

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

PRESENT:

Thiru S.Akshayakumar	Chairman
Thiru G.Rajagopal	Member
	and	
Dr.T.Prabhakara Rao	Member

I.A.Nos.1 and 2 of 2018
in
M.P.No.20 of 2018
and
M.P.No.20 of 2018

Tamil Nadu Generation and Distribution Corporation Ltd.
Represented by the Chief Engineer / Non-Conventional Energy Sources
144, Anna Salai
Chennai – 600 002

... Petitioner
(Thiru Abdul Saleem
Advocate for TANGEDCO)

NIL Vs. ...Respondent

Dates of hearing : 18.09.2018; 16.10.2018; 16.11.2018
and 20.11.2018

Date of Order : 10-12-2018

The M.P.No.20 of 2018 came up for final hearing on 20-11-2018. 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.20 of 2018:-

The prayer of the Petitioner is to accord approval for procurement of 1000 MW RTC power and 500 MW peak power for the supply period from October

2018 to May 2019 and for approval of the deviations from the MoP guidelines in regard to the following conditions:-

- a) to modify the billing cycle as monthly billing.
- b) to delete payment security clause and contract performance guarantee clause in lieu of each other.
- c) to delete provision for supply from alternate source in view of short duration of contract period.
- d) to delete change in law clause in view of duration of contract is less than one year.
- e) to fix the validity of the tender as 30 days excluding the date of bid submission

The Petitioner also seeks the approval to FLOAT TENDER No. TANGEDCO/SHORT/PP 10- 2018 for the procurement of 1000 MW RTC power and 500 MW peak power for the supply from October 2018 to May 2019 through e-bidding portal (DEEP), as per the enclosed Tender Specification (RfP)

After deliberations by the Commission, the Petitioner in their affidavit filed on 20-11-2018 has prayed the Commission to accord approval to take on record the execution of power supply agreement with M/s.PTC for procurement of 550 MW RTC power for three years at Rs.4.24 per unit (ex bus) at 55% PLF under pilot scheme initiated by Gol and approach the Commission later for adoption of tariff under section 63 of the Electricity Act, 2003 and to approve procurement of upto 1000 MW RTC power for the summer period from February 2019 to May 2019 under the present Short Term Tender No.10/2018.

2. Prayer in I.A.No.1 of 2018 in M.P.No.20 of 2018:-

The Petitioner has modified the prayer in the main petition by way of filing the I.A.No.1 of 2018 in M.P.No.20 of 2018 with the following prayer:-

- (i) to give concurrence to M/s.PTC for procurement of upto 1000 MW RTC power for 3 years under pilot scheme initiated by GOI at a discovered rate of Rs.4.24 per unit and approach the Commission later for adoption of tariff under section 63 of the Electricity Act, 2003;
- (ii) to approve procurement upto 1000 MW RTC power during October 2018 to December 2018 and February 2019 to May 2019 under the present Short Term Tender No.10 of 2018; and
- (iii) to grant liberty to TANGEDCO to call for tenders for additional procurement, if any, to meet the summer deficit till May 2019, and come before the Commission before award for approval of quantum as well as rates.

3. Prayer in I.A.No.2 of 2018 in M.P.No.20 of 2018:-

The Petitioner has modified the prayer in the main petition by way of filing the I.A.No.2 of 2018 in M.P.No.20 of 2018 with the following prayer:-

- (i) to take on record the execution of Power Supply Agreement with M/s.PTC for procurement of 550 MW RTC Power for three years at Rs.4.24 per unit (ex-bus) at 55% PLF under pilot scheme initiated by GOI and approach the Commission later for adoption of tariff under section 63 of the Electricity Act, 2003;and
- (ii) to approve procurement upto 1000 MW RTC power for the summer period from February 2019 to May 2019 under the present Short Term Tender No.10/2018 subject to availability.

4. Facts of the Case:-

The petition has been filed by TANGEDCO for approval of the Power Procurement under Medium Term basis for a period of three years and Short term power procurement of 1000 MW RTC power and 500 MW peak power for the period from October 2018 to May 2019 and Floating of Short term tender seeking approval and ratification for procurement of power to meet the anticipated deficit.

5. Contentions of the Petitioner:-

5.1. The power position for the period from October 2018 to May 2019 has been reviewed by TANTRANSCO, the assessed demand and availability are as follows:

Month	:	Oct 18 – May 19
Net availability (Sustained)	:	13070 – 15180 MW
Anticipated Demand	:	14300 – 15600 MW

Deficit of about 1000 MW to 1900 MW.

Based on the above, indent has been given for procurement of 500-750 MW RTC and 1000 MW peak hour from October 2018 to May 2019.

5.2. Availability from State owned thermal power stations, after accounting auxiliary consumption will be 4000 MW. Annual overhauling is scheduled for one 210 MW unit of MTPS during October 2018. CGS is taking some of the units for overhaul during October 18 to December 18.

5.3. The availability factor of Kudankulam units since commissioning is as follows:

	Unit 1	Unit 2
2015-16	34 %	---
2016-17	77%	----
2017-18	58%	51%

5.4. In view of planned AOH of some units and uncertainties of Kudankulam units, availability from CGS stations will be in the range of 4100 MW to 4900 MW during the period from October 2018 to December 2018 and around 5000 MW during January 2019 to May 2019, even though the total allocation to TANGEDCO is about 6000 MW.

5.5. TANGEDCO had contracted 3330 MW under long term. Due to payment default, PGCIL has terminated the long Term Access granted to Ind Barath Energy Utkal Limited and hence they cannot inject any power into CTU network. Similarly, PGCIL has imposed restriction of LTA under CERC (Regulation of power supply) Regulations, 2010 for payment default and LTA of KSK has been regulated to 300 MW from 29.4.2018. Further, PGCIL has issued a notice for termination of Transmission Service Agreement and KSK has filed petitions before CERC for stay on Regulation of Power Supply and Termination notice. Coastal Energen is under strategic debt restructuring plan and availability during this contract year is less than normative availability. Coal India is also supplying around 65% of Annual Contracted quantum and generators are meeting the requirement through alternate sourcing. Due to the reasons cited, many times the availability from long term PPA is about 2000 MW.

5.6. The hydro generation cannot be run to meet RTC requirement and is being utilised to meet peak requirement.

5.7 300 MW of power is expected from Medium Term Agreements upto January 2019 and 200 MW thereafter as the PPA with NETS is due for expiry on 31.1.2019.

5.8 Solar power is available only during day time and pattern of availability is as below:

8.00 to 10.00 hrs	-	30 % to 80%
10.00 to 11.00 hrs	-	80 % to 100%
11.00 to 13.00 hrs	-	100%
13.00 to 15.00 hrs	-	100 % to 80%
15.00 to 17.00 hrs	-	80 % to 10%

5.9. Peak deficit and deficit on account of multiple outages are managed by procuring power from power exchanges, to the extent available/allotted in bidding process. Details of power purchase from exchanges and percentage in total consumption from exchanges are as below.

2016 - '17:	352.49 mu (Approximately 0.34% in total grid consumption)
2017 - '18 :	1934.59 mu (Approximately 1.8% in total grid consumption)
2018 - '19:	474.859 mu (upto Aug '18).

5.10. In view of delay in commissioning of our projects, non-supply of power by Ind Barath Energy Utkal Limited and uncertainties of supply by LTA generators and Kudankulam Nuclear units, TANGEDCO has to resort to additional power procurement to meet the deficit.

5.11 The Planning wing has forecasted the Demand and Availability upto 2026. As per the forecast, the deficit projected without considering renewable is 1391 MW, 2509 MW and 2126 MW for FY 18-19, FY 19-20 and FY 21-22 respectively.

5.12. Based on short term demand - Availability, TANTRANSCO has forecasted deficit in the range of 125 MW to 680 MW during morning peak (06:00 to 9.00 hrs) and 600 MW to 1800 MW during evening peak (18.00 to 23.00 hrs) from October

2018 to May 2019.

5.13 Ministry of Power, through a resolution dated 10.04.2018 has issued a guideline for procurement of power under pilot scheme for medium term through PFC Consulting Limited as Nodal Agency and PTC India Ltd as Aggregator. The guidelines is issued to facilitate procurement of power of 2500 MW for 3 years from generating companies having coal based power plants which are already commissioned and without power purchase agreements. The proposed scheme envisages procurement of power through competitive bidding process to be conducted by PFC Consulting Limited and supply of power between successful bidders and Distribution Licensees, PTC India Limited will act as the Aggregator for the purpose of these guidelines. Aggregator will sign PPA with generators (successful bidders) and back to back agreement with Distribution Licensees. The tariff determined on these guidelines for the purpose of Agreement for procurement of power shall be adopted by the Appropriate Commission under Section 63 of Electricity Act, 2003.

5.14. PFC concluded the bidding process and aggregated quantum from 7 bidders is 1900 MW @ Rs.4.24 per unit, firm for three years.

5.15. The lump sum tariff discovered in Pilot Scheme is Rs.4.24 per unit, in which fixed charge is Rs.0.01 per unit and variable charges is Rs.4.23 per unit. The tariff is firm for the period of three years. Total quantum available under this proposal is 1900 MW.

5.16 The tariff discovered in the recently concluded GUVNL short term procurement for the supply period from September 2018 to November 2018 is in the range of Rs.4.26 to 4.66 per unit.

5.17. To meet the anticipated deficit and to avoid any load shedding in view of parliamentary elections scheduled in 2019, 1000 MW RTC power and 500 MW Peak power from October '18 to May '19 is to be procured.

5.18 Therefore, a short term tender (TANGEDCO/SHORT/PP/10-2018) is proposed the floated for procurement of 1000 MW RTC power and 500 MW peak power for supply from March 19 to May 19.

5.19 As mandated by Ministry of Power, procurement under short term will be done through MoP's e-bidding portal (DEEP).

5.20 To enable the successful bidders to book transmission corridor in advance, Tender process is to be initiated immediately and finalised quickly.

5.21 TANGEDCO is seeking approval for deviations from the MOP guidelines in the short term tender (i) monthly Billing cycle, (ii) deletion of payment security clause viz., opening of Letter of Credit, (iii) deletion of Contract Performance Guarantee clause, (iv) deletion of change in law clause and (v) deletion of provision for supply from alternate source, in view of short duration of contract period.

5.22 Delivery point proposed is TANGEDCO periphery and tariff at delivery point. Therefore, the process of evaluation has been eliminated. Only rate comparison will decide the granting of tender.

5.23 If the Medium Term procurement is materialized, TANGEDCO will reduce the quantum under short term procurement.

6. Additional Affidavit filed by the petitioner on 05.10.2018:-

In the hearing held on 18.09.2018, Hon'ble Member-I has raised certain points and the petitioner has filed an affidavit on 05.10.2018 clarifying in this regard, the query raised by the Hon'ble Member and the reply of the Petitioner are as follows:-

1) What is the financial commitment of the proposal and how this will be managed?

It is respectfully submitted that the short term tender has been opened and the minimum rate discovered in Reverse Auction for supply of RTC power is Rs.5.30 at TANGEDCO periphery. There was no response for the peak power tender. The expenditure towards this power purchase would be met from revenue/borrowings of TANGEDCO. As per audited accounts, the average rate of realization for the year 2016 - '17 is Rs. 6.73 per unit.

2) The month-wise projected demand and availability of power from October 2018 to May 2019 compared with the same period of last 2 years.

It is respectfully submitted that the projected Demand for October 2018 to

May 2019 as forecasted by SLDC, compared with last two years actual demand is enclosed.

3) The availability of power from CGS, Long term power purchase, Medium term power purchase to the extent of 3000 MW was not considered in the availability and why?

It is respectfully submitted that the availability of power from CGS is taken as per the target issued by the CEA for the year 2018-19. For LTOA & MTOA Generators, the availability of power is taken as 2200 to 2300 MW as against the contracted quantum of 3130 MW. These generators are also facing issues in supply of coal from Coal India and the coal crisis is prevailing all over India. As most of the plants are located inland, import of coal and transporting of coal is also stated to be not economical.

The availability from LTA generators for the last twelve months is as follows:-

Sep. '17	77.8%
Oct. '17	69.7%
Nov. '17	80%
Dec. '17	90.6%
Jan '18	79.6%
Feb. '18	89.6%
Mar. '18	68.30%
Apr. '18	76.7%
May '18	78.2%

June'18	55.6%
July'18	69.7%
Aug.'18	81.6%

In the last twelve months, only in Dec. '17 & Feb.'18, the availability was more than normative availability of 85%, mainly owing to non-availability of coal. Hence availability from LTA has been considered less. TANGEDCO is continuously pursuing with the generators to maximize their dispatches as per the contracted quantum.

- 4) During 2016-17 and 2017-18 short term power has been purchased for about 650 MW and 500 MW respectively for about 3 months from February to May 15th. Now TANGEDCO is intending to purchase 1000 MW RTC power and 500 MW peak power for 8 months from 01-10-2018 to 31-05-2019 and why such a huge quantum of power and for such a long period.**

It is respectfully submitted that -

a. The DC given by the LTOA, MTOA Generators in the last year was between 2500 MW to 3000 MW during October '17 to May '18 and the monthly quantum realized was 1800 MU (minimum) to 2140 MU (maximum) during the above period. But this year, the DC given by the LTOA, MTOA generators for the month of August '18 is between 2000 to 2500 MW only and the quantum realized for the month is 1625 MU only.

b. The availability from TANGEDCO's thermal stations has been considered between 4000 to 4200 MW for the period October '18 to May '19. If the present scenario of coal position continues, then the availability from TANGEDCO thermal stations for the period October '18 to May '19 is likely to get reduced by 800 MW to 1000 MW.

c. For the past one year i.e from August '17 to August '18, both units of Kudankulam were in simultaneous operation for only 93 days and both units were simultaneously off the bar for 39 days. However, both units were considered in the availability projected from November '18 to May '19. But, for the past one year there is a large variation in the Kudankulam generation and the beneficiaries were not able to predict the availability of the units. There is no proper intimation from the Nuclear Power Corporation of India Limited regarding the unit availability for the forthcoming months.

d. The demand in the State has been increasing and it is about 500 MW to 750 MW more than the demand in the corresponding period last year. It could be seen that there is a steady increase in consumption from April '18 onwards. There had been no capacity addition in the recent past nor any addition is expected in the next year. By considering all the above facts, power purchase requirement has been intended from October 2018 itself.

5) During the last 2 years the short term power purchase was up to 15-05-2017 and 15-05-2018 and why this time it is proposed up to 31-5-2019.

It is respectfully submitted that normally the wind season sets in by 15th of May every year. Hence TANGEDCO sought Commission's approval for purchase from 1st February '17 to 15th May '17. Wind season had set in from the beginning of May '17. Hence, procurement for summer months of 2018 was proposed from February '18 to April '18 and subsequently restricted to March '18 and April '18. However, during May 2018, wind had set in only during last week of May 2018. TANGEDCO had to largely depend on exchange purchase at high cost apart from regulation of demand. The additional requirement during May '18 was met through power purchase from exchange. Hence in the present proposal, approval has been requested to procure power till the end of May '18.

6) For the issue not connected with TANGEDCO, PGCIL has restricted Transmission capacity of 200 MW cheaper power under long term contracts for one of the power supplier under long term agreement. The action taken to get this power may be submitted.

PGCIL has imposed regulation of power on account of payment default by M/s KSK. M/s KSK has filed a petition before Hon'ble CERC seeking stay on the regulation notice. M/s KSK had given commitment schedule to settle the dues to M/s PGCIL. TANGEDCO had also intervened in the matter and PGCIL has withdrawn the regulation of power w.e.f 28.09.2018. KSK has increased the availability to 450 MW from 01.10.2018 and is likely to supply entire contracted quantum shortly.

7) During the last 2 years, the petition for purchase of short term power filed in November for purchase of power in March following year. This

time the petition was filed on 11-09-2018 for supply from 01-10-2018.

Why advance action was not taken?

Present installed capacity/availability from conventional sources is as follows:

Sl.No	Source	Qtm in MW
1	TANGEDCO Thermal	4320
2	Gas	230
3	IPP	416
4	CGS	6152
5	LTA/MTOA	3130
6	Total	14248

After accounting for auxiliary consumption and transmission losses, the net availability for distribution will be around 12000 MW.

Hydro resource is normally used for morning and evening peaks. As Kadamparai Hydro Electric Station is proposed to be taken out for total shut down during December '18 and January '19 to attend flap gate problem and other maintenance works, the peaking support of about 400 MW from Hydro resource will not be available. Only after attending to the above works, operation of both pump mode and generation mode will be possible. Every generator all over India is facing coal shortage. Firming up of requirement had taken some time and could be finalized only during end of August 2018, particularly after the buffer stock of coal in TANGEDCO's Thermal Power Station started depleting at an alarming rate due to shortage in rake movement of domestic coal and persistent inability of CGS &

private generators to provide the requisite power to TANGEDCO.

- 8) During the course of hearing, the SE/PPP has filed demand and supply statement from 10/18 to 5/19 and on perusal of the said document it reveals that the demand and supply of power for the said period has to be reassessed. The petitioner was directed to come before the Commission with detailed justification for the quantum as well as the rate before award.**

As per the experience in earlier short term tenders, the response for peak period tender is poor. In order to ensure power availability during morning peak and lighting peak, the RTC quantum proposed for short term tender was enhanced to 1000 MW against 500 MW projected by SLDC and additional peak hour requirement was reduced to 500 MW to meet the peak deficit of 1000 MW projected by SLDC.

Details of quantum and rate offered during IPO & RA for RTC Power under the present tender No. 10/2018 is given below.

Sl. No.	Month	Quantum offered in IPO (MW)	Rate offered in IPO (Rs. per unit)	Quantum available during RA (MW)	Rate offered during RA (Rs. per unit)
1.	October 18	763	5.30 to 8.46	763	5.30 to 8.46
2.	November 18	1873	5.29 to 8.46	1000	5.29 to 5.80
3.	December 18	1529	5.29 to 8.46	1000	5.29 to 5.76
4.	January 19	1646	5.39 to 8.46	1000	5.39 to 6.01
5.	February 19	1646	5.39 to 8.46	1000	5.39 to 6.01
6.	March 19	1419	5.49 to 8.46	1000	5.49 to 6.25
7.	April 19	953	5.50 to 8.46	953	5.50 to 8.46
8.	May 19	1053	5.50 to 8.46	1000	5.50 to 7.03

Total quantum of peak power offered in IPO in this tender is from 20 to 60 MW and the rate varies from Rs. 8.00 to 9.99 per unit. However, all bidders had withdrawn the offer for peak power during Reverse Auction process.

9) If the above factors are not taken into consideration in determining the quantum of short term power purchase required, the extra expenditure will not be allowed by the Commission in ARR.

Considering all these factors, the following 'revised proposal' is submitted for approval of the Hon'ble Commission.

As per the long term demand - supply projection (without considering the renewable) there will be a deficit of 1391 MW for 2018 - 19, 2509 MW for 2019-20 and 2126 MW for 2020-21.

The non-supply under LTA from Ind Barath Utkal (500 MW), non-commissioning of 660 MW ETPS Expansion, which was scheduled for commissioning in Jan. '18, uncertainty in the availability of atleast one unit of Kudankulam at most of the time in a year and anticipated increase in demand of around 500 MW to 750 MW in this FY 2018-'19 compared to last year has resulted in RTC deficit in existing availability by around 2500 MW.

The ongoing projects are expected to get commissioned and stabilize from 2021 - '22 onwards only. 300 MW of supplies under MTOA expires by January 2019/August 2019.

Under these circumstances, it becomes inevitable to tie up power under Medium Term/short term contracts till our projects get commissioned and stabilized, to manage the short fall in the existing availability.

MoP/GOI has recently concluded the "2500 MW Medium Term Tender under Pilot Scheme" at a discovered tariff of Rs.4.24 at ex-bus with Fixed Cost of 1 paise and Variable Cost of Rs.4.23 per unit. This translates to Rs.4.82 per unit at TANGEDCO periphery. As per the terms and conditions of the scheme, minimum dispatch to be ensured is 55% of contracted quantum. There will be no commitment for backing down upto this limit. At the same time dispatch can be increased upto the contracted quantum during peak period and at the same cost.

If off-take is more than 55%, there will be discount in the tariff as below. The tariff is firm for a period of three years.

Sl.No	Off-take of contracted capacity	Tariff (Rs. /unit) (1% discount in tariff applicable for incremental 5% off-take beyond 55%)
1	Upto 55%	4.240
2	> 55% upto 60%	4.198
3	>60% upto 65%	4.155
4	>65% upto 70%	4.113
5	> 70% upto 75%	4.070
6	> 75% upto 80%	4.028
7	>80% upto 85%	3.986
8	>85% upto 90%	3.943
9	>90% upto 95%	3.901
10	> 95% upto 100%	3.858

The tender discovered rates in other States under short term RA process in the recent period for delivery of power from October 2018 are as follows.

Utility	Tariff at	Supply period	RA discovered (Rate in Rs per unit)
Maharashtra	State periphery	Oct'18 to Dec'18	Rs. 4.41 to Rs. 5.49
West Bengal	State periphery	Mar'19	Rs. 6.25 to Rs. 8.25
Uttarkhand	State periphery	Oct'18 to May'19	Rs. 4.88 to Rs. 8.25
TANGEDCO	TANGEDCO	Oct'18 to May'19	Rs. 5.29 to Rs. 8.46
Andhra Pradesh	State periphery	Oct'18	Rs.5.99 to Rs. 8.59

Considering the present short term market and spot market rates, the rate of Rs.4.24 per unit, discovered under GOI Pilot Scheme at ex-bus, may be considered reasonable.

Therefore, in order to manage the deficit for the next three years, it is proposed to contract 1000 MW under the Pilot Scheme initiated by GOI (subject to confirmation from PTC), which has the flexibility to increase from minimum dispatch quantum to the total contracted quantum during peak hours or whenever it is required.

The expected financial commitment for procurement of 1000 MW at Rs.4.24 per unit at ex-bus under MTOA will be around Rs. 2050 crores per annum at 55% PLF and Rs. 3160 cr per annum at normative PLF of 85%.

To meet out the proposed balance deficit of around 1000- 1500 MW RTC/ Peak, it is proposed to negotiate further with the short term bidders. To meet anticipated additional demand, procurement proposed is 1000 MW RTC power from October '18 to December '18 and February '19 to May '19 under the present short

term tender. Financial commitment under short term purchase will be around Rs.2700 Cr for 1000 MW RTC for 7 months at Rs.5.29 per unit.

The need for any additional quantum over and above the present tender quantum will be reassessed and TANGEDCO may be permitted to float tenders if required and come before the Commission for quantum as well as rate approval, before award.

The minimum rate discovered in the present short term tender No.10 of 2018 in each month, is as follows.

Oct. '18	Rs. 5.30 per unit
Nov. '18	Rs. 5.29 per unit
Dec. '18	Rs. 5.29 per unit
Jan. '19	Rs. 5.39 per unit
Feb. '19	Rs. 5.39 per unit
Mar. '19	Rs. 5.49 per unit
Apr. '19	Rs. 5.50 per unit
May. '19	Rs. 5.50 per unit

The lowest discovered rate in RA is Rs.5.29 per unit at TANGEDCO periphery' for the months of Nov. '18 and Dec. '18. This translates to around Rs.4.57 per unit at ex-bus. The Commission may approve the ceiling rate of Rs.5.29 per unit at TANGEDCO periphery, for procurement under short term for any month tendered for.

For the foregoing reasons, the petitioner seeks to amend the prayer to give concurrence to M/s PTC for procurement of upto 1000 MW RTC power for three

years under pilot scheme initiated by GOI at a discovered rate of Rs. 4.24 per unit and approach the Commission later for adoption of tariff under Section 63 of Electricity Act, 2003, and to approve procurement of upto 1000 MW RTC power during October '18 to December '18 and February '19 to May '19 under the present short term tender No.10/2018, and also to grant liberty to TANGEDCO to call for tenders for additional procurement, if any to meet the summer deficit till May 2019, and come before the Commission before award for approval of quantum as well as rates.

7. Hearing held on 16-10-2018

During the hearing held on 16-10-2018, Thiru Arvind Pandian, Additional Advocate-General appeared for the Counsel- on- Record for the Petitioner and made elaborate submissions. During the hearing, the Commission has raised certain points (as detailed in para 6 below) and the learned Additional Advocate-General has responded that an additional affidavit will be filed on the above points and prayed to permit the Petitioner to go ahead with the MTOA quantum upto 1000 MW only for the present and the short term purchase may be decided based on the submission by TANGEDCO on the above issues raised by the Commission. The petitioner is permitted to proceed with MTOA, as prayed by the petitioner. The petitioner is further advised to negotiate with PTC for having annual and monthly PLF for the purpose of incentives and penalties.

8. Amendment petition filed by the petitioner in terms of the order dated 16.10.2018 :

In the hearing held on 16.10.2018, the Commission has pointed out various points. The points raised by Commission and the reply of the petitioner are as follows:

- a) **The projected demand for 2018-19 and the subsequent years upto 2026-27 is based on the maximum demand of 15440 MW reached on 27-04-2018. Whether the demand and energy projections can be made on the maximum demand or the sustained demand in the grid?**

Though maximum demand reached is average for a block period of 15 minutes, the sustained demand over peak hours is not very much less than the maximum demand. The demand on the same day during 16 to 23 hours is almost close to maximum demand. The load curve of 27.04.2018 is enclosed as Annexure A. Further, TANGEDCO as per Government policy, have to meet its demand all over the day without load shedding. Hence, demand and energy projections were made based on the maximum demand already reached, which is expected to be matching with the sustained demand in the ensuing months.

- b) (1) **The demand and energy projections and the availability from 2018-19 to 2026-27 do not consider the renewable energy i.e. the wind and solar.**

(2) **In the open access - Third party sale and captive wheeling also only 500 MW has been considered against the availability of about 1000 MW under this category.**

(3) **During wind season, about 5 months from May to September, TANGEDCO is power surplus and also during north-east monsoon and the following months due to climatic conditions there is a decline in demand from November to February.**

- (1) It is seen from the past three years data, Wind generation is at its peak during June to August only. During beginning of the season i.e May and end of the

season i.e September, wind generation is much less and fluctuating/varying over the years. TANGEDCO/CGS are planning overhaul of all thermal stations only during the wind season. Solar power is at its peak only for 3 to 4 hours in a day and is not available during morning and evening peak when the demand is high.

(2) Though TANTRANSCO has given open access upto 1060 MW, wheeling of power from CPPs to third party fluctuates between 500 to 1000 MW. Hence, TANTRANSCO considered 500 MW under captive wheeling, as an estimation.

(3) As stated in para 3(b)(1), wind generation is at peak during June to August only and during that time TANGEDCO/CGS is planning overhaul of all thermal stations. Taking into consideration the availability of 550 MW power under MTOA Pilot scheme, power requirement under short term tender proposed to be restricted to February '19 to May '19 only, excluding the winter months.

c) Under long term case 1 bidding, out of the availability of 2830 MW, only 2000 MW is considered. In the case 1 bidding 3 generator for 1172 MW are using imported coal. Therefore, they should not have any coal problem.

The average availability declared by the long term generators using imported coal is only 73% (during 2018-19 upto Sep '18) due to various reasons. The availability from other coal based generators is also less than 70 % only due to difficulties in receipt of coal. Hence the availability from LTOA has been considered at 2000 MW (70%) against the contracted capacity of 2830 MW.

Hence, power procurement under short term tender is very much essential for meeting the summer demand from February '19 to May '19. It is

requested that TANGEDCO may be permitted to purchase available capacity upto 1000 MW of RTC power under short term tender No 10 of 2018 for the period from Feb '19 to May '19.

For the foregoing circumstances, the petitioner prayed to take on record the execution of Power Supply Agreement with M/s PTC for procurement of 550 MW RTC power for three years at Rs.4.24 per unit (ex-bus) at 55% PLF under pilot scheme initiated by GOI and approach the Commission later for adoption of tariff under Section 63 of Electricity Act, 2003 and to approve procurement of upto 1000 MW RTC power for the summer period from February'19 to May'19 under the present short term tender No. 10/2018 subject to availability.

9. Additional Affidavit filed by the petitioner on 20-11-2018 in terms of the order dated 16.11.2018.

During hearing on 16.11.2018, the Commission has raised the following queries and the reply of the Petitioner is as follows:

- a. Why the imported coal based plants are not able to supply the full power as per agreement and whether the penalty collected for the supply of power below 85% of the PLF is sufficient to meet the cost of power purchase to the extent of short supply of power by the generator.***

The tariff comprises of two parts viz. Capacity Charge and Energy Charge. As per the provisions of PPA, if cumulative availability from the beginning of each contract year and upto the billing period is more than the normative availability, the capacity charge is to be restricted to Normative Availability of 85%. No Capacity Charge is payable for the availability declared more than Normative Availability.

If cumulative availability from the beginning of each contract year and upto the billing period is less than the normative availability, the Capacity Charge is payable for the actual declaration.

If the cumulative availability is more than normative availability, incentive is payable for the availability in excess of normative availability.

Similarly, if cumulative availability is less than 80%, the Seller shall pay penalty corresponding to the difference between 80% and availability.

Intra State generators have maintained cumulative availability of around 85% for 2017 - '18. For 2018 - '19 (upto Sep. '18), the cumulative availability of ILFS was 89% and that of Coastal, due to its Strategic Debt Restructuring and financial problem, etc was at 57%.

For less than normative availability of 85%, penalty of Rs. 21.75 Cr and proportionate reduction in Capacity Charge amounts to Rs. 130.33 Cr upto Sep. '18 have been recovered/adjusted.

b. *The rate quoted by the bidders would reflect the Power exchange rate prevailed at the time of calling for the tender i.e September 2018 and the Power exchange rate has now come down drastically and enquire whether it would be appropriate to go for re-tender to get fair price.*

The present proposal before the Commission is for procurement of power from February '19 to May '19. It is seen from the Market Analysis Report published by IEX that there is an increase for more than 40% in price discovered year on year. Hence during summer months of 2019, the price is likely to increase and even may reach the price level prevailed during September '18 and October '18.

c. Since the quantity as well as period varies more or less 50%, the tender still valid.

The tender was called for supply of power from October'18 to May '19.with separate requisition for each month. The bidders had the option to quote different quantum and tariff for each month. The quantum/tariff will be valid for the respective requisition/month. Hence the tender is still valid. As per the terms of tender, TANGEDCO has the right to reject the tender fully or partly.

3. The bids were invited for supply of power at TANGEDCO periphery, which means that the tariff shall be inclusive of intrastate transmission charges and losses. The lowest tariff of Rs.5.29 per kwh at TANGEDCO periphery translates to Rs.4.57 per kwh at ex-bus.

The tariff emerged in the Pilot Scheme is Rs.4.24 per kwh at ex-bus. Telangana had opened short term tender for supply period from 15.02.2019 to 30.04.2019 on 06.10.2018 and the lowest tariff discovered was Rs.5.22 per kwh at Telangana State periphery. Chattisgarh had opened short term tender for supply period from 15.11.2018 to 31.03.2019 on 02.11.2018 and the lowest tariff discovered was Rs.6.14 per kwh at Chattisgarh State periphery. This translates to Rs.5.22 at ex-bus (intra state source) for Telangana tender and Rs.5.63 at ex-bus for Chattisgarh tender.

Since the power procurement proposal is for peak summer months, the lowest tariff of Rs. 5.29 per kwh at TANGEDCO periphery is comparable. For the above reasons, the Petitioner prayed as follows:-

- (i) to take on record the execution of Power Supply Agreement with M/s.PTC for procurement of 550 MW RTC Power for three years at Rs.4.24 per unit (ex-bus) at 55% PLF under pilot scheme initiated by GOI and approach the

Commission later for adoption of tariff under section 63 of the Electricity Act, 2003;and

- (ii) to approve procurement upto 1000 MW RTC power for the summer period from February 2019 to May 2019 under the present Short Term Tender No.10/2018 subject to availability.

10. Findings of the Commission:-

10.1. We have carefully considered the proposal made by the TANGEDCO for procurement of power as stated supra. Originally, the proposal was made for procurement of 1000 MW RTC and 500 MW peak power for the period from October 2018 to May 2019 by Floating Tender through e-bidding. The petitioner Corporation also sought approval for deviation from the Ministry of Power guidelines in regard to the following;

- (a) to modify the billing cycle as monthly billing.
- (b) to delete payment security clause and contract performance guarantee clause in lieu of each other.
- (c) to delete provision for supply from alternate source in view of short duration of contract period.
- (d) to delete change in law clause in view of duration of contract is less than one year.
- (e) to fix the validity of the tender as 30 days excluding the date of bid submission.

10.2. The petitioner had also requested to approve procurement of RTC power upto 1000 MW under medium term from procurement for 3 years being the power available in the tender floated by M/s.PTC under pilot scheme initiated by Gol at the discovered rate of Rs.4.24 per unit. (ex-bus)

10.3. TANGEDCO has set out many reasons for the proposed procurement such as shortage of generation in its own generating stations reduction in power from Central

Generating Stations, reduction in the long term open access contracted quantum of 3330 MW arising out of termination of contract by PGCIL with Ind-Bharath for default in payment and imposition of restriction of LTA under CERC Regulation of power supply Regulation 2010 for payment default, termination notice issued by PGCIL on KSK, the inability of hydro generation to meet the RTC requirements in view of its utilisation of peak requirement, the reduction in wind generation, lack of availability of solar, the delay in TANGEDCO's ongoing projects, uncertainty in Kudankulam Nuclear Units etc.

10.4. Insofar as the deviation sought for in regard to the guidelines of Government of India, it is seen that such deviations have been approved in the past and the Commission has approved similar deviations in M.P.No.16 of 2017 and hence, we have no difficulty in approving the deviations sought for herein. Hence, the issues narrow down to the necessity for procurement and whether the present proposal satisfies the requirement of reasonableness in terms of necessity and prudence.

10.5. Upon consideration of the initial proposal, the Commission in its daily order dated 18.09.2018 raised queries on the financial commitment arising out of this proposal and other issues. As many as nine queries were raised by the Commission ranging from financial commitment, the demand forecast, availability of power from other sources such as CGS, long term power purchase, medium term power purchase etc. and directed TANGEDCO to file its reply to the queries raised by the Commission. Accordingly, TANGEDCO filed its reply to the queries raised by the Commission, the replies of TANGEDCO were being examined by the Commission in the hearing held on 16.10.2018 and Commission raised further queries as below necessitating reassessment of shortage of power projected by them.

- i) Whether demand and energy projections can be made on the maximum demand or sustained demand?**
- ii) In the demand and energy projections, why the renewable energy has not been considered and why only 500 MW of third party sale and captive wheeling has been considered as against the 1000 MW?**
- iii) The decline in the demand from November to February due to climatic conditions has not been considered by TANGEDCO.**
- iv) Why out of the availability of 2830 MW under long term case-1 bidding, only 2000 MW has been considered when three generators producing 1172 MW who are using imported coal do not have coal related problems?**

10.6. The AAG undertook to file an additional affidavit to answer the queries of the Commission and pleaded that TANGEDCO might be permitted in the meanwhile, to go ahead with procurement of 1000 MW on MTOA on 16.10.2018. Accordingly, the Commission permitted TANGEDCO to proceed with MTOA for the said quantum and advised to negotiate with PTC for having annual / monthly PLF for the purpose of incentives and penalties.

10.7. The TANGEDCO submitted its replies in the form of affidavit to the queries raised by the Commission on 16.10.2018. On the query-(i) relating to maximum and sustained demand, the TANGEDCO submitted that there was not much of difference between maximum demand and sustained demand and hence, the maximum demand was taken as the basis. TANGEDCO also submitted that in view of the Government policy to avoid load shedding, the demand and energy projections were

made on maximum demand. On the query-(ii) as stated above, TANGEDCO submitted that the wind generation was at peak only from June to August during the last three years and during the beginning of May and end of September wind generation was less and hence, the same was not taken for projection. It was further submitted by TANGEDCO that TANGEDCO / CGS would be undertaking overhaul of Thermal Stations only in Wind season and hence, the generation from wind power was not taken into account. In regard to solar power, TANGEDCO submitted that the said power would be at its peak only for 3 to 4 hours in a day and would not be available in the morning and evening when demand would be high. On the non-consideration of balance capacity of 500 MW available from open access generators, TANGEDCO submitted that the wheeling of power from CPPs to third parties fluctuates from 500 to 1000 MW and hence, it was considered only to the extent of 500 MW. As regard query-(iii) i.e., decline in demand from November to February, TANGEDCO submitted that the overhauling of Thermal Stations was being undertaken during that period and hence, the power requirement was restricted to February – May 2019 excluding winter months. In regard to the query-(iv) on the availability of imported coal, the TANGEDCO submitted that the average availability from the long term generators using imported coal was in the order of 73% for various reasons and the availability from other coal generators was less than 70% due to difficulties in receipt of coal and hence, the availability from LTOA was considered at 2000 MW at 70% of total contracted capacity of 2830 MW.

10.8. In the subsequent hearing held on 16.11.2018, the Commission again sought to query TANGEDCO as to why the imported coal based plants under LTOA were not able to supply full power as per agreement and whether penalty collected for the

supply below 85% of the PLF would be sufficient to meet the cost of power purchase to the extent of short supply of power by the generators. The Commission also queried TANGEDCO whether the rate quoted by the bidders would reflect the power exchange rate at the time of calling tenders i.e., in September 2018 and in view of the power exchange rates having come down drastically now, whether it would be appropriate to go for re-tender. The Commission also queried TANGEDCO whether the tender would be still valid since the quantity and period varies more or less 50%. For the above queries of the Commission, TANGEDCO filed its response. On the first query, with regard to inability of the imported coal based plants to supply as per agreement, TANGEDCO submitted that the intra-State generators have always maintain cumulative availability of 85% for the period 2017-18 and 2018-19 (upto September 2018) and that in cases where the cumulative availability is less than the normative availability capacity charges have been recovered or adjusted proportionately. In regard to the query on Power Exchange rate prevailing at the time of tender, TANGEDCO submitted that there is an increase of more than 40% in the price discovered in the exchange as per the market analysis report of IEX and during the summer months of 2019, the price is likely to increase and may reach the price level prevailed during September 2018 to October 2018. On the third query raised by the Commission, TANGEDCO submitted that the tender was called for the period from October 18 to May 19 with separate requisition for each month and the bidders have the option to quote different quantum and tariff for each months and that the quantum / tariff would be valid for the respective month. TANGEDCO further submitted that the tender would be still valid and it has the right to reject the tender fully or partly.

10.9. After advancing its arguments on the above lines and furnishing replies to the queries of the Commission as aforesaid, TANGEDCO prayed the Commission to take on record execution of power supply agreement with PTC for procurement of 550 MW for 3 years at Rs.4.24 per unit (ex-bus) at 55% PLF under pilot scheme initiated by Government of India and to permit it to approach the Commission later for adoption of tariff under section 63 and further to approve the procurement of 1000 MW RTC which had been restricted for the summer period from February 2019 to May 2019 under the short term Tender No.10 of 2018.

10.10. The Commission carefully examined the replies furnished by TANGEDCO to the queries of the Commission in connection with the amendment petition filed for procurement of both STOA and MTOA power. As TANGEDCO has stated that the earlier tender is still valid as the bid is sought for on monthly basis, there is no difficulty in agreeing to the request of TANGEDCO to give go-ahead with the procurement in the modified proposal in the same tender which was floated earlier for the relevant months in the light of the explanation given by the petitioner. In view of the above, the Commission is inclined to the revised proposal of the petitioner to procure the short term power for the restricted period at a rate not exceeding the lowest of Rs.5.29 per unit at ex-bus discovered in the tender and for the quantity upto 1000 MW.

10.11. As regards the approval for procurement of 1000 MW under MTOA already given by the Commission in its daily order dated 16.10.2018, the same stands modified now to the extent as prayed for by TANGEDCO in the amendment petition dated 20.11.2018 by limiting to 550 MW through PTC at Rs.4.24 per unit (ex-bus) at 55% PLF. As ordered in the Daily Order dated 16.10.2018, TANGEDCO shall

negotiate with PTC for having annual / monthly PLF for the purpose of incentive and penalties.

Ordered accordingly.

11. 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 the copy of this order by the aggrieved person.

(Sd)
(Dr.T.Prabhakara Rao)
Member

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

(Sd.....)
(S.Akshayakumar)
Chairman

/True Copy /

Secretary
Tamil Nadu Electricity
Regulatory Commission