

**ODISHA ELECTRICITY REGULATORY COMMISSION
BIDYUT NIYAMAK BHAWAN
PLOT NO.-4, CHUNUKOLI, SHAILASHREE VIHAR
BHUBANESWAR - 751 021**

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

Case No. 71/2022

**M/s.Tata Steel Ltd.
Vrs.
OREDA&Others**

..... Petitioner

..... Respondents

In the matter of: **Petition under Regulations 16, 17 and 20 of the Odisha Electricity Regulatory Commission (Procurement of Energy from Renewable Sources and its Compliance) Regulations, 2021 seeking a declaration and exemption that the petitioner is not an ‘obligated entity’ and thereby not required to fulfil its RPO targets in relation to its Meramundali Unit for the period FY 2021 onwards and for future period as long as the generation from its Captive Co-Generation Plant/Unit at Meramundali is in excess of its presumptive RPO requirements for the same period.**

For Petitioner : Ms. Mandakini Ghosh, Advocate and Ms. Anusha Nagarajan, Advocate on behalf of M/s. Tata Steel Ltd.

For Respondent : Shri Atish Kumar Meher, the representative of OREDA.

ORDER

Date of hearing: 27.12.2022

Date of Order: 01.02.2023

1. The present petition has been filed by the petitioner-M/s Tata Steel Ltd., the owner of a Captive Generation Plant, to relax and/or remove difficulties under Regulations 16, 17 & 20 of OERC (Procurement of Energy from Renewable Sources and its Compliance) Regulations, 2021 (“RPO Regulations, 2021”).
2. The Petitioner, Tata Steel has prayed the Commission to declare that
 - a) the Petitioner’s Meramundali units of 258 MW, being a captive co-generator of electricity, is not required to fulfil its RPOs from FY 2021 onwards and even for subsequent years as long as the cogeneration is in excess of presumptive RPO targets, de hors the provisions of the relevant regulations;
 - b) the Petitioner’s Meramundali unit is entitled to set-off its presumptive RPO targets qua the consumption from 65 MW fossil-fuel based captive generating

plant against the electricity generated and consumed from its captive cogeneration plants irrespective of fuel utilized in such plants.

3. The Petitioner, M/s Tata Steel Ltd. (TSL), owns and operates a 5.6 MTPA Integrated Steel Plant and a 323 MW Captive Generation Plant (including co-generation) at Meramundali, District- Dhenkanal, Odisha. The petitioner is engaged in manufacturing and sale of Sponge Iron and Steel goods in all forms and is also engaged in generating power from co-generation process since 2008. Out of the Captive Generation Plant (CGP) of 323 MW ((1x165 MW + 1x77 MW + 1x33 MW + 1x20 MW + 1x16 MW+ 1x12 MW), 258 MW is Co-generation based (about 80%) and remaining 65 MW is coal based generation (about 20%) which uses coal as primary fuel. The 323 MW plant is entirely owned by the petitioner and power generated from the same is completely consumed by the petitioner.
4. Blast Furnace Gas (BFG) with high calorific value, is a by-product produced during production of Hot Metal (HM). Similarly, Coke Oven Gas (COG) with high calorific value is generated in Coke Ovens (CO) during coking process. Top gas Recovery Turbine (TRT) of Blast furnace utilises high pressure and temperature of BFG to generate electricity and no additional fuel input is required. TRT of Blast furnace is connected to a 16 MW generator. The high calorific value of waste heat energy from BFG & COG is used in heating gas fired boiler to generate steam for rotating turbine for generation of power instead of releasing to atmosphere, which would have caused environmental damage and equivalent quantum of power generation through fossil-fuel (Coal) based plants is being saved. The waste flue gases with high temperature produced in rotary kiln of Direct Reduced Iron (DRI) plant/sponge Iron Plant during manufacturing of Sponge Iron are channelized through the waste heat Recovery Boilers (WHRBs) to produce steam & ultimately generation of electricity of 110 MW (1x33 MW + 1x77 MW). Hence Sponge Iron Plant or DRI plant process produces two or more form of useful energy including electricity simultaneously & hence qualifies as a co-generating plant.
5. The Petitioner M/s. Tata Steel Ltd. has submitted the following:
 - a) The 258 MW captive co-generating unit of the petitioner includes of 132 MW of generation using Blast Furnace (BF) & Coke Oven (CO) Gas, 16 MW of generation utilizing Top Gas Recovery Turbine (TRT) and 110 MW of generation utilizing Waste Heat Recovery Boiler (WHRB). Waste heat in the

form of exhaust gases from BF and CO is used as a fuel in gas fired boilers to produce steam for 132 MW of power generation that is used internally in the plant operation. In TRT, heat and pressure energy of BF gas is used to drive a turbine which is transferred to a 16 MW generator and converted to electric power. During the iron ore reduction process, waste flue gases are produced at very high temperature that are channelized through WHRB to produce steam and consequently generation of electricity from the steam turbine driven generators of 110 MW (1x33 MW + 1x77 MW). The electricity produced by these Generators is used for consumption in the steel manufacturing process.

- b) The 258 MW captive co-generation unit, captures the waste heat released from the various iron & steel making processes and converts it into electricity thereby adequately and sufficiently minimizing the huge amount of pollution causing waste heat that would have released into atmosphere leading to atmospheric warming with danger of changing local weather conditions and harmful pollution etc. The cogenerating unit helps in utilisation of resources and minimises use of fossil fuel for generation of power.
- c) Co-generation is a non-conventional method of generating electricity (i.e. fossil fuel is not used directly for generation of electricity), which is recognized internationally as an environmental friendly way of generation of electricity because it displaces the need for fossil fuel to generate electricity by using waste steam/ heat. Co-generating is a process which simultaneously produces two or more forms of useful energy (including electricity) and thereby protects environment and prevents pollution. The Petitioner's Co-generation unit at Odisha falls within the definition of 'co- generation' given under Section 2(12) of the Electricity Act, 2003.
- d) As per OERC (Renewable and Co-generation Purchase Obligation and its Compliance) Regulations, 2010, the Obligated Entities' had RPO to purchase electricity from co-generation and from renewable energy sources. Therefore, both renewable and co-generation were treated at par in compliance with Section 86(1)(e) of the Act. Subsequently, the RPO Regulations, 2010 and was repealed on 01.08.2015 and replaced by OERC (Procurement of Energy from Renewable Sources and its Compliance) Regulations, 2015.

- e) On 07.08.2015, this Commission passed an order directing entities such as the petitioner to fulfil RPO for the period FY 2010-11 to FY 2014-15. This Order has been challenged before the Hon'ble High Court of Odisha by several co-generators, which is pending for adjudication. Aggrieved by the RPO Regulations 2015(order dt.07.08.2015) and the Tariff Policy, 2016, the petitioner filed WP No.9694 of 2017 before the High Court of Odisha on 19.05.2017 challenging the vires of Clause 4(e) of RPO Regulations, 2015 and Clause 6.4 of Tariff Policy, 2016. The petitioner through writ petition is seeking a declaration that RPOs cannot be imposed on a captive co-generating plant under the RPO Regulations, 2015. The Hon'ble High Court issued notice granting interim relief to the Petitioner on 14.01.2020. The writ petition is currently pending for adjudication before the Hon'ble High Court. It is pertinent to mention that on 05.09.2022, the Commission has filed its counter affidavit in the WP (C) No.9694 of 2017 filed by the petitioner. In its counter, the Commission has acknowledged that based on judgments of APTEL, the Commission has granted exemption to fossil fuel based co-generating plants for fulfilment of RPOs.
- f) The RPO Regulations, 2021, notified on 17.01.2022, specifies the RPO targets for obligated entities in the state for the period FY 2021-22 to FY 2024-25. Relevant extract of the Regulation are as under:

“3. Scope of Regulations and Extent of their Application

3.1 These Regulations shall apply to all Obligated Entities in the State of Odisha. The Obligated Entities include:

XXXXX

(b) Any person who owns Captive Generating Plant including co-generation plants based on conventional fossil fuel with installed capacity of 1 MW & above, and consumes electricity generated from such plant for his own use shall be subject to RPO to the extent of a percentage of his consumption met through such fossil fuel-based captive source

XXXXX”

- g) As per the judgments of Hon'ble APTEL and the Commission, a captive cogeneration plant irrespective of fuel is not liable to be fastened with RPOs under the Electricity Act, 2003. Therefore, the petitioner being a captive co-generating plant is not liable to be fastened with any RPOs under Regulation 3.1(b) of the RPO Regulations, 2021 to the extent of its consumption from co-

generation power. Therefore, this is a fit case wherein this Commission may exercise their powers of removal of difficulty and relaxation to declare that the petitioner is not liable for fulfilment of RPOs. Moreover, the petitioner generates co-generation power in excess of its presumptive RPO targets. Therefore, the petitioner is not required to fulfil any further RPO against its 323 MW captive generating plant. The details of power generation is as under:

RPO (Solar and Non-solar) from FY 2015-16 to FY 2021-22						
Year	Total Energy generated and consumed from captive (MWh)	RPO requirement (%)		RPO requirement (MWh)		Co-generation energy produced (MWh)
		Solar	Non-Solar	Solar	Non-solar	
2015-16	1570674	0.5	2.5	7853	39267	227351
2016-17	2165103	0.5 & 1.5	2.5 & 3	16233	56946	546471
2017-18	2317578	0.5 & 3	2.5 & 4.5	22899	68990	758267
2018-19	2254603	0.5 & 4.5	2.5 & 5	26323	78377	1136141
2019-20	2507786	0.5 & 5.5	2.5 & 5.5	53463	89632	1183813
2020-21	2550333	0.5 & 5.5	2.5 & 5.5	51171	89584	1380799
2021-22	2944100	0.5 & 7.25	2.5 & 6	65890	103397	1554020

- h) The Hon'ble APTEL in the matter of JSW Steel Ltd. vs. TNERC (Appeal No.278 of 2015 and 293 of 2015), M/s. NALCO Ltd. vs. OERC & Others. (Appeal No.260 & 261 of 2015); and JSW Steel Ltd. vs. MERC & Others (Appeal No.176 of 2020) has held that even when regulations provide for fulfilment of RPOs for fossil-fuel based captive cogeneration plant, such regulation has to be read down. The Electricity Act, 2003 does not distinguish between co-generation and renewable sources of energy and seeks to promote both sources. If the intention of the Electricity Act, 2003 was to promote only renewable sources of energy, there was no need to include the term 'co-generation' in section 86(1)(e) or define the term 'co-generation' under section 2(12). Therefore, the inclusion of the term 'co-generation' was deliberate and is required to be promoted in addition to the renewable sources of energy.
- i) Similar findings have also been held by the Hon'ble APTEL in its Order 26.04.2010 in respect of Century Rayon vs. MERC (Appeal No. 57 of 2009); Order 30.01.2013 in respect of Emami Paper Mills Ltd. vs. OERC (Appeal No.54 of 2012); Order dt.31.03.2013 in respect of Vedanta Aluminium Ltd. vs. OERC (Appeal No.59 of 2012); Order dt.10.04.2013 in respect of Hindalco Industries Limited vs. UPERC (Appeal No.125 of 2012); Order dt.01.10.2014 in respect of India Glycols Ltd. vs. UERC (Appeal No.112 of 2014), JSW Steel

Ltd. vs. KERC (Appeal No. 333 of 2016) and JSW Steel Ltd. vs. TNERC (Appeal No. 278 of 2015). Further, the Hon'ble APTEL by judgment dt.02.11.2020, has again reiterated in the case of NALCO vs. OERC & Others., Appeal No.260 of 2015 & Batch, that captive co-generation plant cannot be fastened with liability of purchasing power from renewable sources to meet RPO obligation. It is pertinent to note that in the aforementioned judgment, the Hon'ble APTEL was dealing with regulations of the Commission imposing RPOs on obligated entities. On 02.08.2021, the Hon'ble Tribunal, in Appeal No.176 of 2020, has held that JSW Steels Ltd., a captive co-generating plant in Maharashtra is not liable to fulfil RPOs under the RPO Regulations 2016 irrespective of source of fuel used by the captive generating plant.

- j) As stated by the Hon'ble APTEL in the aforementioned judgments, entities similar to the petitioner, owning and operating a cogeneration based CPP, irrespective of fuel used is not liable to be fastened with the RPOs so long as the electricity generated from its co-generation plant in excess of the presumptive RPO target (quo its captive consumption) for the relevant years. The petitioner's consumption from its cogeneration plant has been in excess of its presumptive RPO targets from 2016 onwards and hence there is no requirement for fulfilling of presumptive RPOs by the petitioner. Moreover, from October 2021 to June 2022, the Commission has exempted similarly placed fossil-fuel based captive cogenerating plants from fulfilment of RPOs in the matter of M/s.Aarati Steels Ltd. vs OREDA in Case No.35/2021; M/s.Visa Steel Limited vs OREDA in Case No.46/2021; M/s. Dalmia Cement (Bharat) Ltd. vs. OREDA in Case No.87/2021; and M/s. SAIL, Rourkela Steel Plant vs. OREDA in Case No.85/2021.
- k) Out of the petitioner's 323 MW captive generating plant, 65 MW utilises coal as its primary fuel. The excess generation from the 258 MW co-generating plant (that remains after satisfaction of the presumptive 3% RPO for the 258 MW) for the relevant years may be allowed to be set-off against the RPOs corresponding to its consumption from the 65 MW thermal based captive generation plant.

6. The Respondent M/s. OREDA submitted the following:

- i. The petitioner as such has no Renewable Energy Power Plant for own use. However, during FY 2015-16 to FY 2021-22, the petitioner has reported to

generate excess from its Co-generation capacity than from the coalbased capacity and have consumed excess energy from the Co-generation plant than the required RPO quantum.

- ii. If the Blast Furnace + Coke Oven Gas Generation based power plant, Top Recovery Turbine based power plant & Waste Heat Recovery Boiler based power plant are recognised as Co-generation Power Plant by any agency and power generated from such plant is considered as renewable power, the Commission may consider relaxing provisions of applicability of RPO and its compliance thereof on both the 258 MW Co-generation based and 65 MW coal based CGP under clause 3.1(b) of OERC RPO Regulations, 2021.
- iii. To avail exemption of RPO for both CGPs (258 MW Co-generation CGP and 65 MW Coal based CGP), the petitioner has to submit generation data to OREDA annually.

7. Heard the Petitioner and Respondent through hybrid mode (through video conferencing and physical mode) and considered their arguments & written submissions. The Commission observes that:

- a) The petitioner-Tata Steel owns and operates 323 MW of Captive Generation Plant (CGP) at Meramundali (Odisha), out of which 258 MW is co-generation based (80%) and 65 MW is fossil fuel (coal) based generation (20%).
- b) The petitioner has prayed to declare that it is not liable to fulfill its RPOs under RPO Regulations, 2021 vis-a-vis its 258 MW captive co-generating plant citing various judgments of Hon'ble APTEL where it has been opined that even if the Regulations impose RPO on cogeneration plants, in such a situation, those regulations have to be read down in the view of protection/ special status granted to co-generation plants under Section 86(1)(e) of the Electricity Act, 2003.
- c) By referring to section 2(12) and section 86(1)(e) of Electricity Act, 2003, the Petitioner has tried to establish that both the co-generation and generation from renewable energy sources needs to be promoted and cogeneration does not mean cogeneration from renewable energy sources alone. So tagging of RPO with the co-generation based CGP defeats the objective of section 86(1)(e) of Electricity Act, 2003.

- d) The petitioner has also sought exemption under RPO Regulation 2021 for its consumption from 65 MW captive generation plant citing that the Hon'ble APTEL in the matter of JSW vs MERC & Others (Appeal No.176 of 2020) has allowed the Appellant, JSW to set off its RPO obligation for the open access consumption against the electricity generated and consumed from its co-generation plant. The petitioner has prayed that the generation and consumption from the 258 MW co-generating plant may be allowed to be set off against the RPO targets of the balance 65 MW of generation from CGP for the corresponding year.
8. Earlier in Case No.66/2019 as well as in some other cases, the Commission had relaxed under OERC (Procurement of Energy from Renewable Sources and its Compliances) Regulations, 2015 and had exempted RPO for consumption of power generated from fossil fuel based captive co-generating plants basing on various orders of the Hon'ble APTEL. In the meantime, the said Regulations have been amended and replaced by OERC (Procurement of Energy from Renewable Sources and its Compliances) Regulations, 2021, which is effective from 15.02.2022 and the Reg.No.3.1(b) of the new Regulations states that:
- “Clause 3.1(b) Any person who owns Captive Generating Plant including co-generation plants based on conventional fossil fuel with installed capacity of 1 MW & above, and consumes electricity generated from such plant for his own use shall be subject to RPO to the extent of a percentage of his consumption met through such fossil fuel-based captive source.”*
- Therefore, as per Regulation 3.1 (b), the consumption of electricity from the Captive Generating plant including co-generation plants based on conventional fossil fuel shall be subject to RPO compliance.
9. The Installed capacity of fossil fuel based Captive Generation Plants (CGPs) in the state of Odisha (about 10GW) is the highest among the states in the country and this capacity is even more than the total installed generation capacity of Odisha. Most of the CGPs in the state has installed waste heat recovery system to increase energy efficiency.
10. The Tariff Policy 2016 of Ministry of Power, Government of India states that:
- “6.4 Renewable sources of energy generation including Co-generation from renewable energy sources:*
- (1) Pursuant to provisions of section 86(1)(e) of the Act, the Appropriate Commission shall fix a minimum percentage of the total consumption of electricity in the area of a distribution licensee for purchase of energy from*

renewable energy sources, taking into account availability of such resources and its impact on retail tariffs. Cost of purchase of renewable energy shall be taken into account while determining tariff by SERCs. Long term growth trajectory of Renewable Purchase Obligations (RPOs) will be prescribed by the Ministry of Power in consultation with MNRE.

Provided that cogeneration from sources other than renewable sources shall not be excluded from the applicability of RPOs.”

Govt. of India (GoI) has an ambitious target for capacity addition of 500 GW of non-fossil fuel based generation by 2030 to reduce emission level and a challenging RPO trajectory including RPO trajectory for Energy storage system beyond FY 2021-22. Similarly, one of the objectives of the new Renewable Energy (RE) Policy 2022 of Government of Odisha (GoO) is to accelerate adoption of clean energy alternatives and decarbonize the energy sector which includes both grid-based electricity consumption and captive consumption of industrial consumers in the State. Moreover, section 86(1)(e) of the Electricity Act, 2003 states only about promotion of co-generation and generation of electricity from Renewable sources of energy. Nowhere in OERC Regulations, 2021 or in GoI's ambitious program for non-fossil fuel based capacity addition (500 GW) by 2030 & challenging RPO trajectory beyond 2021-22 or in Electricity Act 2003 or in new RE policy 2022 of GoO, there is any mention about considering fossil fuel based captive co-generation as an alternative to RE generation for getting RPO benefit.

11. In view of above observations and specific provision in Tariff Regulations 2016 & OERC Regulations 2021, the Commission is not inclined to unfasten the Petitioner's consumption from 323 MW of Captive Generating Plant which includes 258 MW of co-generation plant from RPO compliance. Accordingly, the Petitioner's consumption from the 323 MW Captive Generating Plant and co-generation plants based purely on conventional fossil fuel source shall be fastened with RPO with effect from the date of Gazette Notification of the Regulations 2021, i.e., from 15.02.2022. However, in view of our exemption granted to the Petitioner in Case no. 66/2019 under OERC (Procurement of Energy from Renewable Sources and its Compliances) Regulations, 2015, the consumption from 258 MW captive co-generation plant shall not attract RPO whereas the extent of consumption met from 65 MW of CGP shall be liable to RPO for the period prior to the notification of the new OERC Regulations, 2021.

12. Accordingly, OREDA shall monitor the RPO compliance of the Petitioner's Plant. The petitioner shall provide necessary data/ information on its consumption and generation to OREDA as and when required by it for verification with regard to RPO compliance.
13. The case is accordingly disposed of.

Sd/-

(S. K. Ray Mohapatra)
Member

Sd/-

(G. Mohapatra)
Officiating Chairperson