

**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.No.6 of 2012**  
**and**  
**I.A.No.1 of 2012**

M/s.OPG Power Generation Pvt Ltd.  
No.6, Sardar Patel Road  
Guindy  
Chennai – 600 032.

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

Vs

1. TANGEDCO  
Rep. by its Chairman  
NPKRR Maligai  
144, Anna Salai  
Chennai – 600 002.
2. The Chief Engineer  
Private Power Project  
Tamil Nadu Electricity Board  
6<sup>th</sup> Floor, Eastern Wing  
144, Anna Salai  
Chennai – 600 002.

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

**Dates of hearing :** **31-07-2012, 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. 6 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 1 x 77 MW Thermal Power Plant–Unit II from the date of commissioning till the commercial operation date and enter into agreements 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 also to fix the rate at which the TANGEDCO should make payment in respect of the infirm power supplied from the said petitioner's plant-Unit II from the date of commissioning till the commercial operate date and to direct payment of such sums.

**2. Facts of the case:-**

2.1. The petitioner is one of the leading private power generators in the State of Tamil Nadu. The petitioner had put up a 1 x 77 MW generating plant which came to be synchronized with the grid and achieved COD on 22-04-2010. The instant case relates to second unit in the same location and it approached the respondent for inspection and for grant of evacuation facility. The petitioner duly obtained all the necessary approval from the Chief Electrical Inspector to the Government. The petitioner's power plant is conceived as a generating station on a merchant basis from the date of commissioning till achieving COD.

2.2. The petitioner requested the 1<sup>st</sup> respondent to accept the infirm power generated from its 1 x 77 MW Unit II -plant at Gummidipoondi till the petitioner goes in for commercial operation vide its Letter No.OPGPG/TANGEDCO/Unit II/2012, dated 17-05-2012. The 2<sup>nd</sup> respondent in its reply bearing Lr.No.CE/PPP/SE/PPP/EE/PPP/AEE2/F.OPG/D133/12, dated 26-05-2012 and CE/PPP1/SE/PPP/EE/PPP/AEE2/F.OPG/D.143/12, dated 06-06-2012, while agreeing to accept the infirm power generated by the petitioner's plant has however directed the petitioner to approach this Commission for fixation of rates and has also stated that till such time the rates are fixed, no power is to be injected into the grid. Hence this petition is filed.

**3. Contention of the Petitioner:-**

In P.P.A.P.No.6 of 2011, this Commission has fixed the cost of infirm power as Rs.1.75 Kwhr which is the rate indicated by the respondent in that case in its counter for a similar type of power station. This Commission had relied upon regulations 20 and 38 of the (Terms and Conditions for Determination of Tariff) Regulations, 2005 and fixed the tariff for the infirm power on the basis of the cost 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 at on the basis of the figures provided by the respondent for a similar type of station. But the petitioner's own Unit I is an identical power generating station and the "lowest fuel cost" that has actually been incurred by it can now be easily adopted for the purposes of fixation of tariff for infirm power for Unit-II and that would also be in accordance with the Regulations. The petitioner is therefore filing a Chartered Accountant's Certificate which sets out the "lowest fuel cost" as Rs.5.25 per unit and

therefore the rate for infirm power for Unit-II is required to be fixed in terms of this Commission's earlier orders.

**4. Contention of the Respondents:-**

- 4.1. The Commission in its previous orders dated 07-09-2010 in D.R.P.No.4 of 2010 relating to M/s.Sai Regency Power Corporation Limited and D.R.P.No.5 of 2010 relating to M/s.MMS Steel & Power Alloys Limited had held that retrospective tariff determination runs counter to the Electricity Act, 2003.
- 4.2. 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.
- 4.3. 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.
- 4.4. 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 generator only.
- 4.5. The grid is exposed to fluctuations due to unreliable pumping of power during testing and also causes impact on voltage / frequency during threshold times.

- 4.6. The respondent who is a distribution licensee is already in a heavy financial loss. The respondent has invested huge amount in establishing the grid and taking all the above factors into consideration, it is reasonable and justifiable if only a small token rate is fixed as tariff for such infirm power.
- 4.7. The rate at which firm power purchase is made by the licensee under STOA is around only Rs.5/- per unit. The petitioner was supplying firm power to the respondent at Rs.5.05 during the period ending June 2012 and after that Rs.5.50 per unit and hence claiming of such exponential rate for infirm power has no merit and deserves to be treated accordingly.
- 4.8. As per the Commission's Terms and Conditions for determination of Tariff Regulations, 2005, the cost of infirm power shall be the lowest fuel cost applicable to the existing similar type of station. Tamil Nadu Electricity Regulatory Commission in its earlier order dated 19-10-2010 in D.R.P.No.6 of 2010 related to M/s.Ind Barath Powergen Company 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 Limited fixed the normative variable cost of ETPS Plant as the tariff for the infirm power by the respective companies as ETPS is the only plant available with the respondent having capacity of 60 MW generation. But the Board 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.
- 4.9. As per the calculation the variable cost works out to Rs.1.07 per Kwhr.

**5. Hearing held on 31-07-2012:-**

During the hearing held on 31-07-2012, the Commission observed that the commissioning of any power station should not be delayed especially where there is acute power shortage in the State as well as in the region. Besides inter-state transmission constraints are also posing difficulty in getting power from outside regions and therefore directed the parties, in consultation with each other to fix the date for trial run for Unit-2 within a period of one month from 31-07-2012. The Commission also observed that once this unit is commissioned the entire power will be available to the State of Tamil Nadu especially when section 11 restrictions are operating in this State.

**6. Additional counter affidavit filed on 27-09-2012:-**

In the additional counter affidavit filed on 27-09-2012, the respondent submitted that 77 MW Unit-II was synchronized with the grid at 18.56 hrs. on 05-09-2012 at 230 KV level and that after detailed discussion, approval for purchase of infirm power from 77 MW Unit-II generator from the date of synchronization was issued on 06-09-2012.

**7. Findings of the Commission:-**

- 7.1. 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.

7.2. 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”.*

7.3. 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.

7.4. 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 licensees 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.

7.5. 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.

- 7.6. 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.

7.7. 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.

7.8. 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<sub>i</sub> - Tariff for infirm power in paise / kWh
- C<sub>sp</sub> - 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<sub>c</sub> - 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<sub>f</sub> - Grid facilitation constant = 0.6

7.9. 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”.*

7.10. 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.

**8. 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**