

**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

**M.P.No.5 of 2017**

Tamil Nadu Generation and Distribution Corporation Ltd.  
(Represented by the Chairman Cum Managing Director)  
144, Anna Salai  
Chennai – 600 002.

... Petitioner  
(Thiru M.Gopinathan  
Standing Counsel for TANGEDCO)

Vs.

NIL

...Respondent

**Dates of hearing** : 25.04.2017, 02.06.2017 and 13.06.2017

**Date of Order** : 31.07.2017

The M.P.No.5 of 2017 came up for final hearing on 13.06.2017. 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.5 of 2017:-

The prayer of the Petitioner in the above M.P.No.5 of 2017 is to-

- (i) extend the Medium Term PPA with M/s. Jindal Power Ltd. and M/s. Adani Enterprises Ltd. for a period of two years from 01.09.2017 to 31.08.2019 with the same terms and conditions of PPA with revised quoted tariff of Rs.3.50 / kwh at a generator bus;
- (ii) suitably amend the clauses of PPA in line with the revised tariff;
- (iii) pass such further or other orders as may be deemed fit and render justice.

## **2. Facts of the Case:-**

2.1. GOI, MOP had issued Guidelines for Determination of Tariff by Bidding Process for Procurement of Power by Distribution Licensee on 19.01.2005 and updated as on 21.07.2010.

2.2. The Government of India / Ministry of Power has issued the standard bidding documents (SBD) case 1- 2009 (RFP/PPA) on 27.03.2009 and updated as on 21.07.2010.

2.3. As per the MoP guidelines the period specified for long-term procurement of electricity is 7 years and above and Medium term procurement for a period upto 7 years but exceeding 1 year.

2.4. In view of shortage of power and to meet the demand for the present and for the near future, the petitioner herein has decided to extend the Power Purchase Agreement executed between TANGEDCO and M/s.Jindal Power Ltd. (JPL), M/s.Adani Enterprises Ltd. (AEL) on 29.06.2012 for procurement of 200 MW (each)

RTC power through Medium Term power purchase under Case-1 bidding for further period of two years.

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

3.1. R&C measures in Tamil Nadu has been lifted with effect from 05.06.2015 and directions of the State Government issued under section-11 of Electricity Act, 2003 have been revoked with effect from 01.06.2016.

3.2. The demand for electricity in Tamil Nadu State is steadily increasing and an all time high demand of 15343 MW was met on 29.04.2016 and all time high consumption of 345.617 MU supplied on 29.04.2016.

3.3 The total firm availability from conventional sources after expiry of these Medium Term contract will be 14,057 MW (TANGEDCO Thermal 4320 MW + Gas 516 MW + IPP 416 MW + CGS Share 5475 MW + LTA 3330 MW). Considering PLF of 85%, the net availability will be 11,900 MW.

3.4. Besides, 500 MW contracted under Long Term PPA with M/s.Ind Barath Energy (Utkal) Ltd. has supplied power through alternative generating source only for the period from 01.09.2016 to 31.01.2017, eventhough PGCIL had operationalized Long Term Access from 16.12.2015. They have not yet commenced the supply from the original source at Jharsguda, Odisha till date.

3.5. Board of TANGEDCO has resolved for decommissioning of ETPS permanently with effect from 31.03.2017.

3.6. As per the projection submitted for 19<sup>th</sup> EPS survey, it has been assessed that there will be a deficit to the tune of 788 MW during 2017-18 and 1451 MW during 2018-19 due to delay in the anticipated commissioning of Ennore SEZ and Expansion projects of TANGEDCO. Hence, there is a need to increase the availability to meet the base load.

3.7. The details of Power Purchase Agreements so far executed by TANGEDCO under Case-I Bidding are as follows:

I. Medium Term

Tender No.01/PPMT/2011 (Phase I):

TANGEDCO executed PPA with NETS on 19.01.2012 for purchase of 100 MW RTC power sourced from Lanco Anpara Power Ltd, Uttar Pradesh through medium term for a period of five years from 2012 to 2017 under Case1 Bidding got expired on 31.01.2017 and TANGEDCO has filed Miscellaneous Petition before the Commission on 31.01.2017 seeking approval for extension of PPA term for two years from 01.02.2017 to 31.01.2019.

II. Long Term

Tender No.03/PPLT/2011 (Phase III):

TANGEDCO had executed 11 long term PPAs with 3 Nos. Intra State generators and 8 Nos. Inter State generators for procurement of 3330 MW RTC power through long term for a period of fifteen years from 2014 to 2028 with a levelised tariff of Rs.4.910/Kwh and tariff adopted by the Commission on 29.07.2016.

### III. Short Term

Tender No.08 of 2016:

TANGEDCO had issued Letter of Award and executed PPA for purchase of 350 MW RTC power from sources located in NEW Region and 672 MW of RTC power for the period from February 2017 and March 2017 and 632 of RTC power for the period from April 2017 and May 2017 from sources in Southern Region under Short term power purchase at a rate of upto Rs.4.00 per kwh and the Commission has approved the above tender process vide its order dated 29.12.2016.

3.8. Clause 2.2.1 of PPA of M/s.Adani Enterprises Ltd (AEL) reads as follows:

"This Agreement shall be valid for a term commencing from the Effective Date (01.02.2012) until the Expiry Date (31.01.2017) (Term of Agreement), unless terminated earlier pursuant to Article 2.3. Upon the occurrence of the Expiry Date, this Agreement shall, subject to Article 2.4, automatically terminate, unless mutually, extended by all the Parties on mutually agreed terms and conditions, at least ninety (90) days, subject to approval of the Hon'ble TNERC."

3.9. The revised Financial Bid of JPL and AEL for the period 01.09.2017 to 31.08.2019 is as below:

Sl. No.	Tariff Components	M/s.Adani	M/s.Jindal
1	Fuel	Blended Coal (30% Domestic and 70% imported coal)	Captive Mine
2	<b>Capacity Charges</b>	In Rs.per Kwh	In Rs per kwh
2(a)	Non Escalable Capacity Charges	1.50	1.50
3	<b>Energy Charges</b>		
3(a)	Escalable Energy Charges	0.97	2.00

3(b)	Escalable Inland Transportation Charges	0.64	----
3(c)	Escalable Fuel Handling Charges	0.39	----
	<b>Total Tariff</b>	<b>3.50</b>	<b>3.50</b>

3.10. The actual Tariff of JPL and AEL, if PPA is extended for further period of two years as provided in Article 2, Clause 2.2.1 of PPA dated 19.01.2012 will be calculated for the revised bid keeping 100 as base index for escalable Energy Charges as on 01.09.2017.

3.11. The present tariff offered by JPL and AEL at Rs.3.50/kwh at interconnection point (i.e. ex-bus) and Rs.3.97/kwh and Rs.3.93/kwh at Tamil Nadu periphery is comparable to the weighted average tariff of Rs.3.96 per kwh contracted by TANGEDCO from the Southern Region generators under short term tender for the period from 01.02.2017 to 15.05.2017 and less than the tariff discovered through Reverse Auction in the Telangana short term tender, which ranges from Rs.5.61 to Rs.6.20 per kwh.

3.12. As Medium Term Open Access will be granted only after 5 months from the month of submitting application to PGCIL, JPL and AEL have requested early signing of PPA in order to initiate actions to obtain MTOA approval.

3.13. The present term of the PPA expires on 31.08.2017. JPL and AEL have sought extension of term of PPA vide their letter dated 31.01.2017 and 21.02.2017 offering a tariff of Rs.3.50/Kwh at Injection Point with Non-Escalable capacity

charges – Rs.1.50/kwh and Escalable Energy Charges – Rs.2.00/kwh for the proposed extended period.

3.14. Under the above scenario, TANGEDCO examined the proposal of JPL and AEL seeking extension for a further period of two years (i.e. from 01.09.2017 to 31.08.2019) subject to the approval of the Commission as per Article 2, Clause 2.2.1 of PPA.

#### **4. Hearing held on 25.04.2017:-**

In the hearing held on 25.04.2017, the Commission directed TANGEDCO to file additional affidavit justifying reasons with the realistic demand estimate, declared power availability and power drawn from CGS for extension of Medium Term power purchase. Accordingly, the Petitioner has filed an affidavit on 02.06.2017 which reveals the following:-

- (i) TANGEDCO met a peak demand of 15343 MW during 2016-17. The average peak demand for the year 2016-17 was 14496 MW.
- (ii) The average demand met by TANGEDCO during the year 2014-15, 2015-16 and 2016-17 are 10876 MW, 11191 MW and 12065 MW respectively.
- (iii) At present, the installed capacity from conventional sources (i.e. TANGEDCO Thermal and Gas, IPPs, CGS and LTA) is 14119 MW. One generator is not supplying 500 MW power contracted under Long Term Tender and Medium Term PPA for a quantum of 400 MW is due to expire on 31.08.2017.
- (iv) As per MoP guidelines for procurement of power, demand forecast shall be based on the latest available Electric Power Survey report published by CEA.

- (v) As per the demand forecasted in latest EPS Report viz, 19th EPS Report, the deficit projected for the years 2017-18 and 2018-19 are 788 MW and 1451 MW respectively.
- (vi) The State owned project which is in the pipe line and scheduled for commissioning by 2018-19 viz , ETPS expansion is getting delayed and likely to be commissioned beyond 2019 only.
- (vii) To meet the above demand/deficit, as per the projections based on 19th EPS report, the extension of Medium Term PPA by another two years has been requested.
- (viii) The tariff quoted by the bidders @ Rs.3.50 per unit (Ex-bus) is reasonable compared to present market prices.
- (ix) Medium Term Open Access will be granted from the sixth month from the date of submission of application, subject to availability of ATC (Available Transfer Capability). Based on availability of Available Transmission Capability, MTOA will be granted for RTC quantum only and it will not be truncated as in the case of Short Term Open Access. Hence, the uncertainties of STOA are eliminated and power sourced under MTOA will meet the base demand.

**5. Hearing held on 02.06.2017:-**

In the hearing held on 02.06.2017, the Commission has directed TANGEDCO to file additional affidavit clarifying that the option proposed is economically the most optimum one. Accordingly, the Petitioner filed an affidavit on 13.06.2017 which reveals the following:-



(i) Market forces influences the tariff of power procurement and particularly in short term market. TANGEDCO floated a tender for short term RTC power procurement during November 2016 for the period from February 2017 to 15<sup>th</sup> May 2017 and the tender discovered tariff was ranging from Rs.2.92 per unit to Rs.4.00 per unit. Subsequently, Karnataka floated a tender for short term RTC power procurement during December 2016 for the supply period from 16.12.2016 to 31.05.2017. The tender discovered tariff was ranging from Rs.3.749 per unit to Rs.4.20 per unit. During March 2017, Telangana floated a short term RTC power procurement for the period of supply from 01.03.2017 to 15.04.2017 and the tariff discovered was ranging from Rs.5.61 per unit to Rs.6.20 per unit.

(ii) The prices discovered in short term market are market driven based on the prevailing demand and supply, which may have surprises depending upon the network congestion / multiple outage scenarios. The options available to TANGEDCO to meet the projected deficit, calculated based on TANGEDCO tender discovered rate and Telangana tender discovered rate in additional affidavit for illustrative purpose. Considering the uncertainty in both availability and the rates to be discovered under short term tender, the power under Medium Term basis (2017-2019) had been proposed to be reliable and cost effective.

## **6. Findings of the Commission:-**

6.1. The delay in filing the additional affidavit is condoned. We have carefully considered the prayer of the petitioner Corporation for extension of medium term PPA with M/s.National Energy Trading and Services Limited for a period of two years from 01.09.2017 to 31.08.2019. It is seen that the original PPA was executed

between TANGEDCO and NET&S for five years from 01.09.2012 to 31.08.2017 and the present procurement for a period of further two years is sought to be made at the rate of Rs.3.50/kwh at injection point with non-escalable capacity charges – Rs.1.50/kwh and escalable energy charges – Rs.2.00/kwh for the extended period. It is to be noted that the agreement dated 29.06.2012 which is sought to be extended was originally executed as per the Guidelines for Determination of Tariff by Bidding Process for procurement of power by the Distribution Licensee, issued by the Ministry of Power. The petitioner has sought to justify the extension of PPA on various grounds which inter alia includes the reaching of peak demand during April 2016 upto 15343 MW and the consistent increase in the demand every year and the expectancy of commissioning of TNEB's own plant (i.e., ETPS expansion project) only after 2009.

6.2. It is seen that the Clause 2.2.1 of PPA executed between TANGEDCO and National Energy Trading and Services Limited reads as follows:-

***“This Agreement shall be valid for a term commencing from the Effective Date (01.02.2012) until the Expiry Date (31.01.2017) (“Term of Agreement”), unless terminated earlier pursuant to Article 2.3. Upon the occurrence of the Expiry Date, this Agreement shall, subject to Article 2.4, automatically terminate, unless mutually, extended by all the Parties on mutually agreed terms and conditions, at least ninety (90) days, subject to approval of the Hon’ble TNERC”.***

6.3. It may be seen from the above that the PPA provides for extension if there is mutual consent among the parties. The maximum period upto which a medium term procurement for power can be executed as per Ministry of Power guidelines is 7 years which means the extension of 2 years over and above the period of 5 years is well within the provisions of the Ministry of Power Guidelines. Therefore, we are satisfied on the question of validity of PPA. Now the questions which arise for

consideration are whether the rates agreed upon between the parties is reasonable and whether the need for continuing the procurement of this power exists.

6.4. TANGEDCO has submitted the present tariff offered by M/s. Jindal Power Limited and M/s. Adani Enterprises Limited at Rs.3.50/- at injection point is lesser than the present prevailing rate of Rs.3.93 in Southern Region. TANGEDCO has further submitted that the demand reached during April 2016 was 15343 MW and the average demand during 2016-17 was in the range of 12065 MW and that the demand increases every year. The de-commissioning of ETPS permanently with effect from 31.03.2017 and delay in ETPS expansion project which is scheduled to be commenced during 2018 and likelihood of its commissioning only in 2019 is also one of the reasons cited for approval of the present proposal for procurement. The TANGEDCO has further submitted that PPA executed for purchase of 350 MW RTC power from sources located in NEW Region and 672 MW of RTC power for the period from February 2017 to March 2017 and 632 of RTC power for the period from April 2017 to May 2017 from sources in Southern Region under short term power purchase at a rate of upto Rs.4.00 per kwh have been approved by TNERC in its order dated 29.11.2016.

6.5. On a careful consideration of the above submissions of TANGEDCO, it is observed that the present rate of Rs.3.50 / kwh is lesser than the rate of Rs.3.93 prevailing in the Southern Region and Rs.4.00 approved in the order dated 29.11.2016. It would be also relevant to consider the following submissions of TANGEDCO before according approval for the present proposal.

- (a) The demand for electricity in Tamil Nadu State is steadily increasing and an all time high demand of 15343 MW was met on 29.04.2016 and all time high consumption of 345.617 MU supplied on 29.04.2016.
- (b) The total firm availability from conventional sources after expiry of these Medium Term contract will be 14057 MW (TANGEDCO Thermal 4320 MW + Gas 516 MW + IPP 416 MW + CGS Share 5475 MW + LTA 3330 MW). Considering PLF of 85%, the net availability will be 11900 MW.
- (c) Besides, 500 MW contracted under Long Term PPA with M/s.Ind Barath Energy (Utkal) Ltd., it has supplied power through alternative generating source only for the period from 01.09.2016 to 31.01.2017, even though PGCIL had operationalised Long Term Access from 16.12.2015. They have not yet commenced the supply from the original source at Jharsguda, Odisha till date.
- (d) Board of TANGEDCO has resolved for decommissioning of ETPS permanently w.e.f.31.03.2017.
- (e) As per the projection submitted for 19<sup>th</sup> EPS Survey, it has been assessed that there will be a deficit to the tune of 788 MW during 2017-18 and 1451 MW during 2018-19 due to delay in the anticipated commissioning of Ennore SEZ and Expansion projects of TANGEDCO. Hence, there is a need to increase the availability to meet the base load.
- (f) The present tariff offered by M/s.Jindal Power Limited and M/s.Adani Enterprises Limited at Rs.3.50/kwh at inter-connection point (i.e., ex-bus) and Rs.3.97/kwh and Rs.3.93 / kwh at Tamil Nadu Periphery is

comparable to the weighted average tariff of Rs.3.96 per kwh contracted by TANGEDCO from the Southern Region generators under short term tender for the period from 01.02.2017 to 15.05.2017 and less than the tariff discovered through Reverse Auction in the Telangana short term tender, which ranges from Rs.5.61 to Rs.6.20 per kwh.

(g) TANGEDCO floated a tender for short term RTC power procurement during November 2016 for the period from February 2017 to 15<sup>th</sup> May 2017 and the tender discovered tariff was ranging from Rs.2.92 per unit to Rs.4.00 per unit. Subsequently, Karnataka floated a tender for short term RTC power procurement during December 2016 for the supply period from 16.12.2016 to 31.05.2017. The tender discovered tariff was ranging from Rs.3.749 per unit to Rs.4.20 per unit. During March 2017, Telangana floated a short term RTC Power procurement for the period of supply from 01.03.2017 to 15.04.2017 and the tariff discovered was ranging from Rs.5.61 per unit to Rs.6.20 per unit.

(h) It is seen that the prices discovered in short term market are market driven based on the prevailing demand and supply, which may have surprises depending upon the network congestion/ multiple outage scenarios. The options available to TANGEDCO to meet the projected deficit, calculated based on TANGEDCO tender discovered rate and Telangana tender discovered rate had already been annexed in additional affidavit for illustrative purpose.

(i) TANGEDCO met a peak demand of 15343 MW during 2016-17. The average peak demand for the year 2016-17 was 14496 MW.

- (j) The average demand met by TANGEDCO during the year 2014-15, 2015-16 and 2016-17 are 10876 MW, 11191 MW and 12065 MW respectively.
- (k) At present, the installed capacity from conventional sources (i.e., TANGEDCO Thermal and Gas, IPPs, CGS and LTA) is 14119 MW. One generator is not supplying 500 MW power contracted under Long Term Tender and Medium Term PPA for a quantum of 400 MW is due to expire on 31.08.2017.
- (l) As per the demand forecasted in latest EPS Report viz., 19<sup>th</sup> EPS Report the deficit projected for the years 2017-18 and 2018-19 are 788 MW and 1451 MW respectively.
- (m) The State owned project which is in the pipe line and scheduled for commissioning by 2018-19 viz., ETPS expansion is getting delayed and likely to be commissioned beyond 2019 only.
- (n) The tariff quoted by the bidders @ Rs.3.50 per unit (Ex-bus) is reasonable compared to present market prices.
- (o) Medium Term Open Access will be granted from the sixth month from the date of submission of application, subject to availability of ATC (Available Transer Capability). Based on availability of Available Transmission Capability MTOA will be granted for RTC quantum only and it will not be truncated as in the case of Short Term Open Access. Hence, the uncertainties of STOA are eliminated and power sources under MTOA will meet the base demand.

6.6. It is observed that the proposal for procurement of power by TANGEDCO in the instant case for the extended period is reasonable. Considering the steady increase in demand, decommissioning of ETPS, delay in commissioning of ETPS expansion project and other factors pleaded by TANGEDCO, it is felt that the present procurement can be approved. The consistent need to keep base load power which acts as the immediate resource for catering to the power requirements of the State is also a factor which is to be borne in mind by the Commission. The sellers, namely, M/s.Jindal Power Limited and M/s.Adani Enterprises Limited have confirmed the position that the present rate of Rs.3.50 / kwh is lower by Rs.1.22/kwh and there is a reduction of about 26% from the current tariff of Rs.4.72/kwh vide their communication dated 31.01.2017 and 21.02.2017 respectively. In view of the same, the Commission accords approval for purchase of power by TANGEDCO from M/s.Jindal Power Limited and M/s.Adani Enterprises Limited for the period from 01.09.2017 to 31.08.2019 at a revised rate of Rs.3.50/kwh at injection point comprising of non-escalable capacity charges – Rs.1.50/kwh and escalable energy charges - Rs.2.00/kwh totally amounting to Rs.3.50/kwh. The other conditions of the PPA shall remain unaltered.

## 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 .....)  
**(Dr.T.Prabhakara Rao)**  
Member

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

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

/True Copy /

Secretary  
Tamil Nadu Electricity  
Regulatory Commission