

TAMIL NADU ELECTRICITY REGULATORY COMMISSION
(Constituted under section 82 (1) of the Electricity Act, 2003)
(Central Act 36 of 2003)

PRESENT:-

Thiru.S.Nagalsamy **Member**

and

Thiru.G.Rajagopal **Member**

M.P.No.25 of 2012

JSW Steel Limited
Salem Works
P.O. Potteneri
Mecheri T.K.
Salem District – 636 453.

... Petitioner
(Thiru Rahul Balaji
Advocate for Petitioner)

Vs

NIL

....Respondents

Dates of hearing : 28-09-2012, 30-01-2013 and 21-04-2014

Date of order : 15-09-2014

The above M.P.No. 25 of 2012 came up for final hearing before the Commission on 21-04-2014. The Commission upon perusing the above petition and the connected records and after hearing the Petitioner passes the following order:-

ORDER

1. Prayer of the Petitioner:-

The prayer of the petitioner is to declare that the Petitioner's captive power plant comprised of three steam powered turbo generators with a combined installed capacity of 67.5 MW as being cogeneration plants under the provisions of the Electricity Act, 2003 and consequently declare that the said captive cogeneration

plant is not required to procure power from Non-Conventional Energy Sources in terms of the judgment of the Hon'ble APTEL in Appeal No.57 of 2009, *Century Rayon Vs. MERC* and the Petitioner would be entitled to account for consumption of power generated from its 67.5 MW cogeneration plant towards Renewable Purchase Obligation under the TNERC (Renewable Energy Purchase Obligations), Regulations, 2010

2. Facts of the case:-

The Petitioner is an integrated steel plant and indeed the only integrated steel plant in the State of Tamil Nadu and is the largest special steel manufacturing facility of long products in the country. The Petitioner has its steel manufacturing works in Salem and this has an annual turnover of Rs.3000 crores (approx.). The Petitioner has a significant presence in the State not only in terms of its contribution to the State revenue but also in terms of direct employment of nearly 1000 persons and 2500 people (approx.) through contractors. The Petitioner claims to be a co-generator and entitled to account for consumption of power generated from its 67.5 MW generation plant towards RPP Obligation under TNERC (RPO) Regulations, 2010.

3. Contention of the Petitioner:-

3.1. Steel is usually manufactured in two routs – (1) primary route; and (2) secondary route. In the secondary route steel is produced by using electric arc furnace and induction furnace using scrap and sponge iron as basic raw material. The steel is further processed in ladle refining furnace and cast into ingots or sent to continuous casters for further hot rolling. Such manufacturing units operate batch by batch, and each batch size is defined by the capacity of the furnace. On the other

hand, primary route such as the system followed in the Petitioner plant consists of sintering the ores in the sintering plant and charging them into the blast furnace along with coke, reducing the oxide ore on a continuous basis in blast furnaces. The liquid iron is then subjected to an oxygen refining process for converting liquid pig iron into liquid steel. Further proceedings is similar to the secondary route inasmuch as they are processed in ladle refining furnaces and continuous casters.

3.2. The Petitioner uses coke as primary reductant and fuel source in its manufacturing process as it has the required properties. To ensure continued and uninterrupted supply of coke, the Petitioner has set up a coke making oven in its plant, wherein metallurgical coal is converted into coke. The exhaust gas from the coke oven is normally very hot and the temperatures of these exhaust gases ranged between 1000°C and 1100°C. The Petitioner would otherwise have to resort to expensive processes to filter the exhaust and remove polluting materials from it before letting it into the atmosphere. However, the Petitioner has devised a method by which the extremely hot exhaust gas is diverted into the captive power plant and the whole heat from these gases is used to power the boilers and generate steam which in turn is used in steam turbo generators to produce electricity. In addition to the hot exhaust from the coking oven, the Petitioner is also diverting the whole gases from the blast furnace which has combustible components such as carbon monoxide and hydrogen to power boilers and generate steam which in turn is used to power steam turbo generators and produce electricity.

3.3. The waste heat in the form of exhaust from the coke oven and the blast furnaces is the primary raw material in the Petitioner's captive power plant. The Petitioner has 3 steam turbo generators (2 steam turbo generators of 30 MW

installed capacity each and one steam turbo generator of 7.5 MW installed capacity) with a combined installed capacity of 67.5 MW which constitute the Petitioner's captive power plant.

3.4. The process adopted by it would qualify as bottoming cycle cogeneration as it produce immense quantities waste industrial gases which are of a very high temperature and this waste heat energy in turn is used to generate electricity. As per Resolution on "Promotion of Cogeneration Power Plants" dated 6th November 1996 notified in the Gazette by Ministry of Power, Bottoming Cycle Cogeneration is defined as "Any facility that uses waste industrial heat for power generation by supplementing heat from any fossil fuel." The said notification also sets qualifying requirement for a facility to be termed as Bottoming Cycle Cogeneration and accordingly any facility to be termed Bottoming Cycle Cogeneration "The total useful power out in any calendar year must not be less than 50% of the total heat input through supplementary firing". In case of the Petitioner's captive power plant the total useful power output with respect to total heat input through supplementary firing for the year 2011-2012 is 82.8% and therefore the Petitioner qualifies the requirement as envisaged by the foregoing Resolution.

3.5. The bottoming cycle cogeneration process is a recognized form of cogeneration of electricity in manufacturing process, such as the Petitioner's, where significant quantities of waste industrial heat is generated. The Petitioner, if it was not using the waste industrial heat in generating electricity, would have to release the waste industrial heat into the atmosphere after resorting expensive technology and processes to filter and purify the exhaust to acceptable norms and standards. By

adopting the above technology, the Petitioner has enabled a system whereby the turbo generators are operated to employ the waste industrial heat an useful end.

3.6. The Electricity Act, 2003 also casts a duty on the State to promote generation of electricity from cogeneration and renewable sources. In this light, section 86 (1) (e) of the said Act casts a specific obligation on the various State Electricity Regulatory Commissions (SERCs) set up under the Act to promote generation of electricity from cogeneration and renewable sources of energy. Additionally, to ensure the usage of electricity generated from cogeneration and renewable energy sources and to increase the share of cogeneration and renewable energy, the SERCs are also required to set out regulations that make it necessary for distribution companies to purchase certain percentage of their total power requirement for such sources. This target is termed as Renewable Purchase Obligation (RPO).

3.7. TNERC has formulated a set of regulations for the Renewable Purchase Obligations vide its notification in TNERC/RPO/19/1, dated 07-12-2010. These regulations govern the framework under which specified obligated entities purchase renewable energy as per quantum specified by the TNERC. These regulations also provide the framework under which units that produce electricity using renewable sources of energy can receive accreditation.

3.8. A question arose before the APTEL whether a cogeneration plant would be required to comply with RPO Obligations and the above issue came to be finally determined by the APTEL in its order dated 26-04-2010 in Appeal No.57 of 2009, *Century Rayon Vs. MERC* wherein it was held

“45. Summary of our conclusions is given below:-

(I) *The plain reading of section 86 (1) (e) does not show that the expression “co-generation” means cogeneration from renewable sources alone. The meaning of the term “co-generation” has to be understood as defined in section 2 (12) of the Act.*

(II) *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.*

(III) *The fastening of the obligation on the co-generator to procure electricity from renewable energy procures (Sic: sources) would defeat the object of section 86 (1) (e).*

(iv) *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 interest.*

(v) *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.*

(vi) *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.*

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. (emphasis supplied)”.*

3.9. By virtue of the binding judgment of APTEL in the Century Rayon case, captive consumers having cogenerating plants cannot be fastened with the

obligation to procure electricity from renewable energy sources as that would defeat the object of section 86 (1) (e) and cogenerating plants have to be treated on par with renewable energy generating plants. The power generated and captively used from the Petitioner's plant should be treated on par with procurement of power from renewable sources for the purposes of complying with RPO obligations.

3.10. The APTEL while interpreting RPO obligated entities has specifically held that cogeneration and non-conventional energy sources have to be treated on par since they are both contained in S.86 (1) (e). In view of the TNERC (RPO) Regulations, 2010 not being sufficiently clear and having appropriately taken into account the judgment of the APTEL, a definite ruling in this regard would clarify the issue. Regulation 8 of the TNERC Regulations provides as follows:-

“8. Power to remove difficulties:- (1) The Commission shall suo-motu or on an application from any person generating electricity from renewable sources or an entity mandated under clause (e) of sub-section (1) of section 86 of the Act to fulfill the renewable purchase obligation may review, add, amend or alter these regulations and pass appropriate orders to remove any difficulty in exercising the provisions of these regulations”.

3.11. The Commission has recently ruled in DCW Ltd.'s case in M.P.No.31/2011 that-

“4.8. The Commission observes that the order of the APTEL as discussed above is subsequent to the issue of the Regulation by this Commission in 2008. From the above judgment, it is observed that 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 suitable methods and suitable directions, in view of the fact that cogeneration plants, which 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 other renewable

energy sources. Further, it is observed from the above judgment that 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. It is also observed from the above judgment that the fastening of the obligation on the co-generator to procure electricity from renewable energy sources would defeat the object of section 86 (1) (e). Since the above judgment is generic in nature, the Commission clarifies that the 2 x 25 MW cogeneration plant of the Petitioner at Sahupuram, Tamil Nadu, being a cogeneration plant, would be treated similar to a renewable energy generator. Consequently, the consumer who consumes the energy generated by this co-generation plant would be eligible for accounting the same for RPO subject to all other provisions of the RPO Regulations, 2010”.

5. Findings of the Commission:-

5.1. The main prayer of the petitioner is to declare that the power generated from their 67.50 MW captive power plant would be entitled to account for Renewable Purchase Obligation under the Tamil Nadu Electricity Regulatory Commission (Renewable Energy Purchase Obligations) Regulations, 2010.

5.2. In support of his case, the petitioner has referred to the Order of the APTEL dated 26-04-2010 in Appeal No.57 of 2009, *Century Rayon Vs. MERC* and Commission's Order dated 21-06-2012 on M.P.No.31 of 2011. The summary order of the said APTEL Order is reproduced below:

“45. Summary of our conclusions is given below:-

- (I) The plain reading of section 86(1) (e) does not, show that the expression ‘co-generation’ means cogeneration from renewable sources alone. The meaning of the term ‘co-generation’ has to be understood as defined in section 2 (12) of the Act.*
- (II) 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.

- (III) The fastening of the obligation on the co-generator to procure electricity from renewable energy sources would defeat the object of section 86(1) (e).*
- (IV) 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 interest.*
- (V) 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 a large, are to be entitled to be treated at par with the other renewable energy sources.*
- (VI) 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.*

To be consistent with the said APTEL Order, the Commission in its Order dated 21-06-2012 on M.P.No.31 of 2011 filed by DCW Limited declared that the energy generated by the fossil fuel based co-generation plant is eligible for accounting for Renewable Purchase Obligation.

5.3.

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However, in its Order dated 02-12-2013 on Appeal No.53 of 2012 the APTEL has reversed its earlier order issued on Appeal No.57 of 2009. The related part of the order is reproduced below:

Upon conjoint reading of the provisions of the Electricity Act, the National Electricity Policy, Tariff Policy and the intent of the legislature while passing the Electricity Act as reflected in the Report of the Standing Committee on Energy presented to Lok Sabha on 19.12.2002, we have come to the conclusion that a distribution company cannot be fastened with the obligation to purchase a percentage of its consumption from fossil fuel based co-generation under Section 86(1)(e) of the Electricity Act, 2003. Such purchase obligation 86(1)(e) can be fastened only from electricity generated from

renewable sources of energy. However, the State Commission can promote fossil fuel based co-generation by other measures such as facilitating sale of surplus electricity available at such co-generation plants in the interest of promoting energy efficiency and grid security, etc.

5.4. In the above order, the APTEL has clearly declared that the purchase obligations under Section 86 (1) (e) of the Electricity Act 2003 can be fastened only from electricity generated from Renewable Sources of Energy. This clarification is also in line with the Tamil Nadu Electricity Regulatory Commission (Renewable Energy Purchase Obligation) Regulation 2010. Therefore, the Commission orders that the electricity generated from the petitioner's 67.50 MW captive power plant which is using fossil fuel is not eligible for accounting for RPO under the Tamil Nadu Electricity Regulatory Commission (Renewable Purchase Obligation) Regulation 2010.

5.5. In the light of the findings in para 5.1 to 5.4 above, the M.P.No.25 of 2012 is hereby dismissed.

6. Appeal:-

An appeal against this order shall lie before the Appellate Tribunal for Electricity under section 111 of the Electricity Act, 2003 within a period of 45 days from the date of receipt of a copy of this order by the aggrieved person.

(Sd.....)
(G.Rajagopal)
Member

(Sd.....)
(S.Nagalsamy)
Member

/ True Copy /

Secretary
Tamil Nadu Electricity
Regulatory Commission