

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

**PRESENT:**

**Thiru M.Chandrasekar**

**.... Chairman**

**and**

**Thiru K.Venkatasamy**

**.... Member (Legal)**

**PPAP No. 2 of 2021**

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

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

**Date of hearing : 24-08-2021**

**Date of order : 07-09-2021**

The P.P.A.P.No. 2 of 2021 came up for hearing on 24-08-2021. The Commission upon perusing the affidavit filed by the petitioner and all other connected records and after hearing passes the following:-

**ORDER**

**1. Prayer of the Petitioner in P.P.A.P. No. 2 of 2021:-**

The prayer of the petitioner in P.P.A.P. No. 2 of 2021 is to procure 1000 MW of solar power from M/s. Solar Energy Corporation of India (SECI) under Manufacturing

Linked ISTS scheme expected to be commissioned during 2022-23 at the rate of Rs.2.61 per unit (Applicable tariff of Rs.2.54 / Unit + SECI's trade margin of Rs.0.07 / Unit) by executing Power Sale Agreement (PSA) on long term basis to meet TANGEDCO's RPO requirement and to execute Power Sale Agreement (PSA) with M/s. SECI for the procurement of 1000 MW of solar power in the MNRE's approved agreement format.

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

This petition has been filed for procurement of 1000 MW of solar power from M/s. Solar Energy Corporation of India (SECI) at the rate of Rs.2.61 per unit under Manufacturing Linked ISTS scheme, by entering into a long term agreement to meet TANGEDCO's RPO requirement.

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

3.1. The Government of India has executed, "Paris Agreement COP 21"; wherein the country has committed to reduce the emissions intensity of its GDP by 33.35% by 2030 from 2005 levels by increasing the share of non-fossil fuel based energy resources to 40% of installed electric power capacity by 2030. With this commitment, the Government of India has set a target of 100 GW of Solar power, 60 GW of Wind power, 10 GW from bio-power and 5 GW from small Hydro power.

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3.2. In order to increase the share of renewable energy in the State of Tamil Nadu, Tamil Nadu Solar Energy Policy, 2012 was announced, wherein 3000 MW of solar

power plants have to be commissioned by 2015. Subsequently Tamil Nadu Solar Energy Policy 2019 has been announced with an ambitious target of around 9000 MW of solar power plants by 2022.

3.3. The total installed capacity of solar PV power plants viz. Utility Scale Projects under the option of selling the power to TANGEDCO and wheeling the power for captive use/third party sale are furnished below:

<b>S.No.</b>	<b>Category</b>	<b>No. of developers</b>	<b>Capacity in MW as on 31-07-2021</b>
I	Utility Scale Projects		
(A)	Sale to Board Category		
1	Central Government Schemes	8	21
2	Preferential Tariff Scheme		
	a) Private developers	76	1409
	b) Public sector	8	680
3	Tender	15	1364
4	REC Scheme	8	22.342
		<b>115</b>	<b>3496.342</b>
(A)	Wheeling Category		
1	REC Scheme	86	187.81
2	Preferential tariff scheme		
a	Wheeling (Captive)	127	428.19
b	Wheeling (Third Party)	34	79.234
c	Wheeling through Pooling SS under 10 (1) scheme	13	76.875
	Total	260	772.109
	Total (Grid connected)	<b>375</b>	<b>4268.451</b>

3.4. In order to achieve the renewable energy targets, "Renewable Purchase Obligation" has been fixed by both Ministry of Power and by the Commission. The details of year wise RPO target fixed for solar power fixed to the State by the Commission and Ministry of Power out of total consumption in percentage is as follows:

Sl. No.	Year	TNERC RPO Target (Solar)	MNRE Target (Solar)	TANGEDCO achievement
1	2014-15	0.05%		0.20%
2	2015-16	0.50%		0.50%
3	2016-17	2.50%	2.75%	2.88%
4	2017-18	5%	4.75%	3.38%
5	2018-19*	5%	6.75%	3.32%
6	2019-20*	5%	7.25%	4.53%
7	2020-21*	8%	8.75%	6.04%
8	2021-22	10.50%	10.50%	

\*Provisional details based on unaudited particulars received.

3.5. The details of year wise RPO target for solar power fixed to the State by Ministry of Power in MW are as follows:

Year	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22
Target in MW	1983	3282	4553	6223	8051	9398

3.6. As per the MNRE target, approximately 9400 MW of solar power is required for the year 2021-22 to meet Tamil Nadu's Solar Renewable Purchase Obligation. Further, based on the total consumption of the State of 106566 MU for the year 2020-21, considering load growth of 6% and taking into account of RPO of 10.50% as per MNRE target for solar, the approximate requirement of solar power is 7126 MW. As on date approximately 4268 MW of solar power plants have been commissioned in the State and approximately 2856 MW of solar power is required by 03/2022 as per Renewable Purchase Obligation.

3.7. Tender has been floated for procurement of 500MW under "Pradhan Mantri Kisan Urja Suraksha Evam Utthaan Mahabhiyaan Scheme" (PM KUSUM) Component-A in the state of Tamil Nadu from prospective individual farmers/ group of farmers / cooperatives /

Panchayats / Farmer producer organizations (FPO) / Water user associations (WUA) /Developers willing to setup Renewable Energy Solar based power plant (REPP) of capacity 1 MW to 2 MW on their lands anywhere across Tamil Nadu up to the capacity of 500MW. In response bids for for 3 MW is received and price bid opened.

3.8. MoU has been signed between TANGEDCO & M/s. SECI for establishment of multiple distributed solar projects of cumulative capacity of 50 MW by evacuating through 11 identified substations in Villupuram region such that the solar power generated from the above projects shall be purchased by TANGEDCO from M/s. SECI through PPA so as to solarize the agricultural feeders in that area. Tender has been floated by M/s SECI for the above project and the tender opening date is 20.08.2021

3.9. Considering all the above on-going solar projects, still there is a shortfall of approximately 1850 MW to the Tamil Nadu State to fulfill the non solar RPO. Hence, it is necessary for further procurement of solar power in order to achieve the RPO targets and to avoid penalty if any to be levied by Ministry of Power for non-compliance of RPO.

3.10. The quantum approval for procurement of 1500MW of solar power has already been accorded by the Commission in its order dated 24/4/2018 in M.P.No.9 of 2018.

3.11. The Commission has approved for procurement of 500MW of solar power from M/s.SECI at the rate of Rs.2.781/unit (Applicable tariff of Rs.2.711/unit + SECI's trade margin of Rs.0.07/unit) under 1200 MW ISTS connected scheme, Tranche-VI by entering

into a long term agreement to meet RPO target fixed to the State vide order dated 09.06.2020 in M.P.No.8 of 2020. The Power Sale Agreement (PSA) in this regard has been entered between M/s. SECI and TANGEDCO on 05.05.2020.

3.12. For the balance 1000 MW quantum of solar capacity M/s. Solar Energy Corporation of India (SECI) has offered 1000MW solar power by entering into long term agreement (25 years) under Manufacturing Linked ISTS scheme at a rate of Rs.2.61 per unit inclusive of M/s.SECI's trade Margin of Rs.0.07 per unit.

3.13. The salient features of SECI'S Manufacturing Linked ISTS solar are:

1. The solar power being offered is from the first of its kind Manufacturing linked Solar PV power plant which intends to promote Solar PV module manufacturing plant in India under Government of India's 'Make in India' policy and to make India Self-reliant in Solar PV modules manufacturing.
2. The acceptance to buy this power would enhance energy security of India and would give impetus to 'Make in India'.
3. In addition, the power being offered under this scheme will continue to be eligible for ISTS charge waiver even if the SPV power plants are commissioned beyond 30-06-2025 is under consideration of MNRE/GOI.
4. Thus, while for other ISTS connected RE plants that get commissioned after 30<sup>th</sup> June 2025 onwards, concerned States would have to pay ISTS transmission charges in the range of Rs.0.58/kWh to Rs.2.53/kWh. But

there would not be any ISTS charges on manufacturing linked ISTS Solar projects even if commissioned after 30th June 2025.

5. Hence, manufacturing linked ISTS solar power will probably be one of the cheapest power available posts 30.6.2025.

3.14. The Government of India in its notification dated 09.10.2019 has stated that solar power plants set up under SECI's tender for Manufacturing Linked solar PPA's would be eligible for ISTS charges waiver even if it is commissioned after 30th June 2025. Also Solar PV power plants commissioned under SECI Tender for Manufacturing Linked capacity scheme for sale to entities having RPO irrespective of whether this power is within RPO or not.

3.15. In order to meet the RPO compliance fixed to the State, it is necessary to procure 1000 MW of solar power from M/s. Solar Energy Corporation of India (SECI), under Manufacturing Linked ISTS scheme. M/s. SECI has offered tariff of Rs.2.61/unit (Applicable tariff of Rs.2.54/unit + trade margin of Rs.0.07/unit) under Manufacturing Linked ISTS scheme and the tariff offered by M/s. Solar Energy Corporation of India is found to be very competitive.

3.16. Considering the above features, TANGEDCO Board in its 101<sup>st</sup> Board Meeting held on 05.08.2021 has accepted the offer of M/s SECI and approved for the solar power purchase of 1000MW under Manufacturing Linked ISTS scheme at a rate of Rs.2.61 per

unit inclusive of M/s.SECI's trade Margin of Rs.0.07 per unit by entering into long term agreement (25 years).

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

**4.1.** The petitioner, TANGEDCO, has prayed for approval to procure 1000 MW of solar power from M/s.Solar Energy Corporation of India (SECI) under manufacturing Linked ISTS scheme at the rate of Rs.2.61 per unit i.e applicable tariff of Rs.2.54 per unit + SECI's trading margin of Rs.0.07 per unit.

**4.2.** The solar power purchase obligation on TANGEDCO is 10.5% on total consumption for the financial year 2021-22. The petitioner states that by the end of FY 2022, approximately 2856 MW of solar power is required to fulfill renewable purchase obligation. The tender floated for procurement of 500 MW solar power under Component A of KUSUM scheme has attracted bids for 3 MW. A MoU has been signed between TANGEDCO and M/s. SECI for establishment of multiple distributed solar projects of cumulative capacity of 50 MW in Villupuram Region. There is still a shortage of contracted capacity to the extent of 1850 MW in solar to meet the solar RPO.

**4.3.** Commission has accorded quantum approval for procurement of 1500 MW of solar power in the M.P No.9 of 2018 dt.24.4.2018 in phases. Of the quantum of 1500 MW, TANGEDCO has entered into an agreement for purchase of 500 MW with SECI at the rate of Rs.2.781 per unit. For the balance of 1000 MW, TANGEDCO seeks approval to enter into an agreement at a tariff of Rs.2.61 per unit i.e Rs.2.54 plus Rs.0.07 per unit of trading margin. Since this 1000 MW plant is a Manufacturing linked Solar PV plant, it is

exempted from ISTS charges even if commissioned after the threshold date of 30<sup>th</sup> June 2025.

**4.4.** The bidding undertaken by SECI for a quantum of 1200 MW is in pursuance to the Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV Power Projects, notified by Government of India on 03.08.2017 and its amendments issued from time to time. The petitioner has requested approval to execute Power Sale Agreement(PSA) with M/s.SECI for procurement of 1000 MW in MNRE's approved format. Since SECI's biddings are under composite schemes the tariff approved/adopted by CERC would be applicable in the instant PSA. Commission has already issued a quantum approval in M.P No.9 of 2018 and notes that the Price payable by the Petitioner under the PSA with SECI is economic and competitive.

**4.5.** As per the amended bidding guidelines dt.22.10.2019, 'the trading margin of Rs.0.07 per kWh has to be paid by the procurer to the intermediary procurer'. Commission is also aware of the judgement issued by Hon'ble APTEL in a case in A.Nos. 52 of 2021 and 70 of 2012 where Delhi ERC and Punjab ERC had curtailed the trading margin to 2 paise in public interest citing section 61(d) of the Electricity Act 2003, considering provisions in CERC's (Procedure, Terms and Conditions for grant of trading licence and other related matters) Regulations, 2020, notified on 2.1.2020 wherein CERC first time introduced Trading Margin on long term transactions.

**4.6.** Regulation 8(1)(d) of the said Regulations specify as follows: “For transactions under long term contracts, the trading margin shall be decided mutually between the Trading Licensee and the seller:

“Provided that in contracts where escrow arrangement or irrevocable, unconditional and revolving letter of credit as specified in clause (10) of Regulation 9 is not provided by the Trading Licensee in favour of the seller, the Trading Licensee shall not charge trading margin exceeding two (2.0)paise/kWh.”

**4.7.** The Hon’ble APTEL in Appeal No. 52 of 2021 & IA No. 176 of 2021 and Appeal No.70 of 2021 dt.2.7.2021 set aside the order of Delhi ERC to the extent that it reduces the trading margin with observation that clause 8(1)(d) and 8(1)(f) of CERC’s Trading Margin Regulations are not applicable to the case. In the above case, the respondent TPDDL had mutually agreed with SECI on the applicability of trading margin at Rs.0.07 per kWh and the PPAs and PSA which are long term arrangements. In the case of the petitioner, TANGEDCO, the PSA is yet to be concluded.

**4.8.** This Commission has issued an ‘Order on Trading Margin under TNERC Licensing Regulation 2005 vide Notification No. TNERC/M.O 5/T.M dt.15.10.2012 fixing trading margin as *‘four(4.0) paise/kWh where the sale price is less than or equal to Rupees Three(3.0)/kWh.’*

**4.9.** The petitioner before signing the PSA is directed to hold negotiations with SECI to reduce the trading margin of Rs.0.07 per kWh and report the result of the negotiation. However, since the quantum approval has been issued and the price is competitive,

market aligned due to the payment securities issued by SECI, the petitioner may sign the PSA in accordance to the outcome of the negotiation and furnish a copy to this Commission.

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

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

/True Copy /

Secretary  
Tamil Nadu Electricity  
Regulatory Commission