

**BEFORE THE HONOURABLE TAMILNADU ELECTRICITY REGULATORY
COMMISSION, CHENNAI**

M.P.No. 14 of 2021

In the matter of implementation of parallel operation to HT consumers with Solar Power Plants in a premises with capacities less than 1 MW or equal to the sanctioned demand whichever is less, without the need for a separate feeder upto FY 2021-22, subject to technical feasibility, consequent to notification issued by Ministry of Power on Draft Electricity (Rights of Consumers) Rule 2020, during December 2020

And in the matter of

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

.....Petitioner

Vs

..... Nil

**PETITION FILED UNDER REGULATION 16(1) OF THE TNERC'S CONDUCT
OF BUSINESS REGULATION.**

I, M.Ramachandran, S/o Thiru C.Manickam, Male, aged about 57 years employed as the Chief Engineer/NCES in the TANGEDCO, having office at No. 144, Anna Salai, Chennai – 600 002, do hereby solemnly affirm and sincerely state as follows:

1. I am the Chief Engineer/NCES, I am well acquainted with the facts of the case and I am authorized to file the present Miscellaneous Petition before the Hon'ble Commission.

2. This petition seeks direction for implementation of parallel operation to HT consumers with Solar Power Plants in a premises with capacities less than 1 MW or equal to the sanctioned demand whichever is less, without the need for a

separate feeder upto FY 2021-22, subject to technical feasibility, consequent to notification issued by Ministry of Power on Draft Electricity (Rights of Consumers) Rule 2020, during December 2020.

3. It is respectfully submitted that Tamil Nadu is endowed with about 300 clear sunny days in a year with high solar radiation, offering very good solar potential for solar based power generation in the State. Tamil Nadu State Solar Energy Policy has been announced by the Government of Tamil Nadu on 19.10.2012 vide G.O.No.121, dated 19.10.2012. Clause 14 of the solar policy envisaged establishment of 3000 MW of solar PV power plants by 2015 as detailed below:

	Utility Scale (MW)	Solar Roof Tops (MW)	REC (MW)	Total (MW)
	(a)	(b)	(c)	(d)
2013	750	100	150	1000
2014	550	125	325	1000
2015	200	125	675	1000
Total	1500	350	1150	3000

4. It is respectfully submitted that the pursuant to the directives in the Solar Energy Policy 2012, the Hon'ble TNERC was pleased to issue an order on LT connectivity and net metering vide Order No.3 of 2013, dated 13.11.2013. Based on the above said order of Hon'ble TNERC, TANGEDCO has extended net-metering facility to eligible LT consumers only.

5. It is respectfully submitted that in the year 2013, some of the HT consumers have requested the TANGEDCO to connect their proposed roof top/ground mounted solar power plants, within their service connection premises, in their HT/LT network without export of energy into grid for mere parallel operation. As there was no technical issue found, TANGEDCO started facilitating parallel operation approvals to all such interested HT consumers.

6. It is respectfully submitted, while so, the Hon'ble TNERC was pleased to issue an amendment to the Tamil Nadu Electricity Distribution Code, 2004 in respect of "distribution system interface with generators" by amending regulation 8 of the Tamil Nadu Electricity Distribution Code, 2004 vide Notification No.TNERC/DC/8-22, dated 23.01.2015, which states as follows:

"8 Distribution system interface with Generators

The generators may be permitted to evacuate the power by interfacing with the distribution system. They shall comply with the norms specified by the Commission and the Authority for capacity, connectivity, safety etc.

*Provided that such generators, including those with captive loads within the premises, barring the generators injecting to the grid through net metering system, shall be connected to the substation through a **separate feeder**, and no other distribution load shall be connected to this feeder".*

7. It is respectfully submitted that considering the Hon'ble TNERC's connectivity regulations, dated 23.01.2015, the facility of approving parallel operation for the establishment of roof top/ground mounted SPV plants within the premises of HT consumers for captive use without export of power has been accorded to the consumers, only those who have separate feeder/dedicated feeder, irrespective of capacity, by TANGEDCO, with a condition that no other HT service connection or distribution transformer shall be connected in the existing feeder feeding the HT service of concerned generator, in future.

8. It is respectfully submitted that the Government of India has envisaged an ambitious cumulative Renewable Energy target achievement of 175 GW as follows:

- 100 GW Solar - (60 GW through utility scale & **40 GW by Roof top** systems), 60 GW Wind, 10 GW Biomass and 5 GW Small Hydro by the year 2022.

The present renewable power installed capacity of the country is about 92,550 MW as on 31.01.2021 and solar installed capacity in the Country is 38,794 MW as on 31.01.2021.

The cumulative solar power generation for Tamil Nadu is targeted at around 9000 MW (fixed by Government of India), out of cumulative 100 GW Solar installed capacity planned by Government of India, which is to be achieved by 2022.

9. It is respectfully submitted that the Tamil Nadu Solar Policy 2019 was announced by the Government of Tamil Nadu on 04.02.2019. The Policy has set a target of 9000 MW to be achieved by 2023 of which 40% is earmarked for consumer category solar energy systems. The details on solar installations under various categories, in Tamil Nadu, as on date are furnished below:

SOLAR GENERATION DETAILS AS ON 28.02.2021			
S.No	Category	No of developers	Capacity in MW as on 28.02.2021
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
		115	3446.342
(A)	WHEELING CATEGORY		
1	REC Scheme	79	160.81
2	Preferential tariff Scheme		
	a. wheeling (captive/ third party)**	119	416.124
	b. wheeling through Pooling SS under 10 (1) scheme	13	76.875
	TOTAL	211	653.809
	Total (Grid Connected)	326	4150.151
II	CONSUMER SCALE PROJECTS		
1	Roof Top/ ground mounted SPV plants (W/o Net meter)	418	223.05
2	Rooftop SPV for LT consumers		
	a. LT Net Metering (TN policy 2012) as on 31.01.2021	12186	55.974
	b. LT Net feed-in (TN policy 2019) as on 31.01.2021	5507	43.29
	TOTAL	18374	325.064
	GRAND TOTAL	18700	4475.215

10. It is respectfully submitted that the pursuant to the directives in the Solar Energy Policy 2019, the Hon'ble TNERC was pleased to issue an order on Rooftop Solar Generation vide Order No. 3 of 2019 dated 25-03-2019. This order on new scheme of rooftop Solar generation, namely, Solar net feed in-consumer category is applicable to all Consumers under Low Tension category except Hut and Agricultural category of tariff. Under net feed-in scheme, the power purchase rate

is fixed as Rs.2.08 per unit for the year 2020-21. The existing consumers under the net metering scheme shall continue to be governed by the provisions in the Order No.3 of 2013 dated 13.11.2013.

11. It is respectfully submitted that as the above Order has not mentioned about the HT Consumers, TANGEDCO has filed Miscellaneous Petition in M.P.No.14 of 2018, praying to pass an appropriate order granting exemption for HT consumers for the establishment of roof top/ground mounted solar power plants within the premises for mere parallel operation for captive use without export of power from applying regulation 8 of the Tamil Nadu Electricity Distribution Code, 2004 (Amendment dated 23.01.2015).

12. It is respectfully submitted that the Hon'ble Commission has passed Orders in M.P. No.14 of 2018 on 29-10-2019. The Order states that "In view of the thrust given by Government of India for implementing Grid Connected Rooftop and small solar power plants in order to achieve the cumulative capacity of 40 GW RTS plants by 2022. TANGEDCO may permit parallel operation to HT consumers with Solar Power Plants in a premises with capacities less than 1 MW or equal to the sanctioned demand whichever is less, without the need for a separate feeder upto FY 2021-22, subject to technical feasibility, safety norms and other conditions normally being followed and collection of parallel operation charges as applicable."

13. It is respectfully submitted that based on the Hon'ble TNERC's Order dated 29.10.2019 in M.P. No.14 of 2018 alone, approximately 69 MW capacity has been achieved through parallel operation in respect of roof top/ground mounted SPV plants within the premises of HT consumer without power export. Before issuance of Hon'ble TNERC order in MP.No.14 of 2018, approximately 154 MW has been achieved through parallel operation and totally 223 MW has been achieved through parallel operation, as on 28.02.2021.

14. It is respectfully submitted that, Ministry of Power has notified Draft Electricity (Rights of Consumers) Rule 2020, dated 9th September 2020. The clause 9 of Draft Electricity (Rights of Consumers) Rules, 2020 notified by the Ministry of Power, Govt. of India, provides that "the regulations on Grid Interactive Roof Top Solar (RTS) PV system and its related matters shall provide for net metering for loads up to five kW and for gross metering for loads above five kW".

15. It is respectively submitted that, subsequently, the Ministry of Power has issued notification on Draft Electricity (Rights of Consumers) Rule 2020, during December 2020. The Clause 11 (4) of Electricity (Rights of Consumers) Rules, 2020 provides that "the regulations on Grid Interactive Roof Top Solar (RTS) PV system and its related matters shall provide for net metering for loads up to ten kW and for gross metering for loads above ten kW".

16. It is respectfully submitted that based on the above notifications wherein gross metering has been suggested for load above 10 KW, a case study was done to analyse the financial impact under various modes of roof top installation which is furnished below:

Name of the H.T. S.C

	British Agro Products (India) Pvt Ltd., Chengalpattu Dist
H.T.Service No. & category	099094111061/IA
Sanctioned demand	1350 kva
installed capacity of Solar	800 kw
CUF	19%
Expected generation from solar per month in units	110960
Expected generation from solar per day in units	3699

Billing prior to installation of solar			Billing after installation of solar (under parallel operation)			Billing after installation of solar (under gross metering)				
	units	in Rs		units	in Rs		units	in Rs	Solar export in units	Cost for solar export in Rs.
Industrial Consumption	449135	2852007.3	Industrial Consumption	338175	2147411	Industrial Consumption	449135	2852007	110960	230796.8
peak hour consumption	141135	179241.45	peak hour consumption	141135	179266.9	peak hour consumption	141135	179241.5		
Total consumption & billing	590270	3031248.7	Total consumption & billing	479310	2326678	Total consumption & billing	590270	3031249	net payable	2800452
Amount receivable from consumer	3031249		Amount receivable from consumer	2326678		Amount receivable from consumer	2800452			

17. It is respectfully submitted that based on the case study , it is inferred that even if the installed capacity of roof top solar in a H.T service is only 50% of their sanctioned demand, the revenue loss between parallel operation mode and gross metering mode in a single service with 800 KW of Roof top solar plant as above works out to roughly to Rs 4.75 lakhs per month. As on date around 254 MW of roof top solar plants have been installed in the H.T services under parallel operation and hence the financial implication is multifold on TANGEDCO's book of accounts.

18. It is respectively submitted that under parallel operation with export restriction, there will be loss of generation to generators during holidays and during non-usage periods. Further adjustment of generation ie., net-metering concept under unit to unit basis or net feed-in basis does not seems to be viable to TANGEDCO. Hence, in order to promote roof top solar power plants and also to absolve the green energy that is wasted in parallel operation during holidays/non-usage periods, it is considered that instead of permitting parallel operation of rooftop/ground mounted SPV plants to the HT consumers, they may be extended with gross metering irrespective of contracted load and voltage level. Under gross metering the consumer/prosumer shall have separate generation meter and the entire generation will be injected into TANGEDCO's grid. It is requested that a

separate tariff may be fixed for the export energy which would be duly paid to H.T consumers or would be adjusted against in their outstanding monthly energy bills.

19. It is respectively submitted that the Hon'ble TNERC's Order on issuing parallel operation approval to HT consumers in M.P. No.14 of 2018 dated 29-10-2019 shall be applicable upto 2022. Under the above circumstances, in order to achieve the roof top target fixed by the Government of India, it is requested that approval may be accorded for implementation of solar roof top plants in H.T consumer premises under gross metering methodology irrespective of the voltage level and irrespective of the contracted load ,as the notification on Draft Electricity (Rights of Consumers) Rule 2020 becomes an Act has recommended only for gross metering method for loads above ten kW.

Under the said circumstances, it is humbly prayed that this Hon'ble Commission may be pleased to pass an appropriate order for extending gross metering methodology to all HT consumers for the establishment of roof top/ground mounted SPV plants within their premises irrespective of voltage level for all roof top loads above 10 kW, as recommended in the notification on Draft Electricity (Rights of Consumers) Rule 2020 .

Solemnly affirmed at Chennai on this the
..... day of March 2021 and signed
his name in my presence:

Before me,



Advocate: Chennai

**BEFORE THE HONOURABLE TAMILNADU
ELECTRICITY REGULATORY
COMMISSION, CHENNAI.**

M.P.No. 14 of 2021

**Tamil Nadu Generation and Distribution
Corporation Limited (TANGEDCO)
...Petitioner**

Vs

NIL

...Respondent

**M.GOPINATHAN
Counsel for Petitioner**