

**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**

**R.A.No.1 of 2021**

- (i) M/s. Walwhan Renewable Energy Limited  
7<sup>th</sup> Floor, Welspun House  
Kamala City, SenapatiBapatMarg  
Lower Parel  
Mumbai – 400 013  
Maharashtra
- (ii) M/s.National Solar Energy Federation of India Limited  
702, Chiranjiv Tower  
43-Nehru Place  
New Delhi – 110 001.

.... Petitioners

(M/s.HSA Advocates on behalf of  
M/s.Walwhan Renewable Energy Limited  
&Thiru.RahulBalaji, Advocate on behalf of  
National Solar Energy Fedn. of India Ltd)

**Vs.**

1. Tamil Nadu Generation and Distribution Corporation Ltd.  
(TANGEDCO)  
Represented by its Chairman and Managing Director  
144, Anna Salai  
Chennai – 600 002.
2. The Chief Engineer / NCES  
TANGEDCO  
Chennai – 600 002.

...Respondents  
(ThiruM.Gopinathan  
Standing Counsel for TANGEDCO)

**Date of order:-05-05-2022**

1. M/s.Welspun Renewable Energy Private Limited, presently M/s.Walwhan Energy and National Solar Energy Federation of India Limited preferred appeals before the Hon'ble Appellate Tribunal for Electricity against the suomotu order issued by this Commission in Order No.2 of 2016 dt. 28.03.2016 determining tariff for solar power for 2016-17.

2. The Hon'ble APTEL in its order dt.11.11.2019 intheA.Nos.118 & 151 of 2016 held as follows:

**“16. SUMMARY OF OUR FINDINGS:** Based on our consideration and analysis in the foregoing paras, we summarise our findings as under

*“i) **Capital Cost:** We conclude that the Impugned Order does not fulfill the legal principles of providing adequate reasoning nor does it adhere to the TNERC regulations itself, which explicitly includes the principles and methodologies specified by CERC and the Tariff Policy of the Government of India, under which the Impugned Order has been passed. Accordingly, we direct TNERC to follow the CERC's final order on benchmark Capital Cost for discovering the fair tariff.*

*ii) **Evacuation Cost:** In line with the principles / methodology adopted by CERC and various SERCs, TNERC should consider compensation for evacuation (inter-face line cost) from the pooling sub-station at the generator's end, upto the grid sub-station, over and above the benchmark Capital Cost as considered by CERC.*

*iii) **Depreciation**The State Commission has erroneously depreciated the value of the plant and machinery by adopting straight line method. It is against accepted and settled regulatory, economic and financial principles as it reduces cash flows in the initial term making debt servicing more onerous, the financial consequences of which have been enumerated above.*

*We, therefore direct the State Commission to re-compute depreciation by following methodologies and principles prescribed and followed by all other state electricity regulatory commissions and CERC i.e. differential depreciation approach.*

*We further direct the State Commission to ensure that aggregate depreciation provided is not less than the 90% of capital cost.*

*iv) Spares- Maintenance spares are an essential component for the efficient and continued operations of a solar generation plant, and the need for such spares cannot be dispensed with, especially without providing any cogent reasons and/or analyses that the same has been compensated in some other manner. We direct TNERC to re compute the tariff by factoring costs for maintenance spares while calculating the working capital, by following the principles and methodology adopted by CERC in this regard.*

*v) Degradation of Modules- We direct the State Commission that the tariff determination must specifically factor for module degradation and reduction of generation while calculating the levelized tariff.*

*vi) Auxiliary Consumption- We hold that the TNERC has considered the Auxiliary Consumption in strict resonance with CERC principles and hence, no interference.*

*vii) Return on Equity- We observe that the calculation of the levelized tariff in Appendix IA even on demurrer basis and assuming all the assumptions made by TNERC on generation, tariff and debt repayment, do not deliver the entitled RoE of pre tax 20%. We are also in agreement with the Appellants that by applying the actual cash flows over the life of the project, calculated on the basis of the generation assumed in Appendix IA at the tariff determined in the Impugned Order, in fact delivers a RoE much lower than the envisaged pre tax 20%. Therefore, we direct TNERC to re determine the tariff to ensure that the levelized tariff ensures recovery of the revenues permissible to the developers during the life cycle of the plant at the energy sent outwith degradation. The permissible revenues mean, inter alia, revenues that will deliver a pre taxRoE of 20% to the developers.*

viii) *Miscellaneous / (CUF, Discount Factor, O&M Expenses) Issues- We find that the TNERC has rightly exercised discretion on these issues and we do not find any infirmity in the impugned order. Hence, interference of the Tribunal on the same is not called for.*

## **ORDER**

*Having regard to the facts and circumstances of the case as stated supra, we are of the considered view that some of the issues raised in the present appeals being Appeal No. 118 of 2016 & 151 of 2016 have merit. Hence, the Appeals are partly allowed.*

*The impugned order dated 28.03.2016 in Order No.2 of 2016 passed by Tamil Nadu Electricity Regulatory Commission is hereby set aside to the extent of our findings under Para No.16, stated supra. The State Commission shall pass the consequential order within three months from the date of the present Judgment & Order as per the directions given above. “*

3. Commission filed a Civil Appeal before the Hon'ble Supreme Court of India against judgment of APTEL vide Civil Appeal No.1633 of 2020. In an interim application filed by the Commission seeking stay of the judgment of the Hon'ble APTEL, the Hon'ble Supreme Court in the I.A No.4204 in the Civil Appeal No. 1633 of 2020 on 24.3.2021 has ordered as follows:

***“I.A No. 4204 is dismissed.***

***All issues are left open.”***

The case is next posted for hearing on 29.4.2022.

4. In view of Respondent's request to pass orders as per the directions of Hon'ble APTEL in the absence of a stay to the judgment in A.Nos.118 & 151 of 2016, and considering the fact that the Hon'ble Supreme Court of India in the interim order has left the issues openwhile not granting a stay of the order issued by the Tribunal, and whereas the crux of APTEL's directions are to follow the principles, methodologies of

the Central Electricity Regulatory Commission for tariff determination, Commission passes the order re-determining the tariff in the Order No.2 of 2016 with the following tariff determinants in arriving at the tariff fixed by the Central Commission:

Tariff Components	Solar PV
Capital Cost	Rs.5.3002 Crores per MW
CUF	19%
Operation and Maintenance expenses	Rs.7 lakhswith escalation at 5.72% p.a from second year
Insurance cost	0.35% of net asset value
Debt-equity ratio	70:30
Term of loan	10 years + 1 year Moratorium
Interest on Loan	13%
Life of plant and machinery	25 years
Working capital components	One month O&M cost and Two months Receivables, Maintenance spares 15%
Interest on Working capital	13.5%
Return on Equity	20% pre tax
Depreciation	5.83% for first 12 years and 1.54% from 13 <sup>th</sup> year onwards
Auxiliary consumption	Nil
Discount factor	10.21%
Levelised Tariff without AD	5.68
Levelised Tariff with AD	5.10

Working sheet for tariff is annexed. This order is subject to the outcome of the Civil Appeal No.1633 of 2020 before the Hon'ble Supreme Court of India.

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

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

/True Copy /

**Secretary  
Tamil Nadu Electricity  
Regulatory Commission**







**ails--- Solar.(P/V)**

1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
3180120	3180120	3180120	3180120	3180120	3180120	3180120	3180120	3180120	3180120	3180120	3180120	3180120	3180120	3180120
2935516	2935516	775419	775419	775419	775419	775419	775419	775419	775419	775419	775419	775419	775419	775419
82764	72490	62215	59501	56787	54073	51359	48646	45932	43218	40504	37790	35076	32362	29648
482318														
1220870	1290704	1364533	1442584	1525100	1612335	1704561	1802062	1905140	2014114	2129321	2251118	2379882	2516011	2659927
221221	213740	167861	172110	176606	181363	186395	191719	197351	203309	209611	216276	223327	230785	238673
<b>8122809</b>	<b>7692570</b>	<b>5550148</b>	<b>5629735</b>	<b>5714033</b>	<b>5803311</b>	<b>5897855</b>	<b>5997966</b>	<b>6103961</b>	<b>6216179</b>	<b>6334974</b>	<b>6460724</b>	<b>6593824</b>	<b>6734697</b>	<b>6883787</b>
<b>4.880</b>	<b>4.622</b>	<b>3.335</b>	<b>3.382</b>	<b>3.433</b>	<b>3.487</b>	<b>3.544</b>	<b>3.604</b>	<b>3.667</b>	<b>3.735</b>	<b>3.806</b>	<b>3.882</b>	<b>3.962</b>	<b>4.046</b>	<b>4.136</b>
101739	107559	113711	120215	127092	134361	142047	150172	158762	167843	177443	187593	198324	209668	221661
183131	193606	204680	216388	228765	241850	255684	270309	285771	302117	319398	337668	356982	377402	398989
1353801	1282095	925025	938289	952339	967219	982976	999661	1017327	1036030	1055829	1076787	1098971	1122450	1147298
1638671	1583259	1243416	1274892	1308195	1343430	1380707	1420142	1461860	1505990	1552671	1602048	1654277	1709519	1767948
221221	213740	167861	172110	176606	181363	186395	191719	197351	203309	209611	216276	223327	230785	238673
0.38	0.34	0.31	0.28	0.26	0.23	0.21	0.19	0.17	0.16	0.14	0.13	0.12	0.11	0.10
<b>1.85</b>	<b>1.59</b>	<b>1.04</b>	<b>0.96</b>	<b>0.88</b>	<b>0.81</b>	<b>0.75</b>	<b>0.69</b>	<b>0.64</b>	<b>0.59</b>	<b>0.54</b>	<b>0.50</b>	<b>0.47</b>	<b>0.43</b>	<b>0.40</b>

11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	5.28%	2.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
2798505.6	2798505.6	2798505.6	2798505.6	2798505.6	2798505.6	2798505.6	1526457.6	0	0	0	0	0	0	0
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-2798506	-2798506	-2798506	-2798506	-2798506	-2798506	-2798506	-1526458	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-968507	-968507	-968507	-968507	-968507	-968507	-968507	-528276	0	0	0	0	0	0	0
0.38	0.34	0.31	0.28	0.26	0.23	0.21	0.19	0.17	0.16	0.14	0.13	0.12	0.11	0.10
0.40	0.36	0.33	0.30	0.27	0.24	0.22	0.20	0.18	0.17	0.15	0.14	0.12	0.11	0.10
1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400	1664400
661715.12	600412.96	544789.91	494319.85	448525.41	406973.42	369270.87	335061.13	304020.62	275855.75	250300.11	227111.97	206072.02	186981.24	169659.05
-385049	-349378	-317011	-287642	-260995	-236816	-214877	-106348	0	0	0	0	0	0	0