

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

PRESENT:

ThiruM.Chandrasekar Chairman
Dr.T.PrabhakaraRao Member
and
ThiruK.Venkatasamy Member (Legal)

M.P. No.16 of 2018

Tamil Nadu Generation and Distribution
Corporation Limited
Represented by Chief Engineer / Private Power Projects
144, Anna Salai
Chennai – 600 002.

... Petitioner
(ThiruM.Gopinathan, Standing
Counsel for TANGEDCO)

Dates of hearing : 18-09-2018; 31-01-2019; 29-03-2019
and 28-01-2020

Date of Order : 22-12-2020

The M.P.No.16 of 2018 came up for final hearing on 28-01-2020. The Commission upon perusal of the petition and connected records and after hearing the submissions of the petitioner hereby makes the following:-

ORDER

1. Prayer of the Petitioner in M.P.No.16 of 2018:-

The prayer of the petitioner in this petition is to approve and ratify the dispatch of power made from ETPS, MTPS, NCTPS-Stage-II, BBGTPS, NLC TS-I, M/s.OPGand M/s.TAQA during the financial year 2016-17 (13,405.203 MU) and 2017-18 (3989.814 MU) as mentioned in para 12 (table 1 and 2) of this petition.

2. Facts of the Case:-

This petition has been filed for approval and ratification for dispatching energy from unapproved sources for the period from 01-04-2016 to 31-03-2017 and 01-04-2017 to 31-03-2018.

3. Contentions of the Petitioner:-

The Petitioner in his affidavit dated 14-08-2018 has submitted as follows:-

3.1. The Commission in its order dated 11-08-2017 in Tariff Order No.T.P.No.1 of 2017 for determination of tariff for generation and distribution has approved the Power Purchase Expenses for Tamil Nadu Generation and Distribution Corporation Limited for the financial years 2016-17, 2017-18, 2018-19 vide Table 4.50, Table 4.51 and Table 4.52.

3.2. The Commission had approved only fixed cost to Ennore Thermal Power Station (ETPS), Mettur Thermal Power Station (MTPS), North Chennai Thermal Power Station Stage II (NCTPS-Stage-II), Basin Bridge Gas Turbine Power Station (BBGTPS) and M/s. TAQA Neyveli Power Company Pvt. Ltd. (M/s. TAQA) for the Financial Year 2016-17 and for BBGTPS, M/s.NLCLtd-TS-I (NLC TS-I), M/s.OPG Power Gen Pvt. Ltd (M/s OPG.) and M/s. TAQA for the Financial Year 2017-18.

3.3. The Commission has not approved any variable cost and purchase of power from ETPS, MTPS, NCTPS-Stage-II, and M/s.TAQA for the Financial Year 2016-17 and for BBGTPS, NLC TS-I, MIS OPG and M/s. TAQA for the Financial Year 2017-18.

3.4. The 'Commission in para 7.1.1. (g), Chapter 7 of the order directed as follows:

“7 SUMMARY OF DIRECTIVES

7.1.1 The Commission directs TANGEDCO

a.

b.

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g) To take prior approval from the Commission for purchasing from unapproved sources.”

3.5. Based on the above directions of this Commission, M.P. No. 13 of 2018 was filed by this Petitioner to approve and ratify the dispatches made from M/s. TAQA alone (Totalling 2114 MU) for the period from 01.04.2016 to 31.03.2018.

3.6. By the order dated 03.07.2018 in M.P.No.13 of 2018 this Commission permitted the Petitioner to withdraw the petition and directed to file a Comprehensive Petition within one month, covering the dispatch of power from NLC TS1, TAQA, MTPS etc.

3.7. As per the above directions, this petition is being filed before this Commission seeking approval and ratification for dispatching power from ETPS, MTPS, NCTPS-Stage-II, BBGTPS and M/s. TAQA for the year 2016-17 and BBGTPS, NLC TS-I, M/s. OPG and M/s. TAQA for the year 2017-18.

3.8. In M.P.No.11 of 2017 filed by TANGEDCO this Commission approved for the power generated from BBGTPS totalling to 11.12380 MU for the FY 2016-17 at the Average Rate of Realization for the year FY 2016-17.

3.9. State Load Dispatch Centre is responsible for carrying out real time operations for Grid control and dispatch of electricity within the State through secure and economic operation of the State Grid in accordance with the Grid standards and Grid Code.

3.10. Accordingly the State Load Dispatch Centre has dispatched ETPS, MTPS, NCTPS-Stage-II, BBGTPS, NLC TS-I, M/s.OPG and M/s.TAQA for a period from 01.04.2016 to 31.03.2018 due to the following reasons.

- i) The generation from ETPS, MTPS, NCTPS-Stage- II, BBGTPS, NLC TS-I, M/s.OPG and M/s. TAQA were availed to meet the grid demand in real time operation according to merit order dispatch due to the forced outages of the State owned Generating Stations, Central Generating Stations, sudden withdrawal of wind generation and variation in availability of wind and to avoid network constraints in Neyveli area.
- ii) The dispatches of power during the above mentioned period is according to the grid conditions as per section 32 & 33 of Indian Electricity Act 2003, Clause 2.7.1, 5.2 (m) of IEGC, clause 4.2 (e), 8.3(b), 8.4 (iii) of TEGC, as per the orders of CERC & TNERC and time to time instructions of SRLDC to maintain the grid discipline and grid security.

3.11. The actual quantum of energy dispatched by SLDC from unapproved generating Stations during the Financial Year 2016-17 and 2017-18 are tabulated below:

Dispatches made during the Financial Year 2016-17

Sl. No.	Name of Power Station	Energy Dispatched in MU
1	Ennore Thermal Power Station	192.001
2	Mettur Thermal Power Station-I	5,730.850
3	NCTPS-Stage- II	6,381.850
4	M/s TAQA	1,100.502
	TOTAL	13,405.203

Dispatches made during the Financial Year 2017-18

Sl. No.	Name of Power Station	Energy Dispatched in MU
1	BBGTPS	6.141
2	NLC TS-I	2,710.293
3	M/s.OPG Power Gen Pvt. Ltd.	259.830
4	M/s.TAQA	1,013.550*
	TOTAL	3989.814

* 143.896 MU was approved in the order in M.P. No.16 of 2017

3.12. The State Load Despatch Centre has dispatched power from ETPS, MTPS, NCTPS-Stage-II, BBGTPS, NLC TS-I, M/s.OPG and M/s.TAQA stating the following reasons:

- a. Reasons for dispatching MTPS, ETPS, NCTPS-II:
 - Judiciously utilised based on TANGEDCO availability to meet the TANGEDCO demand and to dispatch quality power and maintain uninterrupted supply to the consumers.
 - ETPS was decommissioned from December 2016.
- b. Reasons for dispatching BBGTPS:
 - Peak load station. The plant was operated intermittently as and when emergencies arise in Chennai network.

- c. Reasons for dispatching NLC TS-I:
- NLC - TS 1 comprises 9 units having capacity of 600 MW (6 x 50 MW + 3 X 100 MW) and delivering a quantum of about 400 MW to 450 MW to TANGEDCO after their auxiliary consumption
 - NLC - TS 1 power is the prime source feeding to 10 Nos. 110 KV substations in Cuddalore, Villupuram, Thiruvannmalai and parts of Salem and Perambalur districts.
 - As such giving zero schedule to the NLC - TS 1 generating stations units 1 to 9 at a time is not technically feasible due to existing network arrangements which will otherwise put Cuddalore, Neyveli, Villupuram parts entirely dark.
 - Partial Grid disturbance occurred on 25.11.2016 due to tripping of Neyveli Thermal Station 2 (250 MVA) Inter Connecting Transformers, TS2 Unit 1 & 2, all NLC -TS 1 units at 17:27 Hrs. Supply interruption to 7 Nos. 230 KV SS and loads affected in 7-8 Districts, which invited larger criticism from various quarters and flashed in media. NLC- TS1 was operated on part load with zero dispatch schedule to some of the units during less demand days.
 - NLC - TS1 schedule is being maintained on day ahead basis from 300 to 350 MW during off peak/peak hours and 350 to 400 MW during summer season. Sometimes 125 MVA Auto Transformer (3T & 4T) in NLC- TS 1 complex getting overloaded due to lesser schedule given by TANTRANSKO and the partial load transfer is carried out from NLC- TS 1 to wherever possible and extending agriculture supply in 3/2 phase depending upon load conditions.

- In view of the above, it is stated that there is no adequate alternate feeding arrangement available ~ to prevailing grid conditions for both 230/110 KV #s from Neyveli TS 1 in order to make 'Nil' generation.
 - At present, 2 X 500 MW NMTPP is under commissioning state as a replacement to Neyveli TS 1 power station. Also 230/110 KV new Neyveli SS is being established by TANTRANSCO inside the Neyveli complex and expected to be commissioned in the last week of July 2018. All 230/110 KV feeders emanating from Neyveli TS 1 switchyard will be transferred to 230 KV New Neyveli SS (with a Auto Transformer Capacity of 2 X 160 MVA).
 - Under the circumstances stated above, Neyveli TS1 generation is essentially required to maintain uninterrupted supply to Cuddalore, Villupuram, Thiruvannmalai districts and parts of Salem and Perambalur districts and only after commission of New Neyveli Thermal Power Project and 230/110 KV New Neyveli SS, power purchase from NLC - TS 1 will be made 'Nil'.
- d. Reasons for dispatching M/S OPG:
- Judiciously utilised based on TANGEDCO availability to meet the TANGEDCO demand and to dispatch quality power and maintain uninterrupted supply to the consumers.
- e. Reasons for dispatching M/s.TAQA:
- In general the power from M/s. TAQA is being availed to meet out the State Peak Demand when the peak demand is above the availability of all other resources.

- The power from M/s.TAQA is being utilised to ensure the Grid Security and Discipline as per the prevailing Grid Parameters as stipulated by the CERC's Regulations so as to ensure the uninterrupted power supply to the public.
- Most of the situations even after availing the power from M/s.TAQA, the power from power exchanges has also been availed at average rate between Rs.4.00 to Rs.12.00 per KWH to meet out the State Peak Demand, which is more than the Variable cost of M/s.TAQA 's power.
- * The Grid network warrants power from M/s TAQA to avoid 230 KV Network loading and overloading 250 MVA TS II. Overloading and tripping of ICTs at Neyveli TS II will lead to Grid disturbance in that area and it is necessitated to maintain ICT loading below 210 MW.
- The power from M/s TAQA is being back down to zero during low demand days (particularly Holidays & Sundays) when marginal tolerance is available in the networking system i.e. by opening one in 230 KV Deviakurichi Feeder at M/s TAQA end.
- Further, it is informed that the generation of M/s TAQA is utilised to balance the high intraday variation in wind generation penetration which is from 300 to 3000 MW in a day.
- Moreover, the Plant Load Factor (PLF) of M/s TAQA for the period 2016-17 is only 50.25% PLF and for the year 2017-18 is only 46.26% PLF which are well below the normative PLF of 85%.

4. Findings of the Commission :

4.1 The Petition has been filed by TANGEDCO seeking approval and ratification for having despatched the power from unapproved sources viz., (i) ETPS, MTPS-I, NCTPS-II and TAQA during the financial year 2016-17; (ii) BBGTPS, NLC TS-I, OPG and TAQA during the financial year 2017-18; and also for condoning the delay in filing the petition.

4.2 Under para 4.15.12 of the Tariff order dated 11-08-2017, Commission has approved the sources for Power purchase by the TANGEDCO based on the Merit Order Despatch ranking. In the Table 4.50 and 4.51 of the Tariff Order, quantum approval had not been given to the generating stations viz., ETPS, MTPS, NCTPS-II and TAQA in respect of FY 2016-17 and BBGTPS, NLC-TS-I, OPG and TAQA in respect of FY 2017-18 according to their rank in MOD table.

4.3 The Commission in the above Tariff order has also directed TANGEDCO under chapter 4 and 7 that TANGEDCO should take prior approval from the Commission for purchasing energy from unapproved sources and for power purchase beyond MOD.

4.4 Now the Petitioner has come before the Commission after a huge delay and prayed to condone the delay in filing of petition for the approval/ ratification of power purchase from unapproved sources during 2016-17 and 2017-18. For the year 2016-17, TANGEDCO already filed a petition in M.P.13 of 2018 sought ratification approval for having despatched the power from M/s.TAQA alone (2114 MU) and subsequently withdrew the same to file a comprehensive petition.

4.5 Now, the petitioner has prayed approval and ratification for the actual quantum of energy despatched by SLDC from the following unapproved sources during the Financial year 2016-17 and 2017-18, as below:

Name of Power station	Energy dispatched from unapproved sources (in MU)	
	2016-17	2017-18
Ennore Thermal Power Station	192.001	
Mettur Thermal Power Station-I	5730.850	
NCTPS-II	6381.850	
M/s.TAQA	1100.502	1013.550
BBGTPS		6.141
NLC TS-I		2710.293
M/s.OPG Power Gen Pvt Ltd		259.830
Total	13405.203	3989.814

4.6 The Commission directed that TANGEDCO shall source the power from the stations with lowest variable cost as ranked in the MOD, and reiterated that the objective of applying MOD is to optimize the power purchase cost, whether it is procured from own generation sources or from other sources, as long as the rate of power purchase is lower.

4.7 Petitioner has stated the following reasons for utilizing the unapproved sources of power.

4.7.1. NLC-TS-I is the prime source feeding to 10 nos. 110 KV substations in Cuddalore, Villupuram, Thiruvannamalai and parts of Salem and Perambalur districts; and giving zero schedule to the Units 1 to 9 of the NLC-TS-I at a time not

technically feasible. Considering the directions of the Commission, it was operated on part load and it can be rectified after commissioning of new NTPP and 230/110 KV in New Neyveli SS. TANGEDCO decided not to extend the Power supply Agreement with NLC TS-I beyond validity period of 31-03-2019

4.7.2. The power from M/s.TAQA is being availed to meet out the State Peak demand and uninterrupted power supply; the petitioner was placed in a position that even after receipt of power from TAQA, it has availed at average rate between Rs.4 and Rs.12 per unit during peak demand which is more than the variable cost of M/s.TAQA power. Further, the power from this station is utilized to balance the high intraday variation in Wind generation penetration which is from 300 to 3000 MW in a day.

4.7.3. BBGTPS was operated intermittently to cater the peak load as when emergency arose in Chennai network.

4.7.4. The Power from MTPS, ETPS, NCTPS-II and M/s.OPG stations were prudently utilized to meet the TANGEDCO demand and to dispatch quality power and maintain uninterrupted supply to the Consumers. ETPS was decommissioned from December 2016.

4.8 In view of the above reasons stated by the petitioner in respect of own generating stations and power purchase from other sources, it is felt that the approval may be accorded subject to certain basic conditions as discussed below.

4.9 The Commission is of the view that TANGEDCO shall procure power on least cost basis and with due diligence as per Regulation 75(1) of the Tariff Regulations and according to the specifications made by the Commission in Tariff order dated 11-08-2017 and proceeded for this power purchase from other available unapproved sources. The said Regulation is reproduced as follows:

“75. Cost of Power Purchase

1) The Distribution licensee shall procure power on least cost basis and strictly on merit order dispatch and shall have flexibility to procure power from any source in the country.”

It may be seen from the above Regulation of the Commission, Power purchase made by the TANGEDCO must be on the basis of least variable cost under dynamic MOD and any deviation shall be placed before the Commission for approval in advance so as to carry out prudence check. Further, Commission requires time to consider the proposal well.

4.10 In view of the above, the Commission approves the variable cost in respect of these plants as below, since the fixed cost has already been considered in the T.O.

Dt.11-08-2017.

- (i) The power from own generating stations viz., ETPS, MTPS-I and NCTPS-II is approved based on “Norms of operation” in Regulation 37 of the TNERC (Determination of Tariff) Regulations, 2005
- (ii) For the source of power from BBGTPS, is approved on the basis adopted in earlier orders i.e., at the rate of Average rate of realisation
- (iii) For the power from M/s.TAQA, NLC TS-I and M/s.OPG Power Gen.Pvt.Limited shall be paid with reference to its norms as per the PPA in arriving of MOD.

4.11 The Commission has already observed on many occasions that in case of any variation from the MOD based power purchase approval, the licensee has to file a

petition for prior approval as per the directives of the Commission. And it was also directed not to file the petition for ratification after availing power with condonation of delay. And it is seen that in spite of the same, ex post facto approval is sought after power procurement is over.

4.12. It is therefore directed that, if any approval is sought for purchasing the power from unapproved source in future, the petition shall be filed with date wise documentary proof and break-up of the MOD prevailed before going for procurement outside of the MOD quantum approved. Ratification, shall be the last resort in unforeseen circumstances, and prior approval is mandatory in cases except for emergency situations.

With the above Orders, the M.P.16 of 2018 is disposed of.

(Sd.....)
(K.Venkatasamy)
Member (Legal)

(Sd.....)
(Dr.T.PrabhakaraRao)
Member

(Sd.....)
(M.Chandrasekar)
Chairman

/True Copy /

Secretary
Tamil Nadu Electricity
Regulatory Commission