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, lignite, natural gas, RLNG, liquid fuel etc., as per the Format prescribed by the Commission.*

*Provided further that the details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal and the weighted average GCV of the fuels as received shall also be provided separately, along with the bills of the respective month:*

*Provided further that copies of the bills and details of parameters of GCV and price of fuel i.e. domestic coal, imported coal, e-auction coal, liquid fuel etc., details of blending ratio of the imported coal with domestic coal, proportion of e-auction coal shall also be provided by company to the beneficiaries.*

18. Considering the above provisions of the OERC Generation Tariff Regulations, 2014, the Commission directed that the Generator, M/s. IBEUL shall furnish the information to GRIDCO as regard to details of coal with break-up as stated in the Regulations. From the submission of M/s. IBEUL it is understood that they have used linkage coal for determination of variable cost. GRIDCO is to verify the details of coal purchased and consumed as well as GCV of the same. However, as an illustration the Commission has calculated the energy charge rate basing on the weighted average price & GCV of both Coal and fuel oil as submitted by M/s. IBEUL before the Commission which is indicated below.

| Parameters                          | Unit             | Submitted by IBEUL | Submitted by GRIDCO | Calculated by the Commission                       |
|-------------------------------------|------------------|--------------------|---------------------|----------------------------------------------------|
| Auxiliary Energy Consumption        | %                | 9.00               | 9.00                | 9.00 (As per OERC Generation Regulations,2014)     |
| Station Heat Rate                   | Kcal/kwh         | 2,369.02           | 2,369.02            | 2,369.02 (As per OERC Generation Regulations,2014) |
| GCV of Coal                         | Kcal/Kg          | 2,881.70           | 3,550.00            | 2,881.70 (As submitted by IBEUL)*                  |
| Coal Price                          | Rs/Mt            | 1,795.05           | 1,587.19            | 1,587.19 (Cost of Linkage Coal)*                   |
| GCV of Oil                          | Kcal/Lt          | 10,000             | 10,000              | 10,000                                             |
| Oil Price                           | Rs/Kl            | 36,850             | 36,850              | 36,850                                             |
| Sp. Coal Consumption                | Kg/Kwh           | 0.82               | 0.67                | 0.82                                               |
| Sp. Oil Consumption                 | ml/Kwh           | 0.50               | 0.50                | 0.50                                               |
| <b>Energy Charge rate (ECR) P/U</b> | <b>Paise/kwh</b> | <b>163.85</b>      | <b>118.17</b>       | <b>145.11</b>                                      |

\* To be verified and ascertained by GRIDCO before payment.

19. Billing of ECR shall be made by M/s. IBEUL and submitted to GRIDCO on monthly basis with the details of coal/oil used for generation as indicated above for scrutiny and payment. However, the Commission is of the view that the entire share of State from the subject IPP should be drawn by GRIDCO. Further, the domestic coal should be utilized for generation of power for State use to avoid tariff burden on the State consumers and no imported coal shall be allowed for this.
20. Further, GRIDCO submitted that in a meeting between GRIDCO, SLDC & IBEUL on dt.29.02.2016 regarding proposal of IBEUL for evacuation of State share of Power through CTU on long term open access, IBEUL has agreed to bear all the inter State transmission charges including transmission loss and any other incidental charges as applicable for evacuation of State share of power through CTU. IBEUL informed that they will approach the State Govt. for necessary permission for evacuation of the State share of power through CTU and after getting the approval from Govt., necessary amendments on the PPA with GRIDCO to this effect will be made. However, till date IBEUL has not communicated the status of the above to GRIDCO, they stated.
21. The Commission observes that the renewal/extension/modification of MoU with Govt. as well as permission for evacuation of the State share of power through CTU has not yet been done by IBEUL in spite of delay in completion of the project. Further, the PPA with GRIDCO has not been amended as agreed by the Petitioner for evacuation of State share

of power through CTU. So, the necessary changes in PPA as well as MOU with Govt. may be made at the earliest and be submitted before the Commission for approval. In case of change in underlying base parameters, the indicative tariff mentioned above is likely to change. Therefore, GRIDCO shall verify GCV and price of coal and oil etc. before making actual payment as per Regulations. Further, it is directed that the payment of other charges such as water cess claimed by Water Resource Dept, GoO, and electricity duty on auxiliary consumption and SLDC charges shall be reimbursed by GRIDCO in proportion to their share of power in the power station.

22. The present case is disposed of accordingly.

Sd/-  
**(A K Das)**  
**MEMBER**

Sd/-  
**(S. P. Swain)**  
**MEMBER**

Sd/-  
**(S. P. Nanda)**  
**CHAIRPERSON**