

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**

P.P.A.P.No.8 of 2012

M/s.Sterlite Industries (India) Limited
SIPCOT Industrial Complex
Madurai Bye Pass Road
T V Puram P.O.
Thoothukudi – 628 002.

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

Vs

1. TANGEDCO
Rep. by its Chairman
NPKRR Maaligai
144, Anna Salai, Chennai – 600 002.
2. The Chief Engineer/PPP
TANGEDCO
6th Floor, Eastern Wing
144, Anna Salai, Chennai – 600 002.

.... Respondents
(Thiru P.H.Vinodh Pandian
Standing Counsel for the Respondents)

**Dates of hearing : 28-09-2012, 27-11-2012, 30-01-2013
12-04-2013 and 27-01-2014**

Date of order : 19-03-2014

The above P.P.A.P.No. 8 of 2012 came up for final hearing before the Commission on 27-01-2014. The Commission upon perusing the above petition and the connected records and after hearing both sides passes the following order:-

ORDER

1. Prayer of the Petitioner:-

The prayer of the petitioner is to direct the respondents to accept the supply of infirm power from petitioner's 2 x 80 MW Thermal Power Plant (Unit I & II) from the date of commissioning till the commercial operations date and enter into any agreement(s) in that regard, if any, without insisting upon fixation of the rates for supply of infirm power as a precondition pending disposal of the petition and to fix the rate at which the TANGEDCO should make payment in respect of the infirm power from the petitioner's 2 x 80 MW Thermal Power Plant–Unit I & II from the date of commissioning till the commercial operations date and to direct payment of such sums.

2. Facts of the case:-

The present petition has been filed before the Commission seeking for fixation of rates towards supply of infirm power generated from the petitioner's 2 x 80 MW (Unit I & II) Thermal Power Plant at SIPCOT Industrial Complex, Thoothukudi from the date of commissioning till Commercial Operation Date (COD) upon a communication bearing Lr.No.CE/PPP/SE/PPP/EE/PPP/AEE1/F.Sterlite/D189/12, dated 28-07-2012, issued by the 2nd respondent wherein, the 2nd respondent, while agreeing to accept the infirm power generated by the petitioner's generating plant has, however, directed the petitioner to approach this Commission for fixation of rate and has also stated that till such time the rates are fixed, no power is to be injected into the grid.

3. Contention of the Petitioner:-

- 3.1. The present petition has been filed in line with submissions made by similar power generator, M/s. OPG Power Generation Pvt. Ltd. for fixation of tariff for infirm power in respect of their 1 x 77 MW generating plant (Unit I) at Gummidipoondi which was the subject matter for fixation of tariff by the Commission in P.P.A.P.No.6 of 2011. The Commission by its order dated 07-10-2011 had fixed a rate of Rs.1.75 per Kwh. It is pertinent to state that imported coal is used for power generation by the petitioners.

- 3.2. The petitioner is in the process of commissioning Captive Power Plant having two units of 80 MW each generating capacity and are expected to get grid synchronization for the first unit in the month of August 2012 and second unit in the month of November 2012. In view of commissioning the units at aforementioned dates, the petitioner had approached the respondent for necessary inspections and for the grant of evacuation facility in respect of its power plant, which has been carried out by the respondent.

- 3.3. The petitioner had requested the 2nd respondent to accept the infirm power generated from its 2 x 80 MW Unit I & II of the Plant at Thoothukudi till the petitioner goes in for commercial operation of the plant vide its Letter No. SIIL/PPP/Infirm Power/2012, dated 07-07-2012. In reply to the same, the 2nd respondent vide letter bearing Lr.No.CE/PPP/SE/PPP/EE/PPP/AEE1/F.Sterlite/D189/12, dated 28-7-2012 had agreed to accept the infirm power generated by the petitioner's generating plant, however, directed the petitioner to approach the Commission for fixation of rate and has also stated that till

such time the rates are fixed, no power is to be injected into the grid. On earlier occasion for a similar matter in respect of M/s.OPG Power Generation Pvt. Ltd., Peria Obulapuram Village, Gummidipoondi Taluk, Thiruvallur District, Tamil Nadu, the respondents had proceeded to enter into an agreement and had directed M/s.OPG Power Generation Pvt. Ltd. to approach this Commission for fixation of the rates for the infirm power to be supplied. However, in the present case, they have categorically indicated that till such time the rates are fixed, power is not to be injected.

- 3.4. The petitioner further states that in respect of similar matter of M/s.OPG Power Generation Pvt. Ltd., the Commission had relied upon regulations 20 and 38 of the (Terms and Conditions for the Determination of Tariff) Regulations, 2005 and fixed the tariff for the infirm power on the basis of the lowest fuel cost applicable to the existing similar type of station. At that point of time, since there was no identical type of station, the rates were arrived on the basis of the figures provided by the respondents for a similar type of station. The petitioner submits that since M/s.OPG Power Generation Pvt. Ltd. is an identical power generating plant the “lowest fuel cost” that has actually been incurred by it can now be easily adopted for the purposes of the fixation and the same would also be in accordance with the Regulations as the generating plant is a similar type of station in terms of capacity. The respondents had also periodically revised the firm power rates due to market scenario.

- 3.5. Thus the petitioner has sought directions to the 2nd Respondent to accept the injection of infirm power into the grid with effect from the date of commissioning without waiting for fixation of tariff and enter into a suitable agreement in that regard inasmuch as, the petitioner's project ought not to be delayed till such time as the tariff fixation exercise is completed.
- 3.6. The petitioner further states that this is especially important both from the view point of the power deficit in the State and the petitioner's own project requirements which have been funded by banks and financial institutions and therefore requires repayments to commence. Any delay in allowing the synchronization on the ground that rates are to be fixed for infirm power would be detrimental to everyone's interest.

4. Contention of the Respondents:-

- 4.1. The petitioner has established a 2 x 80 MW coal based Captive Power Plant at SIPCOT Industrial Complex, Madurai Bye-Pass Road, T.V.Puram P.O. Thoothukudi.
- 4.2. The petitioner vide their letter dated 07-07-2012 informed that commissioning activities of 2 x 80 MW Captive Power Plant is under progress and that Unit-1 will be expected to get grid synchronization at 230 KV level during last week of July 2012 and Unit-2 will be synchronized during first week of November 2012. The petitioner requested the respondent to avail the infirm power from both the units, from date of synchronization till the date of COD (Commercial Operation Date) and make payment for the supply of infirm power.

- 4.3. The respondent in their reply dated 28-07-2012 to the petitioner had agreed to purchase infirm power from the petitioner's generators as per the tariff determined by the Commission without prejudice to respondent's right to accept the tariff. The respondent requested the petitioner to approach the Commission for fixing the tariff for their proposed infirm power sale to respondent and no power shall be injected into the respondent's grid until fixation of tariff by the Commission.
- 4.4. The Commission in its order dated 07-10-2011 in P.P.A.P.No.6 of 2011 stated that the interconnection with the grid for the purpose of testing, which results in injecting infirm power into the grid is a service rendered by the respondent. It is further stated that eventhough the Tariff Regulation stipulated for the cost of infirm power as the lowest fuel cost of similar type capacity plant, the intention of the regulation is not to reimburse the actual variable cost of the various generators who might require the service of the licensee for testing their generators. The proposed infirm power supplies till COD is not at all required by the licensee due to the fact that there will not be any consistency in supply and will not help the licensee in demand side management. It is to the sole benefit of the petitioner generator only. Further grid is exposed to fluctuations due to unreliable pumping of power during testing and also causes impact on voltage / frequency during threshold times. The respondent is a distribution licensee which is already in a heavy financial loss. The respondent have invested huge amount in establishing this grid. Taking all

the above factors into consideration, it is reasonable and justifiable if only a small token rate is fixed as a tariff for such infirm power.

- 4.5. The intention of the regulation was not to provide for reimbursement of the actual variable cost of the various generators and hence the claim made by the petitioner cannot be accepted herein.

- 4.6. As per this Commission's Terms and Conditions for determination of Tariff Regulation, 2005, the cost of infirm power shall be the lowest fuel cost applicable to the existing similar type of station. The Commission in its earlier order dated 19-10-2010 in D.R.P.No.6 of 2010 related to M/s.Ind Barath Powergencom Ltd. and also in its order dated 07-10-2011 in P.P.A.P.No.6 of 2011 related to M/s.OPG Power Generation Ltd. (the petitioner herein), fixed the normative variable cost of ETPS (Ennore Thermal Power Plant) plant as the tariff for the infirm power supplied by the respective companies for their infirm power supplied before the COD as ETPS is the only plant available with the respondent having capacity of 60 MW generation. But the respondent did not agree for the same since comparing life expended ETPS plant on par with a new plant was not acceptable and the normative variable cost of ETPS was on higher side i.e. Rs.1.94 per unit and Rs.1.74 per unit respectively for the relevant periods.

- 4.7. The Commission in the order dated 28-09-2012 in P.P.A.P.No.8 of 2012 was pleased to admit the petition and directed that due to acute shortage of power

the parties may in consultation with each other fix the date of trial run for Unit-I within period of one month.

- 4.8. The petitioner had approached the respondent as directed by the Commission on 28-09-2012 for fixing the date for trial run of the Unit-I as 01-10-2012. Based on the company's request on 29-09-2012, approval has been accorded to the company on 29-09-2012, to inject infirm power from the date of synchronization till COD. The company informed TANGEDCO vide letter dated October 4, 2012 that the Unit-I of 2 x 80 MW power plant was synchronized with grid on 30-09-2012 at 11.25 p.m.

5. Written Submission of the Respondents:-

- 5.1. In the counter affidavit dated 18-12-2012, the respondent submitted that eventhough this Commission's Tariff Regulation, 2005 stipulates the cost of infirm power as the lowest fuel cost of similar type of plant, it was prayed for fixing Rs.1.07 per unit, towards infirm power supplied by the petitioner company.
- 5.2. Tamil Nadu Electricity Regulatory Commission's Terms and Conditions for determination of Tariff Regulations, 2005 has been issued under section 61 read with 181 of the Electricity Act, 2003. The determination of tariff by the Commission is done under by section 61, 62 and 63 of the Electricity Act, 2003. The general principles of computing cost and return in chapter III of the said Regulations fundamentally deals with computation of capital cost, and the various factors involved in calculation of capital cost, such as Debt-equity

ratio, Return on equity, interest and finance charges on loan capital etc. Further Regulation 38 clearly states that any revenue other than the recovery of fuel cost earned by the generating company from the sale of infirm power shall be taken as reduction in capital cost as provided in Regulation 20. In continuation to the above, it is said in Regulation 20 (3) that the cost of infirm power shall be lowest fuel cost applicable to the existing similar type of station.

- 5.3. The above said Regulations can be made applicable only when tariff is determined under section 62 of Electricity Act, 2003 which generally happens under MOU route with prior agreement between generating company and the distribution licensee for purchase of electricity under normal course.
- 5.4. Under the provision of section 62 (1a) a minimum and maximum ceiling of tariff can be fixed for a period of not exceeding one year. In case of determination of tariff by the Commission under section 63 of the Electricity Act, 2003, the Commission shall adopt the tariff if such tariff has been determined through transparent process of bidding (for long term, medium term or short term). The Tariff Regulation, 2005 is to specify the terms and conditions for determination of tariff as envisaged under section 61 of the Electricity Act, 2003.
- 5.5. The Commission has issued tariff order on Generation & Distribution and for Transmission in Order No.1 of 2012 dated 30-03-2012 and Order No.2 of 2012 dated 30-03-2012 respectively. These tariff orders were issued as per

the specification of Tariff Regulations, 2005. In these order, no tariff has been fixed for infirm power supply before COD. The terms and conditions specified in the Tariff Regulations, 2005 will be applicable as a whole towards determination of tariff. The rate for supply of infirm power before COD does not qualify to be termed as tariff under section 62 of the Electricity Act, 2003, since the terms and conditions specified in Tariff Regulations, 2005 are not complied with.

5.6. The regulations should be read as a whole and not in an isolated manner as projected by the petitioner. A comprehensive reading of the said regulation would clearly reveal that the said regulation has no application to the facts and circumstances of this case particularly for realizing some rate for the fuel spent for the trial run of the plant before COD and when there will be no occasion to the petitioner to come before this Commission for the rigour of regulation provided for the purpose of full-fledged tariff fixation.

5.7. The licensee extends its facility for testing the generator as a service without collecting any charges for such testing. Such infirm power is inconsequential towards positive requirement of the licensee. On the other hand, the requirement of the generator is really huge towards necessity to attain COD. Declaring COD is the first and foremost eligibility for going into any commercial dealing by the generator. To get the eligibility of "COD attained" the generator is bound to incur expenditure, and the licensee is not under any obligation to pay towards this expenditure of the generator. It is illogical to expect the above from the licensee, since all the benefits and profits, the

generator will earn after COD will be entirely his, and not going to be shared with the licensee. Therefore, the theory of full expenditure, type of fuel, capacity of machine are of no concern to the licensee at least in respect of the infirm power supply before COD.

- 5.8. The MOP guidelines for short term tender does not consider the type of fuel, capacity of machine etc. but consider only the rate. Logically, the status of the infirm power before COD is far below the status of the power supplied under short term tender. Such being the case, the generating companies cannot be permitted to claim reimbursement of actual cost incurred by them for generation during trial run period which is unreasonable and therefore amounts to undue enrichment at the cost of public exchequer and as a goodwill gesture only a token amount can be paid for such infirm power supplies till COD.

6. Findings of the Commission:-

- 6.1. We have heard the arguments of both sides and gone through the written submissions filed on behalf of the respondent. The only issue that arises for consideration is as to what is the rate payable by the Licensee for the infirm power injected by the generating company into the grid during the trial or test run conducted by the generating company before commissioning of its commercial operation.
- 6.2. The relevant provision for determination of the cost for infirm power is traceable to regulation 20 of the Tamil Nadu Electricity Regulatory

Commission (Terms and Conditions for the determination of Tariff) Regulation, 2005. The said regulation reads as follows:-

“20. Revenue / charges during trial stage (prior to COD)

- (1) The cost incurred during trial up to COD shall be treated as capital cost.*
- (2) The revenue earned from sale of power (infirm power) shall be treated as reduction in capital cost.*
- (3) Cost of infirm power shall be the lowest fuel cost applicable to the existing similar type of station”.*

6.3. Sub-Regulation 20(3) provides criteria to determine the cost of infirm power.

In the absence of specific Regulation to determine the cost of infirm power to the CGPs, Merchant Generators etc., the Commission has decided to adopt sub-regulation 20(3) to all the generators. The Commission adopted the regulation to determine the cost of infirm power in its earlier similar cases and orders. As per sub-regulation 20 (3), the lowest fuel cost of the existing “similar type of station” should be reckoned as the cost of infirm power. There is a difficulty in applying the above said regulation in toto due to non-availability of “similar type of station” in the State. Each generating station varies in terms of its capacity. The generators may use different fuels such as Indian coal, Imported coal, gas, liquid fuel etc.

6.4. The respondent contended that the licensees are offering their grid for testing the generating plants as a service to the generators. Further the injection of such infirm power imposes certain difficulties to the licenses to schedule and dispatch. The respondent therefore contends that the generating companies cannot be permitted to claim reimbursement of actual cost incurred by them for generation during trial run period. There is a valid point in the contention of the respondents. The generators may use different fuels including the

costly fuels such as liquid fuel, naphtha etc. to their convenience. The licensees are providing a service to the generators by extending their network / grid facilities for conducting the test / trial run. Just because, the generators use costly fuel, it is not justifiable to charge the licensee the high variable cost of the costly fuel. Therefore, a viable solution has to be arrived at, in order to arrive at the cost of infirm power as provided in regulation 20(3) referred to above. Regarding the fuel, though the cost of gas is considered to be the cheapest, since most of the upcoming generators are coal based, coal has been considered as the fuel for the purpose of determining the tariff for infirm power. Even among the coal, imported coal cannot be considered in view of high cost involved, since the regulation 20(3) insists on the lowest fuel cost. As such we consider that the cost of the Indian coal may be considered for this purpose. In order to protect the interest of both the generators and the licensee / consumers, we have considered the cost of Indian coal for arriving at the tariff for infirm power.

6.5. Further there are many new generators with different capacities are coming up in the State. It is difficult to determine infirm power tariff by the Commission for each and every new generators. As already discussed, in view of the non-availability of “similar type of station” and the lowest fuel cost we have decided to consider the following generalized parameters to determine the reasonable cost of infirm power for all categories of generators.

- (i) Average specific coal consumption;
- (ii) Average auxiliary consumption; and
- (iii) Lowest landed cost of coal in Tamil Nadu.

The first two parameters can be obtained from the Central Electricity Authority's annual report on "Performance Review of Thermal Power Stations". We have chosen to adopt the Central Electricity Authority's report obviously for the reason that the annual report of Central Electricity Authority covers more than 400 thermal units in the country to a total installed capacity of around 1,00,000 MW in the range of 25 MW and above and most of the petitions pending with the Commission for determination of cost of infirm power is in respect of less than 200 MW coal fired thermal units. Further Central Electricity Authority report considers the higher size units also. The heat rate and the variable cost are generally high for small capacity generators. Captive / merchant generators are generally choosing small capacities for their convenience. On the other hand, the general trend among the Government owned generators and IPPs is opting for higher capacity units in the range of 500–800 MW so as to increase the efficiency. Therefore, it is considered injustice to make the licensee to bear the high variable cost of such small generators of the captive / merchant generators. In the future higher capacity units also may be commissioned by the captive / merchant generators. Hence, it is prudent to consider the higher capacity units also to arrive at the common parameters to arrive at a generalized tariff.

- 6.6. The fuel cost varies depending upon the source of fuel and the destination of its use. The Commission has approved yearwise average landed coal cost for the state owned thermal stations in Tamil Nadu which are available in the Commission's tariff order. The lowest landed coal cost for the year in

question shall be obtained from the Commission's tariff order which is in force for the particular period.

6.7. The respondent has argued that taking into account the service provided by the licensee, only a token rate may be fixed as tariff to the infirm power injected by the generators. It is a fact that the respondent is providing a service by offering his grid to the petitioner without which the generator cannot conduct the test / trial run. We cannot conclude that the service of the licensee is a gratuitous one. Since the respondent has made large investment to create the network / grid, a charge has to be paid for using the grid. At the same time, the Commission has to facilitate the generators in the State to utilize the grid for testing and commissioning their generators. Therefore, we have no hesitation to introduce a factor, namely Grid Facilitation Factor (Gf) to give reasonable charges to the service provided by the licensee. While facilitating the generators to test their generators, the Commission shall take into account the interest of the consumers also. As the electricity consumers are ultimately paying the network cost through tariff, the benefit arising out of introduction of grid facilitation factor should go to the consumers. Taking into account all the factors, we consider that it is reasonable to apply a Gf of 0.60 (sixty percent) on the formula to arrive at the generalized tariff for infirm power.

6.8. Taking into account the three parameters and a constant of 0.60, the Commission arrives at the following formula which can be used to arrive at the generalized per unit cost of infirm power (Ti).

$$T_i = \frac{\{G_f \times [100 \times (C_{sp} \times C_c)]\}}{(100 - AUX)}$$

- T_i - Tariff for infirm power in paise / kWh
- C_{sp} - All India Specific coal consumption of thermal power stations in kg/kWh as per the latest Central Electricity Authority report on “Performance Review of Thermal Power Stations.
- AUX - All India average AUX of thermal power stations in percent as per the latest Central Electricity Authority report on “Performance Review of Thermal Power Stations”.
- C_c - Lowest landed cost of coal in any of the Power Stations in Tamil Nadu Paise / kg as approved by the Commission in its latest Tariff Order.
- G_f - Grid facilitation constant = 0.6

6.9. The above parameters shall be adopted irrespective of generator capacity and fuel used, for the purpose of determination of tariff for the infirm power supplied by the generators during the trial / test run. The parameters available in the latest Central Electricity Authority report and the latest tariff order may be considered for the calculation in case if it is not available for the relevant period. We make it clear that the above formula is made due to non-availability of “similar type of stations” as provided in the said regulation 20(3) and to arrive at the lowest cost of fuel of similar type of stations. As discussed supra, the Commission faced with some practical difficulties in adopting the sub-regulation 20 (3) in toto. The Commission issues this order under Regulation 89 of the Tariff Regulations, 2005 which is reproduced below:-

“89. Power to remove difficulty

If any difficulty arises in giving effect to any of these regulations, the Commission, may, of its own motion or otherwise, by an order and after giving a

reasonable opportunity to those likely to be affected by such order, make such provisions, not inconsistent with these regulations, as may appear to be necessary for removing difficulties”.

6.10. This procedure may be adopted by the generators / Distribution Licensee to determine the cost of infirm power injected by the generators during the trial / test run before declaration of COD. The petitioner may furnish a revised bill to the TANGEDCO confirming to this order. The TANGEDCO shall make payment to the petitioner / generator within 30 days of receipt of the bill.

7. 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