

**ODISHA ELECTRICITY REGULATORY COMMISSION
BUDYUT NIYAMAK BHAWAN
PLOT NO.-4, CHUNOKOLI, SHAILASHREE VIHAR
BHUBANESWAR - 751021

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

Case No. 10/2022

M/s. Jindal Steel & Power Limited, Angul	Petitioner
Vrs.		
OREDA	Respondents

In the matter of: Application under Regulation 12.6 & 12.7. of the OERC (Procurement of Energy from Renewable Sources and its Compliance) Regulations, 2015 seeking direction to M/s. OREDA regarding relaxation/ exemption from the applicability of RPO and compliance thereof taking into consideration of generation power from the Co-generation power plants at JSPL, Angul as Cogeneration Power Plants.

For Petitioner: Shri A. K. Sahani, authorized representative of M/s. Jindal Steel & Power Limited.

For Respondent: Ms. Sasmita Patjoshi, Joint Director, OREDA.

ORDER

Date of Hearing: 02.08.2022

Date of Order: 25.08.2022

The Petitioner, M/s Jindal Steel & Power Limited, Angul is having several of its manufacturing facilities across the country, and one of its the Integrated Steel Manufacturing Plant is situated at Angul, within the state of Odisha. The Government of Odisha (GoO) entered into a Memorandum of Understanding (MoU) in 2005 with the Petitioner Company for setting up steel plant of 2 MTPA capacity at Deojhar in Keonjhar district and 6 MTPA capacity and 900MW of Captive Power Plant (CPP) in Angul district in the state of Odisha. The power requirement for the manufacturing operation of this steel plant is primarily met through its Captive Power Generation and during Power shortage, some portion of power requirement is met through procurement from IEX & PXIL.

2. The Petitioner, M/s. Jindal Steel & Power Limited (JSPL), has prayed the Commission (a) to recognize the aforesaid Captive Power Plants at Angul as Cogeneration Power Plants and (b) pass the order and directions to relax and exempt the Petitioner from applicability of Renewable Purchase Obligation (RPO) and compliance thereof, since

the electricity produced from these captive cogenerating units is far in excess of its RPO requirements for the period from 2009-10 to till date and for the further period in terms of 2015 Regulation.

3. To substantiate its prayer, the Petitioner- M/s. Jindal Steel & Power Limited, Angul has submitted the following:

a) Its CGP having 6 units of capacity 135 MW each (6x135 MW) was commissioned during April 2011 to August 2013 within the factory premises of JSPL. Power generated from these 6 units is used for its internal/ captive consumption of the steel plant at Angul, Odisha. This CGP satisfies the criteria fixed for defining as a CGP under Electricity Act, 2003 and rules made there under. The Petitioner is seeking benefits for its cogeneration power plant similar to renewable power generating plants.

b) The term 'Cogeneration' is defined in terms of Section 2(12) of the Electricity Act, 2003, which reads as follows:

"Cogeneration means a process which simultaneously produces two or more forms of useful energy (including electricity)" and it is very efficient technology to generate electricity and heat. The Power generation from CGP, Process Boiler & DRI, Turbo expander are meeting the necessary criteria for Cogeneration as defined in the above definition under the Electricity Act, 2003.

c) The description of its Captive Cogeneration Units to establish eligibility for being considered as a co-generating unit.

i. Captive Generating Plant (CGP):

The Captive Generating plant was commissioned during 2011 wherein by-product gases generated in the integrated steel plant processes at Blast Furnace, LD, Coke Ovens and BOF are also used as fuel. The waste gases generated through various metallurgical processes is being utilized as a fuel, which produces the steam and Power required for various processes of the integrated steel plant.

ii. Back Pressure Turbine:

In Process Boiler, the High Pressure (HP) steam is being generated and its HP steam is mainly used to meet the process requirement of the steel plant units like, by product plant (BPP), Steel Melting Shop (SMS) and other auxiliary

boosters like Coke Oven Gas etc. which are part of the Integrated Steel Manufacturing process. In the backpressure turbine configuration, the turbine does not consume steam. Instead, it simply reduces the pressure and temperature as per the requirement of the process. Since turbine exhaust steam will have a lower temperature and enthalpy, the boilers' energy input is usually increased to make up for steam energy converted to electricity. Thus the power generation using backpressure turbine has a substantial contribution towards reducing GHG emission and carbon foot print from power sector. To utilize the opportunity of generating electricity from back pressure turbine, a HP boiler has been installed with a back pressure steam turbine-generator placed between the boiler and the steam distribution network. Power Generation from the Back Pressure Steam Turbo Generator varies from 5 MW to 30.5MW depending upon requirement of process steam.

iii. Turbo Expander Generator:

A Turbo Expander Generator has been installed in Direct Reduced Iron (DRI) Plant at JSPL, Angul. The MIDREX Shaft Furnace systems, the recycle gas CO₂ removal system, reducing gas heating system and the Turbo Expander Generator are within the DRI plant. The basic objective of Turbo Expander is converting kinetic energy to electrical energy by using turbines and electrical generators. As the gas flows from the high pressure stream into the turbo-expander, the gas spins the turbine, which is coupled to a generator that produces electricity. In their Gasification plant it will generate desirable reducing gases for the DRI Plant. The Gasification process produces synthesis Gas at a pressure of 18 to 25 bar. This gas to be further utilized at DRI process requires reducing of pressure up to 3.5 bar. The syn gas from Coal Gasification plant is supplied at 23 bar pressure. The gas is then used to drive a Turbine Generator which reduces the pressure to approx. 3.5 bar. The syn gas at this reduced pressure is used for Iron Ore reduction in DRI plant. The Expander generator can generate power up to 13MW with a maximum flow of 225000NM³/hr of syn gas through the turbine. In the Turbo expander configuration, turbine does not consume gas. Instead, it simply reduces the pressure and temperature as per the requirement of the process. Thus the power generation using Turbo expander has a substantial contribution towards reducing GHG emission and carbon foot print from power sector.

- d) In view of above the Captive Power Plant produces two types of output (i.e.) both power as well as steam for process requirement and by product gases produced in the steel making process are used as supplementary fuel. Hence the captive generating power plants qualify the eligibility conditions prescribed for being a Cogeneration Unit.
- e) The cogeneration can provide significant environmental benefit by effective utilization of waste heat enhancing energy efficiency and reducing CHG emissions and carbon foot print. The functions of the Commission are clearly laid down in terms of Section 86 of the Electricity Act, which includes the promotion of co-generation and generation of electricity through renewable sources of energy. Accordingly, in exercise of the powers conferred by Sections 66, 86 (1) (e) and Section 181 of the Electricity Act 2003 and all other powers enabling it in this behalf, the Odisha Electricity Regulatory Commission (OERC) framed the 'Odisha Electricity Regulatory Commission (Renewable Purchase Obligation and its Compliance) Regulations, 2010, which was subsequently repealed by framing and publishing of the OERC (Procurement of Energy from Renewable Sources and its Compliance) Regulations, 2015.
- f) The Petitioner is an Obligated Entity as per the provisions of OERC's RE Regulations of 2015 and complies with RPO requirement through its own captive cogeneration plants as mentioned herein. The Electrical Energy produced through the above mentioned Captive Cogeneration Plants are sufficient to meet the entire RPO liabilities of the petitioner.
- g) Various regulatory provisions and Judgments supporting the case are as follows:
 - i. Section – 86 (1) (e) of the Electricity Act suggests the following:
The State Commission shall discharge the following functions, namely:- promote co – generation and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person and also specify, for purchase of electricity in the area of a distribution licensee;
 - ii. Appellate Tribunal for Electricity (APTEL) in its order dated 26th April 2010 in Appeal No. 57 of 2009 in Century Rayon Vs Maharashtra Electricity Regulatory Commission has concluded as below in Section 45 of its order:

- The meaning of term ‘Co-generation’ has to be understood as defined in definition section 2(12) of the Act.
- As per Section 86 (1) (e), there are two categories of ‘generators namely (1) co–generators (2) Generators of electricity through renewable sources of energy. It is clear from this section that both these categories must be promoted by the State Commission by directing the distribution licensees to purchase electricity from both of these categories.
- The imposing of the obligation on the co–generator to procure electricity from renewable energy sources would defeat the object of Section 86(1)(e).
- The clear meaning of the words contained in Section 86 (1) (e) is that both are different and both are required to be promoted and as such the fastening of liability on one in preference to the other is totally contrary to the legislative intent.
- Under the scheme of the Act, both renewable source of energy and cogeneration power plant, are equally entitled to be promoted by State Commission through the suitable methods and suitable directions, in view of the fact that cogeneration plants, who provide many number of benefits to environment as well as to the public at large, are to be entitled to be treated at par with the other renewable energy sources.
- The intention of the legislature is to clearly promote cogeneration in this industry generally irrespective of the nature of the fuel used for such cogeneration and not cogeneration or generation from renewable energy sources alone.

Further, APTEL in paragraph 46 of the judgment (Appeal No.57 of 2009 order dated 26.04.2010), directed that the conclusion reached by APTEL would be equally applicable to all cogeneration based captive consumers who may be using any fuel. The said paragraph 46 of the judgment reads as follows:

“46. *In view of the above conclusions, we are of the considered opinion that the findings rendered by the commission suffers from infirmity. Therefore, the same is liable to be set aside. Accordingly, the same is set aside. Appeal is allowed in terms of the above conclusions as well as the findings referred to in aforesaid paras 16, 17, 22 and 44. While*

concluding, we must make it clear that the Appeal being generic in nature, our conclusions in this Appeal will be equally applicable to all co – generation based captive consumers who may be using any fuel. We order accordingly. No Costs”.

Subsequent to the decision passed in the case of Century Rayon, APTEL reiterated its position on this point in several other judgments delivered by it, which are as follows:

- Appeal No. 54 of 2012 (Emami paper Mills Ltd. – versus – Odisha Electricity Regulatory Commission & Ors).
- Appeal No. 59 of 2012 (Vedanta Aluminum Ltd. (VAL) – versus – Odisha Electricity Regulatory Commission).
- Appeal Nos. 112,130 and 136 of 2014 (Indian Glycols Ltd. &Ors. Versus Uttarakhand Electricity Regulatory Commission).
- Appeal No. 66 Of 2019 (Tata Steel Kalinga Nagar Plant versus Odisha Electricity regulatory commission dated 08.12.2020).

APTEL in its Judgment dated 02.12.2013 queried that:

“Whether a Distribution Licensee could be fastened with the obligation to purchase as percentage of its consumption from co-generation irrespective of the fuel used under Section 86(1)(e) of the Act 2003”.

The basis for this question arose from one of the findings given in the judgment of Century Rayon being – *As per section 86 (1) (e), there are two categories of ‘generators namely (1) co – generators (2) Generators of electricity through renewable sources of energy. It is clear from this section that both these categories must be promoted by the State Commission by directing the distribution licensee to purchase electricity from both of these categories.* The reliefs as sought for in Appeal No. 53 of 2012 (Lloyds Metal & Energy Ltd. versus Maharashtra Electricity Regulatory Commission & Ors) and by the Petitioner seeking compliance of renewable purchase obligations is completely different. In the case of Lloyds Metal & Energy Ltd., the Petitioner had prayed for fixing a liability on distribution licenses to procure the power cogeneration for the purpose of Section 86(1)(e) of the Electricity Act, 2003. In other words, the producer of cogenerating unit had sought to fasten obligation on distribution companies to purchase a percentage of its consumption from fossil fuel based cogeneration under Section 86(1)(e) of the Electricity Act, 2003, which belonged to it. While the case of the petitioner is strikingly different since it has

only prayed for exemption of its steel works from the applicability of RPO to the extent it complies its RPO through its captive cogeneration plant. The Petitioner, even though, it comfortably meets the RPO compliance had not sought fixing of any preferential tariff for the purposes of sale of surplus units of cogenerated electricity produced by it to Distribution Licensees.

Thus, the Petitioner submitted that the subject matter of dispute in the Lloyds Metal case is significantly different to the claim being made by the Petitioner herein. A judgment being an authority for what it decides, the above mentioned decision of the Full Bench has not decided on the issue of providing of exemption from the applicability of RPO to the extent an obligated entity complies its RPO through its captive cogeneration plant. Hence the decision of the full bench of the Learned APTEL has no bearing at all on the case of the Petitioner.

The Petitioner submitted that the APTEL has clearly appreciated the interpretation of the provisions of Section 86(1) (e) of the Electricity Act and in the various judgments delivered by it has very clearly settled the position of law with respect to the interpretation of this provision.

APTEL vide its judgment in Appeal No. 278 of 2015 (JSW Steel Limited) has held the following:

“41. The Full Bench of this Tribunal, in Lloyds Metal case, after thorough evaluation of the entire material available on records and after considering the submissions of the learned counsel appearing for both the parties, has set aside only the findings in so far as recorded at para 45 (ii) of the judgment in Century Rayon case and not the Century Rayon judgment in its entirety.”

The findings contained in para 45(II) of the Century Rayon Judgement, the said judgment still valid and binding and has the recent approval of APTEL in terms of the recent judgments:

- JSW Steel Limited Vs TNSERC, Appeal No. 278 of 2015 dated 02.01.2019.
- Ultratech Cement Limited Vs KERC, Appeal No. 322 of 2016 dated 09.04.2019.
- Rajasthan Renewable Energy Corporation Limited Vs Shree Cement Limited, Appeal No. 146 of 2017, dated 16.04.2019.

APTEL while considering the cogeneration and generation from renewable sources on equal footing clearly observed the process of a typical cogeneration gas based power plant in para 29 of the judgment in the Case No. 57 of 2009, which is reproduced hereunder:

“29. *In a typical co-generation power plant which is liquid fuel or gas based, heat is co-generated as a by – product or industrial waste and is harnessed for further power generation and for industrial use. For example, in a gas based co-generation power plant, Heat Recovery Steam Generators are installed which recover heat from the exhausts of gas turbines and the same heat is used for industrial purpose and running steam turbines, which are in turn used for further power generation”.*

- h) The RPO requirement of the Petitioner along with the energy produced through cogeneration system(as shown in following Table) shows clearly that the electricity produced from cogeneration system is far in excess of the RPO requirement for the period from 2018-19 to 2020-21:

Year	Self Power Consumption - MU	RPO Requirement					Cogenerated Energy Produced
		(MU)		(MWH)			
		% Solar (0.5)	% Non Solar (2.5)	Solar	Non Solar	Total	MWH
2018 – 19	1985.31	9.93	51.62	9926.55	51618.06	61544.6	2311680
2019 – 20	2272.99	11.36	59.10	11364.95	59097.74	70462.7	2493260
2020 – 21	2727.04	13.64	70.90	13635.2	70903.04	84538.2	2816710

4. The Petitioner further submitted that in view of the facts and the settled principles of law as stated herein above, the Petitioner is entitled to being granted exemption from the Renewable Purchase Obligations as prescribed in the OERC (Procurement of Energy from Renewable Sources and its Compliance), 2015. The Petitioner has invoked the provisions of Cl. No. 12.7 of the said Regulations and seeking relaxation & exemption from compliance of RPO.
5. The Respondent, OREDA has submitted that **(a)** the petitioner is having CPP with total capacity of 900 MW that was commissioned before 01.06.2016. **(b)** M/s. JSPL is an identified Obligated Entity under OERC’s RPO Regulation, 2010, 2015 and 2021. **(c)** the petitioner may consider to submit the RPO compliance status for the period 01.09.2015 to 31.03.2022. **(d)** the Petitioner has claimed of having the co-generation facility at their steel plant premises, as understood with ‘Top-Cycle’ Cogeneration route. The cogeneration certification by any Government Agency is not submitted with this petition. **(e)** as the Cogeneration status may change in each FY depending upon the

use of the extracted steam in other applications, the cogeneration status of the petitioner is to be validated each year. (f) if the claimed facility of the petitioner is recognized as cogeneration power plant and the power generated from such cogeneration plant is more than the RPO quantum for that FY, relaxing the provision of applicability of RPO for that period may be considered.

6. The Petitioner in its rejoinder has cited and submitted various judgments of APTEL. The petitioner has mentioned that in a similar situation, Commission has passed order in the Case No. 66/2019 in the matter of M/s. Tata Steel Ltd. Vrs. OREDA. The para-17 of the Order is reproduced below:

“17. Therefore, considering the various judgements of the Hon’ble APTEL as submitted by the petitioner and its prayer, this Commission is inclined to relax the provision for industry of the Petitioner having co-generation CGP under Regulation 12.6 and 12.7 of the OERC RPO Regulations, 2015, towards its obligation for meeting renewable purchase obligation treating the Petitioner as a co-generation plant. The petitioner shall be exempted from Renewable purchase Obligation when its consumption from cogeneration CGP is more than its Renewable Purchase Obligation for the respective time period. This is because the petitioner also avails its power from sources other than Cogeneration CGP. OREDA shall monitor its Cogeneration Consumption and Renewable purchase obligation accordingly. The relaxation shall be applicable from FY 2019-20 onwards since the transaction of REC has already been settled for past periods. We are relaxing the provisions of the Regulation on the basis of the judgment of Hon’ble APTEL and the said judgments have not dealt with any refund of REC and a settled thing cannot be unsettled now. The petitioner shall provide necessary data/information on its consumption and generation and also power availed through open access, to OREDA as and when required by it for verification with regard to RPO compliance.”

Accordingly, the Petitioner has prayed to recognize the CGPs at Angul as Cogeneration Power Plants and to relax and exempt the Petitioner from applicability of RPO and compliance thereof, since the electricity produced from these captive cogenerating units is far in excess of its RPO requirements for the period from 2009-10 till date and for further period.

7. Heard the petitioner and respondents through virtual mode. The Commission observed that the Petitioner M/s. JSPL is having a 6 MTPA, integrated steel plant with 900 MW CGP at Angul District of Odisha. The Petitioner has provided reference to various Provisions of the Electricity Act, 2003 and Judgments of APTEL in support of its argument for recognizing the aforesaid CGP at Angul as a cogeneration plant. Following our earlier judgements in the Case No. 66/2019 in the matter of M/s. Tata Steel Ltd. Vrs. OREDA in this regard, we are inclined to relax under Regulation 12.7 of OERC (Procurement of Energy from Renewable Sources and its Compliance) Regulations,

2015 in the case of the present Petitioner provided Captive Power Plant at Angul is declared having co-generation facility for the period of operation of the Regulation. OREDA has been declared as State Nodal Agency under Regulation 6 of OERC (Procurement of Energy from Renewable Sources and its Compliance) Regulations, 2015 for discharging various functions under that Regulation. Therefore, OREDA is directed to give a detailed report on co-generation status of the Petitioner basing on our earlier judgements in Tata Steel case (Case No. 66/2019). The OREDA may engage outside experts for such verification if need be. The expenses in this regard shall be reimbursed by the Petitioner to OREDA. This exercise shall be completed preferably within three months from the date of issue of this order. If co-generation status of their CGP as claimed by the Petitioner is validated by OREDA then they shall get exemption from RPO requirement depending upon quantum of co-generation power availed each year for the period from FY 2009-10 up to FY 2020-21.

8. The case is accordingly disposed of.

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

Sd/-
(G. Mohapatra)
Officiating Chairperson