

- (b) declare that the Petitioner being a generating plant utilizing industrial waste heat recovery process is a generator that is exempt from renewable energy purchase obligation under the TNERC (Renewable Energy Purchase Obligations) Regulations, 2010.

2. Facts of the Case :-

- (a) The Petitioner's company is involved in the manufacture of Carbon Black from petroleum derivatives.
- (b) The Petitioner has developed a method of recovery of the industrial waste heat gases which are of low calorific value to be used as a raw material source for power generation.
- (c) The Commission in its order dated 01-08-2007 in D.R.P. No.3 of 2007 was pleased to categorize the Petitioner as a fossil fuel based cogenerating plant and held that it would be governed by the provisions of Order No.4 dated 15-05-2006 with amendments made thereto and also declared that all fresh power purchase agreements entered into with the Petitioner would be in its capacity as a fossil fuel based cogeneration plant with attendant privileges.
- (d) Subsequent to the above order of the TNERC categorizing it as cogeneration plant, the Petitioner had entered into Energy Purchase Agreements (EPA) with the TNEB (now known as TANGEDCO).

This petition has been filed by the Petitioner for declaration of the Petitioner company as a cogenerating plant and also declaring that the Petitioner company is exempted from TNERC (RPO) Regulations, 2010.

3. Contentions of the Petitioner :-

(a) While referring to the definition of “Obligated Entity” in clause 2 (g) of the TNERC Power Procurement from New and Renewable Energy Sources of Regulations, 2008, the Petitioner has stated that the Commission has been vested with power to approve a particular source as a renewable source. The raw material source of the Petitioner’s co-generation plant is industrial waste hot gas comprising of carbon monoxide and carbon dioxide.

(b) The Petitioner states that this resource used by the Petitioner for power generation would qualify as a renewable source as it meets the definitional requirements of being inexhaustible and capable of replenishment. However, a definite ruling would become essential since it is only then that the Petitioner would qualify to enter the REC regime.

(c) The Petitioner has further stated that the Energy Policy of the State of Uttar Pradesh includes industrial waste as a renewable energy / green energy option alongside more traditional categories such as solar energy, wind energy and hydel projects. The Rajasthan State Electricity Regulatory Commission states that waste heat recovery from industrial plant has already been classified as cogeneration project and thus falls under the category of renewable energy power projects. Any consumption of electricity supplied from such cogeneration plants would be considered as consumption of renewable energy and would qualify as fulfillment of RPO.

(d) The Petitioner’s sister concern operating in the State of Uttar Pradesh utilizing the same technology is classified as non-conventional energy generator.

4. Finding of the Commission:-

4.1. This Petition is filed for declaration of cogenerating plant of the Petitioner where power is generated from waste heat recovery as a new and renewable source of energy so that they will be eligible for Renewable Purchase Obligation (RPO) for their own generation. There are two prayers in this petition. The first prayer is to declare the Petitioner's co-generation plant as a new and renewable source of energy so as to make it eligible for obtaining accreditation under the TNERC (Renewable Energy Purchase Obligation) Regulations, 2010. The second prayer is to declare that the Petitioner's plant is exempt from RPO Regulations.

4.2. With regard to the first prayer, it is to be noted that this prayer has to be examined with reference to the provisions of the Tamil Nadu Electricity Regulatory Commission (Renewable Energy Purchase Obligation) Regulations, 2010 (shortly referred to as "TNERC (RPO) Regulations, 2010"). Regulation 6 of the TNERC (RPO) Regulations, 2010 is reproduced below.

"6. Eligibility and Registration for Certificates. –

*(1) A generating company engaged in generation of electricity from **renewable energy sources** shall be eligible for obtaining accreditation from the State Agency if it fulfils the following conditions:*

xxx xxx
xxx xxx

4.3 The term "renewable sources" has been defined by regulation 2 (1) (l) of the TNERC (RPO) Regulations, 2010 as below:-

*"2 (1) (l) "**Renewable Sources**" means sources of energy as defined in the Regulation 2 (1) (g) of the Power Procurement from New and Renewable Sources of Energy Regulations, 2008 issued by the Commission".*

4.4 Regulation 2(1)(g) of "The Power Procurement from New and Renewable Sources of Energy Regulations, 2008 reads as follows:-

“2(1)(g) “New and renewable sources” means the non-conventional, renewable electricity generating sources such as mini/micro hydel, wind, solar, biomass, bagasse based cogeneration, urban / municipal waste or other such sources as approved by the Government of India or Government of Tamil Nadu or Commission which are generally inexhaustible and can be replenished in a short period of time”.

4.5 The petitioner in paragraph 14 of the petition is contended as follows:-

“The Petitioner states that this resource used by the Petitioner for power generation would qualify as a renewable source as it meets the definitional requirements of being inexhaustible and capable of replenishment. However, a definite ruling would become essential since it is only then that the Petitioner would qualify to enter the REC regime”.

4.6 In this connection, Paras 3,4 and 6 of the petition are reproduced below.

“3 The petitioner is a unit involved in the manufacture of carbon black from petroleum derivatives. The process of production involves cracking of petroleum based feedstock in specially designed reactors. The main raw material of the petitioner’s production cycle is Carbon Black Feed Stock (CBFS) which is a heavy and aromatic component of crude oil obtained as residue from mollified crude oil petroleum. The CBFS is fed into a tubular furnace which operates at a very high temperature, wherein the CBFS disintegrates through a process of partial combustion. The output from the furnace is in the form of an aerosol containing colloidal particles of carbon suspended in a mixture of hot gases. This aerosol is passed through a filtration system wherein the carbon particles are precipitated and collected separately while the egregious gases are filtered out. A large volume of gas is produced during the manufacturing process which would be environmentally hazardous as it is primarily comprised of carbon monoxide, carbon dioxide and hot gases.

4 The petitioner states that instead of evacuating the gases produced in the manufacturing process as exhaust, the petitioner has developed a method of recovery of the industrial waste heat gases which are of low calorific value to be used as a raw material source for power generation. The petitioner has established special purpose boilers which utilize the gases, which are of a significant volume and a by-product of

the main manufacturing process as a source of heat energy to produce steam to power turbines and generate power. The petitioner states that the mechanism developed by it in utilizing the waste gases from carbon black manufacturing to generate electricity in India.

X X X

6 *The petitioner approached this Hon'ble Tribunal in the Year 2007 and this Hon'ble Tribunal vide its order dated 01.08.2007 in DRP 3 of 2007 was pleased to categorize the petitioner as a fossil fuel based cogenerating plant and held that it would be governed by the provisions of Order No.4 dated 15.05.2006 with amendments made thereto and also declared that all fresh power purchase agreements entered into with the petitioner would be in its capacity as a fossil fuel based cogeneration plant with attendant privileges.*

4.7 It is clear from the above that the fuel used by the petitioner in their co-gen plant is a petroleum derivative of crude oil which is a "fossil fuel" as declared by the petitioner himself and by the Commission vide its order dated 01.08.2007 in DRP 3 of 2007. It is an accepted fact that fossil fuel is generally exhaustible and cannot be replenished. The fuel used in the petitioner's cogeneration plant is not in accordance with the eligibility criteria specified by the TNERC-(RPO) Regulations, 2010. Accordingly, the Commission declares that the energy produced by the petitioner's co-gen plant is not eligible for obtaining accreditation under the TNERC (Renewable Energy Purchase Obligation) Regulations, 2010 for the purpose of REC.

4.8 The second prayer is to declare that the petitioner's plant is exempt from RPO. In this connection, it is necessary to examine the definition of obligated entity in the TNERC's Regulation dated 7-12-2010. The definition of "obligated entity" as contained in the above referred Regulation is extracted below:-

*“2 (1) g **“Obligated entity”** means Distribution Licensee, consumers owning grid connected Captive Generating Plants (CGPs) and open access consumers in the State of Tamil Nadu, who have to mandatorily comply with renewable purchase obligation under these Regulations subject to fulfillment of conditions outlined under Regulation 3”.*

4.9 “New and renewable source” has been defined in the Power Procurement from New and Renewable Sources of Energy Regulations, 2008 dated 8-2-2008 made by the Commission. Definition of “New and Renewable Sources” as contained in the referred Regulation is extracted below:-

***“New and renewable sources”** means the non-conventional, renewable electricity generating sources such as mini / micro hydel, wind, solar, biomass, bagasse based cogeneration, urban/municipal waste, or other such sources as approved by the Government of India or Government of Tamil Nadu or the Commission which are generally inexhaustible and can be replenished in a short period of time”;*

4.10 Regulation 3 (1) of the same Regulation stipulates as follows:-

“The minimum percentage of electrical energy which each distribution licensee shall purchase from new and renewable sources generators shall be as stipulated in the Commission’s order issued from time to time, subject to the availability of such power. The distribution licensee shall furnish the quantum of purchase of energy from new and renewable sources and cogeneration for the ensuing year in the Annual Revenue Requirement (ARR) filing”.

4.11 During the arguments the counsel for the petitioner has also extensively quoted from the judgment of the Appellate Tribunal for Electricity in Appeal No. 57 of 2009 in the matter of Century Rayon Vs MERC which was delivered on 26th April, 2010. The Relevant portion of the Order in the above referred case is extracted 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 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 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.*

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)".

4.12 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 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 cogenerator 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 cogeneration plants aggregating to 33.7 MW of the petitioner at Gummidipoondi, Tamil Nadu, being a cogeneration plant, would be treated similar to a renewable energy generator for the purpose of RPO as specified in section 86(1)(e) of the Act. 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 TNERC (RPO) Regulations, 2010.

Ordered accordingly.

5. Appeal:-

An appeal under section 111 of the Electricity Act, 2003 against this order shall lie to the Appellate Tribunal for Electricity within a period of 45 days.

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

(Sd.....)
(K.Venugopal)
Member

/ True Copy /

Secretary
Tamil Nadu Electricity
Regulatory Commission