



Together, Let us light up our lives

ଓଡ଼ିଶା ବିଦ୍ୟୁତ୍ ନିୟାମକ ଆୟୋଗ
ODISHA ELECTRICITY REGULATORY COMMISSION
BIDYUT NIYAMAK BHAWAN
PLOT NO.4, SHAILASHREE VIHAR, BHUBANESWAR -751021
TEL. No. 2721048, 2721049
E-MAIL: oerc@odisha.gov.in / orierc@gmail.com
WEBSITE: www.orierc.org

Present: Shri G. Mohapatra, Officiating Chairperson
Shri S. K. Ray Mohapatra, Member

Case No. 43/2024

M/s. JSW Energy (Utkal) Limited	Petitioner
Vrs.		
DoE, GoO & Others	Respondents

In the matter of: **Application under Section 86(1)(a) of the Electricity Act, 2003 read with Regulation 27 of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 and all other enabling provisions of the Regulations and the Electricity Act, 2003 for Determination of Energy Charge Rate for Supply of 12% of the energy sent out from the IPP of M/s. JSW Energy (Utkal) Limited to GRIDCO towards the State's entitlement of power.**

For Petitioner: Shri Aman Anand, Learned Advocate along with Shri Nikhilesh Barik, Learned Advocate.

For Respondents: Shri B.K. Das, Sr. GM along with Ms. Susmita Mohanty, DGM (Elect.) and Pragnya Punam Dash, AGM (Elect.) on behalf of GRIDCO Ltd, Ms. Sonali Patnaik, Manager (Legal), Department of Energy, Government of Odisha, Ms. Subhashree Das, AGM, RTC, OPTCL and the Representatives of DISCOMs (TPCODL, TPWODL, TPNODL & TPSODL) do appear.

ORDER

Date of Hearing: 26.11.2024

Date of Order: 11.02.2025

The Petitioner-M/s. JSW Energy (Utkal) Limited [formerly known as M/s. Ind-Bharath Energy (Utkal) Limited] has filed the present petition under Section 86(1)(a) of the Electricity Act, 2003 read with Regulation 27 of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 and all other enabling provisions of the Regulations and the Electricity Act, 2003 for Determination of Energy Charge Rate for Supply of 12% of the energy sent out from the IPP of M/s. JSW Energy (Utkal) Limited to GRIDCO towards the State's entitlement of power.

2. The prayers of the Petitioner-M/s. JSW Energy (Utkal) Limited (M/s. JSWEUL) are as under:

- “ a) Determine the Energy charge base rate as Rs.3.140 per kWh for 12% of energy sent out (ESO), being the entitlement of the State Government and supplied to GRIDCO, subject to adjustments as per the Regulations; and
 - b) Direct reimbursement against payment of water cess claimed by Water Resource Dept, GoO, and electricity duty on auxiliary consumption and SLDC charges, by GRIDCO, in proportion to their share of power; and/or
 - c) Pass any other further orders as this Commission may think appropriate in the facts and circumstances of the case, in the interest of justice.”
3. The submissions of the Petitioner-M/s. JSWEUL in brief are concisely stated hereafter as under:
- a) M/s. Ind-Barath Energy (Utkal) Ltd., an Independent Power Producer (IPP), is a registered company under the Companies Act, 1956 having its registered office in Andhra Pradesh. A MOU was executed between the Government of Odisha and M/s. Ind-Bharath Energy (Utkal) Limited (M/s. IBEUL) on 07.02.2009 for setting up a thermal power plant of capacity 700 MW (2X350 MW) at Jharsuguda, Odisha. Accordingly, a PPA was executed between M/s. GRIDCO and M/s. IBEUL on 14.09.2009 (expired on 06.02.2012).
 - b) On 03.01.2011, the 1st Supplemental MOU was executed between the Government of Odisha and M/s. IBEUL for enhancement of installed capacity from 700 MW to 1360 MW (Phase-I: 2x350 MW + Phase-II: 1x660 MW). In line with the 1st Supplemental MOU, a revised PPA was executed between M/s. IBEUL and GRIDCO on 04.01.2011, wherein the entitlement of GRIDCO from the thermal power station is 14% of energy sent out if coal block(s) is allocated within the State of Odisha, otherwise GRIDCO shall receive 12% of energy sent out. The charges payable by GRIDCO to M/s. IBEUL shall be restricted to variable cost only in regard to 14%/12% of the power sent out from the plant as well as for the infirm power.
 - c) Thereafter, on 28.01.2014, 2nd Supplemental MOU was executed between Government of Odisha and M/s. IBEUL for extension of validity period of 1st Supplementary MOU (expired on 02.01.2014) up to 27.01.2016. The COD of the Unit-1 of M/s. IBEUL-IPP was declared on 20.07.2016 with a de-rated capacity of 339.6 MW against the installed capacity of 350 MW.
 - d) The Commission, vide its Order dated 30.07.2016 passed in Case No. 21 of 2016, determined an indicative variable cost i.e. Energy Charge Rate (ECR) based on the use of linkage coal for supply of 12% State's share of power in accordance with the OERC Generation Tariff Regulations, 2014. The Commission further directed

GRIDCO for reimbursement against payment of water cess claimed by the Water Resources Department, GoO and Electricity Duty on auxiliary consumption and SLDC charges in proportion to the share of power in the power station. Since the matter of evacuation of State's share of power through CTU transmission system (with IBEUL to bear the necessary interstate transmission charges including transmission losses and any other charges, as applicable) as an interim arrangement till establishment of connectivity with STU network by M/s. IBEUL, as agreed by M/s. IBEUL, was not incorporated in the PPA, the Commission in the said Order dated 30.07.2016 had advised the parties to take steps for necessary changes in the PPA. Accordingly, Supplementary PPA was executed between GRIDCO and M/s. IBEUL on 07.06.2017 incorporating the above directions of the Commission regarding evacuation of State's share of power.

- e) Thereafter, pursuant to an application filed by the Bank of Baroda under Section 7 of the Insolvency and Bankruptcy Code, 2016, the NCLT Hyderabad Bench, vide its Order dated 29.08.2018, had ordered the commencement of the Corporate Insolvency Resolution Process (CIRP). M/s. JSW Energy Ltd. (JSWEL) has submitted its Resolution Plan under the CIRP. The NCLT, Hyderabad Bench has approved Resolution Plan of M/s. JSWEL vide its Order dated 25.07.2022. Pursuant to the NCLT approval, the Resolution Plan has been implemented by the M/s. JSWEL on 28.12.2022 and accordingly Ms. IBEUL has become a subsidiary of M/s. JSWEL.
- f) Thereafter, 3rd Supplemental MOU was executed between the Government of Odisha and M/s. IBEUL (presently a subsidiary of M/s. JSWEL) on 24.11.2023 for revalidation of acquisition of the IPP of M/s. IBEUL by M/s. JSWEL in pursuant to approval of NCLT. Now, the name of the IPP has been changed from M/s. Ind Barath Energy (Utkal) Ltd. to M/s. JSW Energy (Utkal) Ltd. with effect from 20.05.2024 i.e. from the date of certificate issued by the Ministry of Corporate Affairs, Government of India.
- g) After signing of the 3rd Supplemental MoU, the Petitioner has started operating Unit-I from 17.01.2024 as a merchant plant, with de-rated capacity of 339.60 MW, by procuring coal from e-auction. Presently, there is no long term PPA in existence for the IPP, except the one with GRIDCO for supply of 12% of the energy sent out at variable cost as determined by this Commission.
- h) GRIDCO, vide its e-mail dated 12.02.2024, requested the Petitioner to commence supply of 12% of the energy sent out from the Unit-I (339.60 MW) i.e. GRIDCO's share of power through CTU network at provisional ECR to be determined by the

Commission and this power shall be scheduled through ERLDC as an interim arrangement and all the transmission charges and losses shall be borne by the IPP as per the supplementary PPA dated 07.06.2017 and the 3rd Supplemental MoU dated 24.11.2023. Accordingly, the State's entitlement of power i.e. 12% of the energy sent out from the Unit-I (339.60 MW), has been commenced w.e.f. 21.02.2024 as per the schedule being carried out by ERLDC. GRIDCO is now making payment towards such power procurement at the provisional ECR of Rs.3.14/kWh as an interim arrangement, subject to finalization of tariff by the Commission.

- i) Regulations 27(8) to 27(18) of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 stipulates the methodology for determination of ECR for a thermal generating station.
4. The submissions made by the Respondent-GRIDCO are as under:
- a) The Petitioner-M/s. JSWEUL has engaged M/s. NMCI as 3rd Party for sampling and measuring GCV of coal at receiving/uploading end. As understood and confirmed from M/s. NMCI, the practice followed to measure "as received" GCV of coal is that the moisture correction formula is applied on "Air Dried Basis (ADB) GCV" measured at the receiving/uploading point i.e. at the plant premises, as per the agreement between M/s. NMCI and the Petitioner. Fairly, the GCV derived on ADB should be close to the range of GCV mentioned in the coal invoice and with moisture correction formula, the "as received" GCV figure should come close to or within the specified range of GCV mentioned in the coal invoice. Further, the extant OERC Generation Tariff Regulations (as notified from time to time) does not provide for applying Moisture Correction formula on "Air Dried Basis" GCV determined at receiving end.
 - b) The "as received" GCV of Spot Auction coal sourced from multiple mines (consumed for generation of power by the petitioner from its 339.60 MW unit) and sampled at receiving end/unloading end by the 3rd Party, varies from the range of GCV mentioned in the coal invoice as submitted by the Petitioner. There is a wide variation in "as received" GCV of coal to the tune of 800 kCal/kg to 1000/1200 kCal/kg from the lower limit of the range of GCV mentioned in the coal invoice as submitted by the Petitioner. The representative of 3rd Party M/s. NMCI could not explain the reasons for such wide variation in GCV. In absence of long-term FSA and 3rd Party GCV sampling at billing end/loading end, it is difficult on the part of GRIDCO to analyze the reasons of such glaring variation in "as received" GCV of

coal which is not commensurate with the landed price of coal considered for computation of actual monthly ECR.

- c) The FSA dated 08.08.2013 executed between erstwhile M/s. IBEUL and MCL has been terminated on 31.05.2018 due to non-lifting of linkage coal by M/s. IBEUL. Regarding resumption of linkage coal supply by MCL, CEA has intimated to the Petitioner that revival of terminated FSA of M/s. IBEUL may not be feasible due to prevailing policy provisions and CEA, vide letter dated 08.03.2024, has intimated that the Petitioner may appropriately participate in upcoming biddings/auctions under Shakti Policy for securing long/medium term coal linkage. The Petitioner may be directed to submit the information regarding its action taken for participation in the upcoming biddings/auctions under different phases rolled out under Shakti Policy for availing Shakti Coal to supply State share of power and status thereof. As per Clause 10.0 of the Amended/Restated PPA dated 23.12.2024, it is the responsibility of the Petitioner to arrange Shakti Linkage Coal for supply of State entitlement of power.
- d) Since the Petitioner has not been allocated any linkage coal and does not have any long-term FSA with coal supplier, there is no 3rd party sampling of GCV of coal being done at billing end/loading end in presence of the coal supplier. Further, the IPP-the Petitioner does not have any other long-term PPA for supply of power except GRIDCO. Therefore, now the Spot Auction Coal is being procured under Clause B (viii) of the Shakti Policy mainly for merchant sale of power in power exchanges.
- e) The coal is being sourced from a mine through Spot Auction and consumed every month for supply of power as per Form-15 (Coal data). Because of absence of coal supplier as party in sampling exercise carried out at receiving end and considering the wide variation in “as received” GCV of coal to the tune of 800 kCal/kg to 1000/1200 kCal/kg from the lower limit of the range of GCV mentioned in the coal invoice of coal company/MCL (as submitted by the Petitioner), GRIDCO finds difficulty in determining GCV at receiving end/unloading end through sampling method. Hence, GRIDCO has prayed before the Commission to direct the Petitioner to determine the “as received” GCV of coal by applying the moisture correction formula as stipulated in the applicable OERC Generation Tariff Regulations as notified from time to time, on the median value of the range of GCV of coal mentioned in the coal invoice of the Coal Company/MCL and consumed in a month (as per Form 15) for supply of power to GRIDCO.
- f) The Commission, vide its order dated 30.07.2016 in Case No.21 of 2016, had fixed the operational parameters for determining ECR of the subject 350 MW generating

unit of the erstwhile M/s. IBEUL as per the provisions laid down in the OERC Generation Tariff Regulations, 2014. Now, the present Petitioner-M/s. JSWEUL has commenced supply of power to GRIDCO w.e.f. 21.02.2024. Therefore, OERC Generation Tariff Regulations, 2020 and OERC Generation Tariff Regulations, 2024 shall be applicable for determination of tariff and thereafter, as per the Regulations notified by the Commission from time to time. Thus, the Commission may consider to fix the operational parameters afresh as per the OERC Generation Tariff Regulations as notified by the Commission from time to time.

- g) The operational parameters for a 350 MW generating unit have not been stipulated OERC Generation Tariff Regulations, 2024. However, the relevant operational parameters for 350 MW generating unit as per the OERC Generation Tariff Regulations, 2020, basing on which the Petitioner has computed the monthly ECR and claimed the same vide monthly invoices are given in the table below:

Sl No.	Description	Unit	OERC Generation Tariff Regulations, 2020	As per M/s. JSWEUL
1	Turbine Heat Rate	Kcal/kWh	Depends upon type of Boiler Feed Pump and Pressure Rating of the Thermal Unit	1950
2	Boiler Efficiency	%	86 (for Sub-Bituminous Coal)	86
3	Gross Station Heat Rate (GSHR)	Kcal/kWh		2267.44
4	Correction	%	5	5
5	GSHR with correction	Kcal/kWh		2381
6	Transit Loss (Non-Pit Head)	%	0.8	0.8
7	Auxiliary Energy Consumption (With Induced Draft Cooling Towers)	%	5.75+0.5=6.25	5.75+0.5=6.25
8	Specific Fuel Oil consumption	ml/kWh	0.5	0.5

- h) GRIDCO has requested the Commission to direct the Petitioner to submit the Manufacturer's Manual in respect of the Boiler and Turbine for determination of Gross Station Heat Rate (GSHR) of the Unit-I of its IPP.
- i) The weighted average GCV of coal and landed cost of coal considered from February, 2024 to November, 2024 for computation of ECR, which varies between

Rs.3.140/kWh in February & March, 2024 and Rs.2.144/kWh in November, 2024 as given in the table below, has been provisionally accepted by GRIDCO. However, after pronouncement of the order by the Commission in the present case, the provisionally accepted monthly ECR shall be duly revised.

Month	Weighted Average GCV of Coal (kCal/kg)	Landed Cost of Coal (Rs./MT)	Energy Charge Rate (ECR) claimed in the monthly energy bills submitted to GRIDCO (Rs.)
Feb-24	2979.00	3.645	3.140
March-24	2979.00	3.645	3.140
April-24	3111.00	3.573	2.951
May-24	3039.36	3.452	2.92
June-24	3017.60	3.443	2.931
July-24	3043.28	3.454	2.916
Aug-24	3095.69	3.355	2.786
Sept-24	2922.83	3.272	2.876
Oct-24	3052.66	2.995	2.525
Nov-24	3183.88	2.646	2.144

- j) The Commission, vide its order dated 30.07.2016 passed in Case No.21 of 2016, has directed for reimbursement of water cess, electricity duty on auxiliary consumption and SLDC charges in proportion to its share of power in the IPP of erstwhile M/s. IBEUL. According to GRIDCO, it is not liable to reimburse the same as there is no such provisions in the MoUs signed by the present Petitioner/erstwhile M/s. IBEUL and in the PPAs signed by present Petitioner/erstwhile M/s. IBEUL. Further, there is no such provision in the State Thermal Policy dated 08.08.2008 and GRIDCO is not reimbursing any such taxes, levies to any other IPP like M/s. NAVA Limited and M/s. MPCL, supplying power at the ECR only.
- k) As per the PPA dated 23.12.2024 executed between the Petitioner and the GRIDCO, the Petitioner shall bear all the transmission charges and losses (GNA charges) as applicable from time to time for supply of power through CTU system and now the said charges are being adjusted by GRIDCO from the dues payable towards cost of power supplied by the Petitioner.
5. The Respondent-TPWODL has submitted that the Commission, vide its order dated 30.07.2016 passed in Case No.21 of 2016, had determined an indicative ECR of Rs.1.4511/kWh for the subject IPP after prudent verification of the proposed ECR of Rs.1.6385/kWh by the then Petitioner M/s. IBEUL, basing on the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014. However, in the instant case the present Petitioner-M/s. JSWEUL has relied upon OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 for determination

of ECR of the subject IPP and accordingly has determined the ECR @Rs.3.14/kWh. According to the TPWODL, similar principle may be adopted as considered in the earlier order dated 30.07.2016 in Case No.21 of 2016 with necessary prudent check with respect to increase in cost. Further, in order to avoid tariff burden on the State consumers, domestic coal should be utilized for generation of power and no imported coal should be allowed.

6. The Respondent-OPTCL has submitted that it has no objection to the instant petition filed by M/s. JSWEUL and the Commission may pass a prudent order considering the facts and circumstances of the case.
7. Heard the parties in hybrid mode. Considering the submissions of the Petitioner and Respondents, the Commission does observe as hereafter:
 - a) M/s. IBEUL (Renamed afterwards as M/s. JSWEUL) has set up a thermal power plant having installed capacity of 1360 MW (Phase I: 2x350 MW + Phase II: 1x660 MW) at Jharsuguda, Odisha. The infirm power as well as 14%/12% of the power sent out from the plant as State's entitlement was to be available to GRIDCO at ECR/Variable cost through CTU network (M/s. JSWEUL to bear the interstate transmission charges and transmission losses) till establishment of direct connectivity with the STU network.
 - b) The Commission, vide its order dated 30.07.2016 passed in Case No.21 of 2016, had fixed the relevant operational parameters and determined the indicative ECR of the subject IPP, the erstwhile M/s. IBEUL, in accordance with the provisions of OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2014 considering use of domestic linkage coal. However, the FSA executed between erstwhile M/s. IBEUL and M/s. MCL was terminated on 31.05.2018 due to non-lifting of linkage coal by M/s. IBEUL.
 - c) Now, pursuant to the approval of NCLT, Hyderabad Bench, M/s. JSW Energy Ltd. acquired M/s. IBEUL on 28.12.2022 and consequently, M/s. IBEUL become a subsidiary of M/s. JSW Energy Ltd. and renamed as M/s. JSW Energy (Utkal) Limited (M/s. JSWEUL). Accordingly, Supplemental MoU was executed by the Petitioner with the Government of Odisha on 24.11.2023 for revalidation of such acquisition.
 - d) Thereafter, the Petitioner has started operating the Unit-I of the IPP from 17.01.2024 as a merchant plant with de-rated capacity of 339.60 MW by procuring coal through e-auction route. Consequent to the request of GRIDCO, the Petitioner has commenced supply of State entitlement of power to GRIDCO Ltd. w.e.f. 21.02.2024 through CTU

network (as an interim arrangement till establishment of direct connectivity with STU network) as per the schedule by ERLDC and GRIDCO Ltd. is now making payment towards such procurement of power at the provisional ECR, computed basing on the operational parameters agreed between the parties as an interim arrangement subject to finalization by the Commission.

- e) As the Petitioner-M/s. JSWEUL (erstwhile M/s. IBEUL), the IPP, has neither long term PPA in existence for the subject IPP except GRIDCO Ltd. nor there is any FSA present for availing domestic linkage coal, the Petitioner has approached the Commission in the instant case for re-determination of operational parameters and ECR for the subject IPP.
- f) In the meantime, the Commission, vide its order dated 08.01.2024 passed in Case No. 64 of 2024, has approved the amended /re-stated PPA dated 23.12.2024 executed between the Petitioner-M/s. JSWEUL and GRIDCO Ltd. which shall be effective from the date of commencement of power supply by the Petitioner to GRIDCO Ltd. i.e. from 21.02.2024 for all purposes. As per the said PPA, GRIDCO shall have the right on behalf of the Government of Odisha to receive 14% of the energy sent out from the Generating Station(s)/Thermal Power Station at Energy Charge Rate (ECR), if coal block(s) is allocated within the State of Odisha. If coal block is not allocated within the State, GRIDCO shall have the right to purchase 12% of the energy sent out from the Generating station at ECR. The ECR shall be determined by the appropriate Commission. Further, Clause 6.1.3 of the said PPA stipulates that, “the methodology for determining the landed fuel cost including cost of road/rail transportation and handling charges upto the generating station/thermal power station i.e. Energy Charge Rate (ECR) shall be as per the applicable norms, regulations, guidelines and directions of the appropriate Commission.”
- g) The OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 was notified on 15.07.2020 and remained in force till 31.03.2024. Further, the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2024 has already been notified which shall be effective from 01.04.2024. Since the Petitioner has commenced power supply to GRIDCO from the subject IPP w.e.f. 21.02.2024, the ECR for the period from 21.02.2024 to 31.03.2024 is to be determined considering the norms and principles laid down in the OERC Generation Tariff Regulations, 2020 and thereafter, the norms and principles of the OERC Generation Tariff Regulations, 2024 shall be applicable.

Energy Charge Rate (ECR)

8. As per the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 as well as the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2024, the Energy Charge Rate (ECR) in Rupees/kWh on ex-power plant basis shall be determined to three decimal places in accordance with the following formulae:

For coal based thermal generating stations

$$ECR = \left[\frac{(SHR - SFC \times CVSF) \times LPPF}{CVPF} + (SFC \times LPSFi) + (LC \times LPL) \right] \times \frac{100}{(100 - AUX)}$$

Where,

AUX = Normative auxiliary energy consumption in percentage;

CVPF = Weighted Average Gross calorific value of coal “as received” 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;

SHR = 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 = Normative 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

The ECR shall be calculated based on the above formula and payable amount shall be claimed by the Petitioner in each month for supply of State's entitlement of power to GRIDCO. However, the Commission is required to fix the operational and technical parameters used in the above formula. Accordingly, such operational and technical parameters is discussed in the following paragraphs.

Normative Annual Plant Availability Factor (NAPAF):

9. As per Regulation 32(1)(a)(i) of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 and Regulation 49(1)(a)(i) of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2024, the Normative Annual Plant Availability Factor (NAPAF) is 85%. Therefore, the

Commission approves the NAPAF of 85% for the subject Thermal Power Station of M/s. JSWEUL.

Auxiliary Energy Consumption (AEC):

10. As per Regulation 32(1)(e)(i) of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020, the normative Auxiliary Energy Consumption for all coal based thermal generating stations of 300 MW and above series is 5.75% with further increase by 0.5% where induced draft cooling towers is used. However, the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2024 provides the same norm for the coal based thermal generating stations of 500 MW and above series and no norm of Auxiliary Energy Consumption for thermal generating station between 300 and 500 MW series has been provided. In the calculation of provisional of ECR, both M/s. JSWEUL and GRIDCO have accepted the auxiliary energy consumption of the subject IPP @ 6.25% (5.75% + 0.5%). Accordingly, the Commission approves the Auxiliary Energy Consumption @ 6.25% for the subject IPP of M/s. JSWEUL.

Gross Station Heat Rate (SHR):

11. As per Regulation 32(1)(c)(iii) of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020, 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:

$$\text{Gross SHR} = 1.05 \times \text{Design Heat Rate (kCal/kWh)}$$

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.

The OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2024 provides the same norm for the coal based thermal generating stations of 200-300 MW set and no such formula of Gross Station Heat Rate for the thermal generating station between 300 and 500 MW set has been provided. Earlier the Commission, vide its order dated 30.07.2016 in Case No.21 of 2016, had determined the Gross Station Heat Rate of the same Unit-I of the subject IPP as 2369.015 kCal/kWh by applying the formula “1.045 X Design Heat Rate (kCal/kWh)” as per the OERC Generation Tariff Regulations, 2014 and considering the design heat rate of the generating unit as 2267 Kcal/Kwh as provided by the erstwhile M/s. IBEUL.

Considering the design heat rate of 2267 kCal/kWh for the said generating Unit-I of the subject IPP, the Gross Station Heat Rate (1.05 x Design Heat Rate) works out to 2380.35 kCal/kWh as per the OERC Generation Tariff Regulations, 2020. Accordingly, the Commission approves the Gross Station Heat Rate as 2380.35 kCal/kWh for the subject IPP of the Petitioner-M/s. JSWEUL.

Specific Secondary Fuel Oil Consumption (SFOC):

12. As per Regulation 32(1)(d)(ii) of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020 as well as Regulation 49(1)(d)(ii) the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2024, the secondary fuel oil consumption for all coal-based thermal generating stations, which have achieved COD on or after 01.04.2014, is 0.50 ml/kWh. Accordingly, the Commission approves the Specific Secondary Fuel Oil consumption as 0.5 ml/kWh for the subject IPP of the Petitioner-M/s. JSWEUL.

Transit and Handling Loss

13. Since the coal for the subject IPP - M/s. JSWEUL is now being procured from the sources other than the Pit Head mines, the transit and handling losses of 0.8% shall be applicable for such procurement of coal as per the OERC Generation Tariff Regulations, 2020 and 2024.
14. The Operational & Technical parameters for determination of ECR are summarized in the table below:

Description	Values
NAPAF	85%
AEC	6.25%
GSHR after applying correction	2380.31 kCal/kWh
SFOC	0.5 ml/kWh
Transit & Handling Loss	0.8%

GCV of Primary Fuel (Coal):

15. According to Regulation 39 of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2024, for computation of ECR, the gross calorific value of coal shall be considered in accordance with 'GCV as received' basis as per Regulation 3(1)(ii), which stipulates that;

“GCV as Received” means the GCV of coal as measured at the unloading point of the thermal generating station through collection, preparation and testing of samples from the loaded wagons, trucks, ropeways, Merry-Go-Round (MGR), belt conveyors and ships in accordance with the IS 436 (Part-I/ Section 1)- 1964;

Provided further that samples of coal shall be collected either manually or through hydraulic augur or through any other method considered suitable keeping in view the safety of personnel and equipment;

Provided also that the generating companies may adopt any advance technology for collection, preparation and testing of samples for measurement of GCV in a fair and transparent manner;

Provided that the measurement of GCV of coal shall be carried out through sampling by third party to be appointed by the generating companies in accordance with the guidelines, if any, issued by the Central Government/Commission;

Provided that GCV of coal 'as Received' shall be found out from GCV of coal on 'as billed basis' allowing an adjustment for total moisture as per the formula given as under:

$$\frac{GCV \times (1-TM)}{(1-IM)}$$

Where: GCV = Gross Calorific Value of coal on as "billed basis"

TM = Total Moisture

IM = Inherent Moisture

At Regulation 3(1)(ff) of the OERC (Terms and Conditions for Determination of Generation Tariff) Regulations, 2020, the 'GCV as Received' has been defined in the similar manner.

It is understood from the submissions of M/s. GRIDCO Ltd. that M/s. NMCI was engaged by the Petitioner as 3rd Party for sampling and measuring of GCV of Coal at the receiving/uploading end. The practice followed by M/s. NMCI to measure "as received" GCV of coal is that the moisture correction formula is applied on "Air Dried Basis (ADB) GCV" measured at the receiving/uploading point i.e. at the plant premises, as per the agreement between M/s. NMCI and the Petitioner. According to M/s. GRIDCO Ltd., the GCV derived on ADB should be close to the range of GCV mentioned in the coal invoice and with moisture correction formula, the "as received" GCV should come close to or within the specified range of GCV mentioned in the coal invoice. But the "as received" GCV of Spot Auction coal sourced from multiple mines by the Petitioner & sampled at receiving end/unloading end by the 3rd Party varies from the range of GCV mentioned in the coal invoice(s) and the variation is to the tune of 800 kCal/kg to 1000/1200 kCal/kg with respect to the lower limit of the range of GCV mentioned in the coal invoice as submitted by the Petitioner. Such glaring variation in "as received" GCV of coal is not commensurate with the landed price of coal considered for computation of monthly ECR. According to GRIDCO, the extant OERC Generation Tariff Regulations, 2024 and OERC Generation Tariff Regulations, 2020 do not provide for applying

Moisture Correction formula on “Air Dried Basis” GCV to determine ‘as received’ GCV of coal.

The Commission is of the view that the parties should follow the Regulations for computation of GCV of coal. As per the OERC Generation Tariff Regulations, 2024 and 2020, the moisture correction formula shall be applied to find out “as received” GCV of coal from the GCV of coal on “as billed basis” i.e. when the GCV of coal on “as received” basis is not known. As per OERC Generation Tariff Regulations, 2024 measurement of “as received” GCV of coal can also be carried out through sampling by 3rd party in accordance with guidelines, if any, issued by Central Govt./Commission. In the instant case, “as received” GCV of coal has been measured by the 3rd party M/s. NMCI engaged by the Petitioner. From the submissions of M/s. GRIDCO Ltd., the Commission observed that the variation in “as received” GCV of coal measured by the 3rd party is very high with respect to the lower limit of the range of GCV of the coal in the invoice and the variation is to the tune of 800 kCal/kg to 1000/1200 kCal/kg. Such variation is not acceptable in view of the interest of the State Consumers as it has impact on the tariff.

The Commission further observed that the Petitioner, in its additional submissions, has stated that the variation observed in the GCV value is mainly due to problems related to mine specific issues, which are beyond the control of the Petitioner. However, keeping in view the peculiar facts of such wide variation in GCV Value at receiving end, the Petitioner has agreed to the proposal of GRIDCO regarding determination of “As received” GCV of coal by applying the moisture correction formula as stipulated in the applicable OERC Generation of Tariff Regulations on the median values of the range of GCV of coal mentioned in the coal invoice of coal company/MCL and consumed in a month (as per Form 15) for supply of State’s share of power. In the instant case, the Commission allows above method of determination of “As received” GCV of coal as both the Petitioner-M/s. JSWEUL and the Respondent-GRIDCO Ltd. have agreed for determination of ‘as received’ GCV of coal by applying moisture correction formula on the median values of the range of GCV of coal mentioned in the coal invoice(s) of coal company(ies). The above methodology would be adopted till any decision/direction is issued by the appropriate authority of Govt. of India regarding such abnormal variation of “as received” GCV of coal measured by the empanelled 3rd party agency. However, when the “as received” GCV of coal measured by the empanelled 3rd party agency is within the reasonable range of GCV of coal mentioned in the coal invoice of coal

company(ies), the same shall be considered “as received” GCV of coal for computation of ECR.

Further, the Commission directs that the “Third Party Sampling Agency (TPSA)” for collection, preparation and analysis of coal samples at receiving/unloading end shall be selected from the list of agencies empanelled for such purpose by PFC/MoP, GoI and the practice of 3rd Party sampling shall be followed in future for determination of “As received” GCV of coal in line with OERC Generation Tariff Regulations, 2024 as amended from time to time.

16. Notwithstanding to the above, the Commission directs the Petitioner to take necessary steps at the earliest for arranging/obtaining Shakti Linkage Coal/concessional coal for supply of State’s entitlement of power, as agreed in Clause 10 of the amended/restated PPA dated 23.12.2024. The respondent GRIDCO is also directed to extend necessary support to the Petitioner in coordination with Government of Odisha for obtaining such Shakti Linkage Coal/Concessional Coal for generation of power from the said power plant of M/s JSWEUL.
17. The Bill at ECR shall be raised by the Petitioner-M/s. JSWEUL on monthly basis and submitted to GRIDCO with the details of coal/oil used for generation as indicated in the OERC Generation Tariff Regulations for scrutiny and payment. As no linkage coal is available presently to the Petitioner’s power plant and the Petitioner is procuring coal through e-auction from various sources, the GCV and price of coal varies and thus, GRIDCO shall verify GCV and price of coal & oil etc. as well as computation of ECR as per the Regulations and as decided in this order, before making payment for State’s share of power. However, the Commission is of the view that the domestic linkage coal/concessional coal should be utilized for generation of power for supply of State’s entitlement of power to avoid tariff burden on the State consumers.
18. As per the OERC Generation Tariff Regulations, 2024 (effective from 01.04.2024), in addition to the ECR, a generating company is eligible to claim supplementary energy charge on account of emission control system, if installed in the generating station to meet the revised emission standards notified from time to time.
19. Further, as agreed in the Clause 4.0 of the PPA dated 23.12.2024, till establishment of connectivity of the subject IPP with the State Transmission Utility (STU) network through dedicated transmission line, the Petitioner-M/s. JSWEUL shall supply the State’s share of power using CTU transmission system and for such delivery of power to GRIDCO, the Petitioner-M/s. JSWEUL shall bear all necessary Inter-State transmission

charges including transmission losses and any other charges as applicable upto the delivery point.

20. As per the OERC Generation Tariff Regulations, 2020 and 2024, the Generating Company shall recover the statutory charges imposed by the State and the Central Government, such as, Electricity Duty, Water Cess & Charges. Accordingly, it is directed that the payment of statutory charges such as Water Cess/Charges paid by the generating company to the Water Resources Department, GoO, and the Electricity duty on auxiliary energy consumption paid to the Government of Odisha and the SLDC charges shall be reimbursed by GRIDCO in proportion to the drawl of the State's share of power from the subject IPP of M/s.JSWEUL.
21. With the above observations and directions, the Case is disposed of.

Sd/-
(S.K. Ray Mohapatra)
Member

Sd/-
(G. Mohapatra)
Officiating Chairperson