

**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)**

**M.P.No. 18 of 2020**

Tamil Nadu Generation and Distribution Corporation Ltd.  
(TANGEDCO)  
NPKRR Maaligai  
144, Anna Salai,  
Chennai – 600 002

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

**Versus**

- (i) Tamil Nadu Spinning Mills Assn. (TASMA)
- (ii) Indian Wind Power Assn. (IWPA)
- (iii) Southern India Mills Assn. (SIMA)
- (iv) Watsun Infrabuild Limited
- (v) Tamil Nadu Power Producers' Assn.

**.... Respondents**  
**(Adv. R.S.Pandiyaraj for R-1,**  
**Adv. Rahul Balaji for R-2, R-3 &**  
**R-5 and M/s. Desai Diwanji Adv.**  
**and Solicitors for R-4)**

**Dates of hearing :**                      **22-12-2020; 29-12-2020; 02-03-2021;**  
**and 16-03-2021**

**Date of order :**                      **15-04-2021**

**ORDER**

**1. Prayer of the Petitioner in M.P No. 18 of 2020:-**

The TANGEDCO has prayed in this Petition -

- (i) to uphold the obligation of the State Distribution licensee in terms of power purchase agreements has been and continues to be stranded and there is an unavoidable obligation and incidence to bear fixed costs consequent to such agreements.
- (ii) Determine the additional surcharge of Rs.1.23/kWh payable by Open Access consumers.
- (iii) Consider the information submitted by TANGEDCO for determining the amount of additional surcharge.
- (iv) Pass such other further orders as the Commission may deem fit and proper in the circumstances of the case.
- (v) To permit to make further submissions, addition and alteration to this Petition as may be necessary from time to time.

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

2.1. The present petition is filed by the Tamil Nadu Generation and Distribution Corporation Limited before this Commission under TNERC (Grid Connectivity and Intra-State Open Access) Regulations, 2014 for determination of Additional Surcharge payable by Open Access consumers availing power under open access. The Petitioner states that the Open Access consumers are now buying considerable quantum of power under open access and on the other hand TANGEDCO also have tied up considerable quantum of power purchase considering the requirement of power in the present and in future.

2.2 The petitioner, TANGEDCO has stated that the power purchase is made from different sources to meet out the peak load shortages and to maintain grid stability only. They have filed this petition to determine additional surcharge payable by open access consumers on quantum of power purchase through open access using the network of distribution licensee in line with section 42 (4) of Electricity Act 2003 as below:

*“Where the State Commission permits a consumer or class of consumers to receive supply of electricity from a person other than the distribution licensee of his area of supply, such consumer shall be liable to pay an additional surcharge on the charges of wheeling, as may be specified by the State Commission, to meet the fixed cost of such distribution licensee arising out of his obligation to supply”.*

2.3. Further the petitioner has stated that Section 8.5 of the National Tariff Policy provides the following provisions that deal with calculation of cross subsidy surcharge and applicability of additional surcharge to be paid by open access consumers.

*“National Electricity Policy lays down that the amount of cross-subsidy surcharge and the additional surcharge to be levied from consumers who are permitted open access should not be so onerous that it eliminates competition which is intended to be fostered in generation and supply of power directly to the consumers through open access.”*

*“8.5.4. The additional surcharge for obligation to supply as per section 42(4) of the Act should become applicable only if it is conclusively demonstrated that the obligation of a licensee, in terms of existing power purchase commitments, has been and continues to be stranded, or there is an unavoidable obligation and incidence to bear fixed costs consequent to such a contract. The fixed costs related to network assets would be recovered through wheeling charges.”*

2.4. TANGEDCO has stated that the petition has been filed in line with the procedure stipulated under Regulation 24 of TNERC (Grid connectivity and Intra-State Open Access) Regulations, 2014, which deal with ‘Additional Surcharge’.

2.5. Hearing on the petitioner and the Consumer Associations, the Commission admitted the petition as maintainable. The Petitioner prayed to levy Additional

surcharge to all open access consumers, including captive consumers, by amending Regulation 24(4) of the TNERC Intra State Open Access Regulations 2014. But the Commission has not permitted the petitioner to file the I.A for amending the prayer; and admitted to the extent of claim of additional surcharge on the third party purchase and IEX transactions only i.e., on non-CGP.

(During the hearing held on 24.11.2020, Dr.T.Prabhakara Rao, Member, reserved his opinion, as Additional surcharge Petition does not deserve part admission for the reason that the petitioner has not filed the Tariff petition; true-up of accounts can be taken up only after prudent check of accounts. Despite repeated reminders the licensee has not filed Tariff petition.)

2.6. As directed by the Commission, the Petitioner has filed their petition adopting the calculation model adopted by the Gujarat ERC. The Petitioner has stated in its petition that its stranded capacity due to Open access consumers is 609.56 MW during October 2019 to March 2020 and its net stranded fixed charges recoverable from OA consumers is Rs.243.10 Crores; according to their calculation sought to fix the Additional Surcharge at Rs.1.23 per Unit. The Petitioner was directed by the Commission in the hearing held on 29.12.2020 to webhost the petition along with other documents seeking comments from the stakeholders. Accordingly, the Petitioner filed their replies against the objections/ Comments of some of the Associations and individuals .

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

3.1. The petitioner has stated that almost 24 hours of power supply is maintained to all categories of consumers including agriculture sector in the State. The R&C measures have been completely withdrawn from June, 2015. The State of Tamil Nadu does not have its own coal resource and has to source its requirements partly

from the Eastern Coal Fields Ltd. (ECL) and Mahanadi Coal Fields Ltd. (MCL) mines situated in West Bengal and Orissa respectively & during February 2016 Chandrabila coal block was allotted to TANGEDCO for ETPS Expansion project, Ennore SEZ project Udangudi Stage I. TANGEDCO at its end is also trying to tap other power sources viz hydel potential which has been tapped to its fullest potential. Tamil Nadu has a friendly policy for encouraging non-conventional sources of power such as wind, solar, co-generation etc. Tamil Nadu has the largest wind power capacity of about 8,468.11 MW and solar capacity of 2724.55 MW as on 01.04.2019. However, besides being infirm in nature, the power from wind sources is available mostly during June to September. Apart from this, the State has four independent Power Producers (IPP) plants in operation at present.

3.2. Continuous efforts are taken to add generation capacity, in spite of constraints on its financial resources. The increase in power demand is being met by power purchase from central generating stations. Similarly on their own generation end, TANGEDCO had made an addition of 600 MW of capacity through Mettur Generating Station Stage III during FY 2013-14 and the North Chennai Thermal Power Station Stage II with an additional capacity of 1200 MW during FY 2014-15.

3.3. The petitioner has stated that the maximum power demand of the State is 15,849 MW during the year. Average daily consumption of the State is about 355.733 MU. Maximum demand met was 16151 MW (03-04-2019) and maximum consumption per day was 369.94 MU (12-04-2019).

3.4. TANGEDCO ,further stated that the distribution network of TANGEDCO comprises of 66kV, 33kV, 22kV and 11kV sub-transmission system. TANGEDCO

owns and operates an extensive distribution network consisting of 8.39 Lakhs Ckt. Kms of lines, of which 1.77 Lakhs Ckt. kms of HT Line Network and 6.28 Lakhs Ckt. Kms of LT line Network as on 01.04.2019. It also owns and operates majority of the generation assets in the State and is the buyer of power from the Government of India owned (Central) generating stations and private producers in the State. It also owns 1,682 substations and 3,09,468 distribution transformers with a total capacity of 41,649 MVA as on 01.04.2019. TANGEDCO is also making continuous efforts towards strengthening the distribution networks to reduce the AT&C losses in the system to a target level of below 15% in the ensuing year through implementation of various schemes viz., RAPDRP, IPDS and DDUGJY.

3.5. TANGEDCO has stated that the Accumulated losses of erstwhile TNEB to an extent of Rs. 34,741.35 Crores has been adjusted in the Final Transfer Scheme notified vide G.O. M.S No. 49 dated 13th August 2015, by revaluation of assets to an extent of Rs.54,658.71 Crores and the excess revaluation reserve of Rs.12,265.99 Crores, Rs. 7,163.58 Crores and Rs.487.79 Crores transferred to TANGEDCO, TANTRANSCO and TNEB Ltd. respectively. Through the notification of final transfer scheme, the Government of Tamil Nadu has assigned the Assets and Liabilities (as on 31.10.2010) to TANGEDCO on final basis.

3.6. TANGEDCO has submitted that Section 42 (2) of the Electricity Act 2003 provides powers to the State Commissions for specifying cross subsidy surcharge as below:-

*“The State Commission shall introduce open access in such phases and subject to such conditions, (including the cross subsidies, and other operational constraints) as may be specified within one year of the appointed date by it and in specifying the extent of open access in successive phases*

*and in determining the charges for wheeling, it shall have due regard to all relevant factors including such cross subsidies, and other operational constraints:*

*Provided that such open access shall be allowed on payment of a surcharge in addition to the charges for wheeling as may be determined by the State Commission:*

xxxx                      xxxx                      xxxx

*Provided also that such surcharge shall not be leviable in case open access is provided to a person who has established a captive generating plant for carrying the electricity to the destination of his own use:"*

3.7. Further, it is stated by the petitioner that the section 40 of Electricity Act describes the duties of Transmission Licensee related to open access

*"to provide non-discriminatory open access to its transmission system for use by-*

*(i) any licensee or generating company on payment of the transmission charges ; or*

*(ii) any consumer as and when such open access is provided by the State Commission under sub-section (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the State Commission:*

*Provided that such surcharge shall be utilised for the purpose of meeting the requirement of current level cross-subsidy:*

*Provided further that such surcharge and cross subsidies shall be progressively reduced in the manner as may be specified by the State Commission:*

Provided also that the manner of payment and utilisation of the surcharge shall be specified by the State Commission

3.8. It is submitted by the TANGEDCO that, the State has implemented Intra State Open Access since 03-08-2005 and SLDC / STU / TANGEDCO are granting approvals / consent to open access consumers for purchase and sale of power through open access as per Open Access Regulations. Presently, 3178 users consisting of long term short term and medium term open access are availing open access in Tamil Nadu. During the financial year 2019-20 more than 3000 open access applications have been received and granted Open Access approval.

3.9. The petitioner has stated that the installed capacity of TANGEDCO as on 01.04.2019 is 18,299.66 MW in conventional power and 12,179.65 MW in renewable power and the total installed capacity stands at 30479.31 MW. The energy available from the present tied up capacity is as below:

Sl. No.	Station Name	Installed Capacity (in MW)
<b>I. Own Generation</b>		
1	NCTPS	630
2	NCTPS Stage II	1200
3	MTPS	840
4	MTPS Stage II	600
5	TTPS	1050
6	Kovilkalappal	108
7	Valuthur I & II	187
8	Kuttalam	101
9	Basin Bridge	120
10	Kunda	834
11	Kadamparai	602
12	Erode	504
13	Tirunelveli	375
14	Wind	17
<b>14</b>	<b>Total Own Generation</b>	<b>7168</b>
<b>II Central Generating Station</b>		
1	RSTPS Stage I & II	488
2	RSTPS Stage III	136
3	Simhadri II	211
4	Talchar Stage II	487
5	NTPC ER	35
6	Kudgi STPS Stage-I	323
7	NLC TPS II Stage I	189



8	NLC TPS II Stage II	283
9	NLC TPS I Expansion	226
10	NLC TPS II Expansion	270
11	NTECL Vallur	1066
12	NTPL Tuticorin	414
13	MAPS	331
14	Kaiga 1 & 2	116
15	Kaiga 3 & 4	110
16	Koodankulam	1151
17	<b>Total CGS</b>	<b>5836</b>
1	PPN	330.50
2	TAQA (STCMS)	250.00
3	Lanco	113.00
4	Pioneer	53.00
5	<b>Total IPP</b>	<b>746.50</b>
IV	LTOA	<b>2830</b>
V	MTOA	<b>750</b>
VI	Captive Power Plants	<b>986.18</b>
1	Wind	8468.11
2	Solar	2724.55
3	Co-Generation	721.40
4	Bio mass	265.59
VII	<b>Total Renewable</b>	<b>12179.65</b>
VIII	<b>Grand Total</b>	<b>30496.33</b>

3.10. TANGEDCO has submitted that in order to meet the demand of the State, TANGEDCO is concentrating on capacity addition. TANGEDCO targeted to install about 6200 MW before end of 2020-21. The details of ongoing schemes are

- i. ETPS Expansion – 660 MW
- ii. Ennore SEZ - 1320 MW (2 x 660)
- iii. NCTPS Stage III - 800 MW
- iv. Uppur -1600 MW (2 x 800)
- v. Udankudi Stage I - 1320 MW (2 x 660)
- vi. Kundah Pumped storage - 500 MW (4 x 125)

Details of new projects are

- (1) Ennore Replacement Thermal Power Project (1 x 660 MW)
- (2) Udangudi Expansion Project Stage–II (2 x 660 MW)
- (3) Udangudi Expansion Project Stage–III (2 x 660 MW)

- (4) Cheyyur Ultra Mega Power Project (5x800 MW)
- (5) Sillahalla pumped storage Hydro–Electric Project (4x500 MW)
- (6) Kadaladi Supercritical Thermal Power Project (5x800 MW),  
Ramanathapuram District
- (7) Kadaladi Ultra Mega Solar photovoltaic park Power Project  
(500MW)

In addition to thermal power capacity addition TANGEDCO is planned to develop Solar Photovoltaic Park with the installed capacity of 500 MW at Kadaladi. At the end of year 2020-21 after commissioning of above 6200 MW thermal plants and 500 MW solar power plants, the tied up capacity will be at 37196 MW.

3.11. Developments made have created peculiar circumstances wherein the TANGEDCO have tied up considerable quantum of power considering the overall growth of the State and therefore tied up power for upcoming consumers also and on the other hand the open access users are not availing power supply from TANGEDCO and the generation capacity tied up by TANGEDCO remain idle. In such situation the TANGEDCO have to pay fixed (capacity) charges to the Generators as per the terms and conditions of PPA irrespective of utilization of generation.

3.12 TANGEDCO has stated that during the year 2018-19 and 2019-20 SLDC / TANGEDCO had to back down the generation and the month wise details are furnished in the Annexure (A). However, consequent to contractual obligations under power purchase agreements, the TANGEDCO ended up paying total fixed cost / capacity charges to the tune of Rs.7768.92Cr in the year 2019-20(Apr-19 to Sep-19) and Rs.8521.41 Crs in the year 2019-20(Oct-19 to Mar-20) (Detailed Statement showing capacity charges is attached as Annexure E & G). Further, total power purchased by open access consumers through open access during 2019-20 (Apr-19

to Sep- to the tune of 9627 MUs and in 2019-20 (Oct-19 to Mar-20) was 7982 MU. Further, the number of open access consumers and power purchased by them under open access has been increasing consistently. The details of the same are as under:

<b>Table A</b>		
<b>Details</b>	<b>2019-20 (Apr-19 to Sep-19)</b>	<b>2019-20 (Oct-19 to Mar-20)</b>
No.of Open Access Consumers	3129	3178
Power consumed In Open Access (in MU)	9627	7982

3.13. Further, it is stated by TANGEDCO that the demand charges payable by open access consumers to TANGEDCO does not compensate fully the fixed cost payable by TANGEDCO to Generators as tariffs are heavily skewed where more than 60% of fixed cost is recovered through energy charges from consumers. During the year 2019-20, TANGEDCO have recovered only Rs 0.95 per unit from Open Access Consumers towards Demand Charges, the details of which are as under:-

<b>Table-B</b>				
Details of consumption by OA consumers for FY 2019-20 ( 6 months from Oct-19 to Mar-20 )				
	Total (Gross) consumption by OA consumers (in MU)	Net Consumption from TANGEDCO (in MU)	Consumption under OA (Wheeling units) (in MU)	Demand Charges recovered from OA Consumers for billable demand (Rs in Crs)
2019-20	10908.55	2926.97	7981.58	1035.33
Per unit demand charges recovered from OA consumers 2019-20 (Oct-19 to Mar-20) Rs.0.95 (1035.33*10/10908.55)				

3.14. TANGEDCO has further stated that in order to circumvent the above mentioned circumstances wherein the burden of fixed cost is affecting viability and sustainability of operations of TANGEDCO which ultimately affects adversely to the

end consumers buying power from TANGEDCO, it would be appropriate that an additional surcharge may be determined and made applicable.

3.15. TANGEDCO has further stated that Clause 3 of Section 24 of TNERC(Grid connectivity and Intra-State Open Access) Regulations, 2014, notified by the Commission provides that the distribution licensee shall submit to the Commission on six monthly basis, a detailed calculation statement of fixed cost which the licensee is incurring towards his obligation to supply and the Commission shall scrutinize the statement of calculation of fixed cost submitted by the distribution licensee and obtain objections, if any, and determine the amount of additional surcharge applicable to open access customers.

3.16. The TANGEDCO has stated that the loss of Fixed cost recovery due to Open access has been arrived based on the latest data. The TANGEDCO is facing shortage of power during summer months of mid of February to May only. Therefore TANGEDCO resort to short term purchase of RTC (Round the Clock) power only during mid of February to May. The short term power purchase is finalised through competitive bidding for a single part tariff without any commitment of fixed capacity charges. The RTC power is availed only when the availability of already committed power is lower than the required quantum to meet the demand. The RTC power is availed only for operation of the grid in an economical way. The available quantum of power in real time market during summer season will be lower and cost will be higher. To meet out the additional demand at a lower cost only TANGEDCO purchase RTC power during summer season.

3.17. The other States such as Gujarat and Haryana have filed separate petitions to determine additional surcharge and separate orders have been issued by the respective Commissions.

3.18. The Petitioner states that the recovery of fixed cost is necessary from those consumers who are availing power from other than distribution licensee. This additional revenue from additional surcharge will be adjusted in the ARR (Aggregate Revenue Requirement) at the time of tariff filing. Hence there will not be any duplication of recovery from consumers.

3.19. The Open Access Regulation 2006 of Himachal Pradesh ERC is in line with Electricity Act 2003 and clearly specifies that the additional surcharge is payable by all open access consumers and there is no exemption for captive consumers. The Regulation is as follows:-

*“HIMACHAL PRADESH ELECTRICITY REGULATORY COMMISSION  
NOTIFICATION No. HPERC/ 391 dated August 21, 2006 REGULATIONS*

**1. Short title, extent and commencement:-** (1) *These regulations may be called the Himachal Pradesh Electricity Regulatory Commission (Cross Subsidy Surcharge, Additional Surcharge and Phasing of Cross Subsidy) Regulations, 2006.*

(2) *These regulations shall be applicable to any person engaged in the business of transmission/ distribution of electricity, and open access customers including captive power plants in the State of Himachal Pradesh.*

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**6. Additional surcharge:-**

(1) *An open access consumer shall also pay to the distribution licensee an additional surcharge to meet the fixed cost of such distribution licensee arising out of his obligation to supply as provided under sub-section (4) of section 42 of the Act.*

- (2) *Additional surcharge will be payable by any consumer including any consumer who puts up a captive plant for his own use.*
- (3) *The additional surcharge for obligation to supply as per sub-section 4 of section 42 of the Act shall become applicable only if it is conclusively demonstrated that the obligation of a licensee, in terms of existing power purchase commitments, has been and continues to be stranded, or there is an unavoidable obligation and incidence to bear fixed costs consequent to such a contract. The fixed costs related to network assets would be recovered through wheeling charges.*
- (4) *Each distribution licensee shall submit to the Commission, details of fixed costs, which the licensee is incurring towards his obligation to supply.”*

3.20. In line with the regulation and the methodology adopted in the State of Haryana, and approved by the Haryana Electricity Regulatory Commission the Petitioner sought for, to be implemented in the State of Tamil Nadu.

3.21. Further stated that, Maharashtra Electricity Regulatory Commission in its Order No. 195 of 2017 dated 12.09.2018 regarding levy of additional surcharge to the captive consumers held as follows:

*“9.38.19. Though, the Commission has specifically provided exemption of Additional Surcharge in the MYT Order for Captive Users of CPPs to the extent of their self-consumption from such Plants, the Commission noted that frequently changing captive users of GCPP was leading to stranded contracted capacity of Distribution Licensee. Such captive users are very different from static captive users of original Captive Power Plants as the latter have ceased to be consumers of Distribution Licensees having created their own permanent power requirement through captive mode. There is no power planning needed for such static captive users as against frequently switching users of group captive power plants for whom the power supply is planned and therefore becomes a stranded capacity. Such Group Captive*

*users become liable to same Additional Surcharge due to stranded capacity as applicable to other open access consumers.*

*9.38.20. It is brought to the notice of the Commission that most of the GCPP users avail Open Access under short term basis. The GCPP matrix also keeps on changing frequently in order to meets 26% equity criteria under Electricity Rules, 2005. Equity is apparently purchased as preferential share at a nominal cost. Hence, change in the consumer mix whereby Consumers switching out of GCPP matrix leads to stranded capacity on Short Term Open Access (STOA) as the quantum of power keeps changing as per the fluctuating number of GCPP users.*

*9.38.21. If there is stranded capacity created on account of such Consumers switching to Open Access Group Captive arrangement , the Additional Surcharge as determined by the State Commission shall be payable by such Captive Open Access users who are already factored in power procurement plan of Distribution Licensees.*

*9.38.22. With the increase in this GCPP based OA transactions, the obligation of the Distribution Licensee in terms of power purchase commitments has been and shall continue to be stranded, and there will be an unavoidable obligation and incidence to bear the fixed costs consequent to such commitments. Such fixed cost of power purchase has to be expected to be incurred with reasonable certainty, and also that such fixed cost of power purchase cannot be recovered from OA Consumers through Wheeling Charges or Stand-by Charges alone.*

*9.38.23. The Commission is of the considered view that, unless such fixed costs due to stranded capacity are recovered from OA Consumers, this burden would be unjustly loaded onto other Consumers of Distribution Licensee. The Commission believes it would be unfair and unwarranted to pass such burden of fixed cost recovery of such stranded cost to other Consumers through consequent tariff hike.*

9.38.24. *The Commission is of the view that, under the circumstances and in pursuance of Regulation 14.8 of the DOA Regulations, 2016, there is a case for recovery of the part of fixed cost towards the stranded capacity arising from the power purchase obligation through levy of Additional Surcharge from OA Consumers including the Group Captive Consumers who have availed such arrangement henceforth.*

9.38.25. *Accordingly, the Commission has determined the two categories of captive users who procure power from CGP's viz., (a) Original Captive Users (who were never consumers of Distribution Licensee) and (b) Converted Captive Users (who subsequently switchover to GCPP mode) . The Original Captive Users are the Users who have been procuring power originally under the captive mode and whose demand has not been included in the power procurement plan of Distribution Licensee whereas Converted Captive Users are the Users who prior to issue of this Order were Consumers of Distribution Licensee and who have opted to procure power under Group Captive arrangement, creating stranded capacity for Distribution Licensee.*

9.38.26. *In view of the above the Commission holds that Additional Surcharge shall be applicable to Captive Users of Group Captive Power Plants; in addition to Open Access consumers."*

3.22. It is further submitted by the Petitioner that even though the Maharashtra SERC order has been overruled before the Hon'ble APTEL, the Hon'ble Supreme Court on appeal has stayed the operation of the APTEL order. Likewise, in the case of *JSW Steel Ltd and Ors. Vs The Secretary Maharashtra Electricity Regulatory Commission and Ors.*, in Appeal No.s 311 of 2018, the order issued by the Hon'ble APTEL was stayed by the Hon'ble Supreme Court in Civil Appeal No.s 5074-5075 of 2019 against the implementation of the APTEL order.



3.23. The Maharashtra and Himachal Pradesh ERCs have considered the relief sought for by the Licensees; in similar lines, the petitioner sought for only amendment to Regulation for levy of additional surcharge for the captive consumers which is within the jurisdiction of Hon'ble TNERC as per Regulation 47.

3.24. Also stated by the petitioner that the additional surcharge is a recovery towards unrecovered fixed cost of tied up generation capacity which stranded due to open access consumers. The stranded capacity of TANGEDCO is higher than the Open access quantum. The calculation for the period October 2019 to March 2020 is as follows:-

Average stranded capacity Max is (A)	= 3881 MW
Average stranded capacity Min is (B)	= 46 MW
Average stranded capacity is $C=(A+B)/2$	= 1963.5 MW
Open access quantum for 10/2019 to 03/2020	= 7982 MU.
Equivalent MW of open access consumers	= 1822 MW

3.25. The Stranded quantum of TANGEDCO, is more than the open access quantum, hence the idle capacity is mainly due to open access consumers only. The under recovered fixed cost is calculated as below:

Unrecovered fixed cost per unit	=	Total fixed cost of tied capacity per unit of sales	-	Demand charges collected from open access consumers per unit
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Hence there is no duplication or over charging on open access consumers.

3.26. The Petitioner has stated that in the cost of carrying regulatory assets or amortisation of regulatory assets and stranded physical assets shall form of Additional surcharge. However ,TANGEDCO has considered only stranded power under long term power purchase assets and not taken stranded physical assets or

cost of carrying regulatory assets or amortisation of regulatory assets even though unrecovered fixed cost will eventually fall on regulatory assets only.

3.27. The additional surcharge is arrived to recover the fixed cost of stranded capacity only and network or any carrying cost of regulatory assets are not included. The stranded capacity furnished by TANGEDCO is backed down quantum from the availability quantum only and all the outages are excluded.

3.28. The Petitioner has stated that TANTRANSCO had vide Circular Memo No. CE/GO/SE/ Comm.Opn/EE/OA/F.Exchange/D102/20dt.17.07.20 stated as follows:

“The HT consumers of Tamil Nadu are permitted to purchase power through Interstate collective (Exchange) / bilateral Transactions in line with the Hon'ble CERC regulations referred above and amendments there of Procedures followed in permitting HT consumers to purchase power through IEX transactions vide ref (I) & (2) cited was reviewed by CMD/Tangedco & Chairman,/Tantransco with the officials of various wings and the following uniform procedure was approved for adherence....”

3.29. The Tamilnadu Spinning Mills Association has challenged the Circular Memo dated 17.07.2020 pertaining to Inter-State Open Access Transmission, issued by the TANTRANSCO in W.P.No.10069 of 2020 before the Hon'ble High Court Madras seeking for the following interim reliefs:

*PRAYER in W.M.P.No.12236 of 2020: Writ Petition filed under Article 226 of Constitution of India, seeking Writ of Certiorarified Mandamus, to issue an order of Interim Stay, against the operation of the impugned Circular Memo, issued by the third respondent in CE/GO/SE/Comm. Opn/EE/OA/F, Exchange/D102/20 dated 17.07.2020, pending disposal of the writ petition.*

*PRAYER in W.M.P.No.12237 of 2020: Writ Petition filed under Article 226 of Constitution of India, seeking Writ of Certiorarified Mandamus, to issue an order of Interim Direction, directing the Superintending Engineers of the*

*second respondent, for continuing to issue the NOC, as per the existing procedures, in the matter of procuring Inter-State Open Access Power from Energy Exchanges/Bilateral Routes, irrespective of the quantum up to the limits provided in the NOC and further direct the SLDC to issue the 'In Principle Approval' and 'Standing Clearances', as were being issued before the issuance of the impugned Circular Memo No.In CE/GO /SE/Comml.Opn /EE/OA/F. Exchange/D102/20 dated 17.07.2020, pending disposal of the writ petition.*

3.30. The Hon'ble High Court of Madras has granted interim stay vide Order dated 03.08.2020 with the following direction:

*“there shall be a further direction to the respondents to follow the existing regulation in so far as open access inter– state transmission is concerned, pending disposal of this writ petition.”*

3.31. The aforesaid petition is not related to intra state regulation and the impugned circular dated 17.07.2020 is no way related with this petition. This petition is filed under TNERC (Grid connectivity and Intra-State Open Access) Regulations, 2014 and in continuation to the previous petition M.P. No. 15 of 2017.

3.32. The petitioner has stated that in the original petition TANGEDCO prayed to determine the additional surcharge of Rs.1.40 per unit payable by open access consumers on quantum of power purchase through open access using the network of distribution licensee and further in line with above prayer in the additional affidavit dated 02-11-2020 prayed for levy of additional surcharge to open access consumer including captive user by suitably amending the regulation.

3.33. The additional surcharge is arrived to recover the fixed cost of stranded capacity only and network or any carrying cost of regulatory assets are not included.

3.34. Thus the petitioner prayed the Commission to admit the petition for determination of additional surcharge payable by open access consumers and pass such further or other orders as the Commission may deem fit in the facts and circumstances of the case and render justice.

#### **4. The Commission's Daily Order dated 24-11-2020 :**

The Commission ordered, after hearing the petitioner and the Stakeholder associations, in its Daily orders dated 24-11-2020, that, amending of the prayer is not allowed; the petition is admitted to the extent of claim of additional surcharge on the third party and IEX transactions only i.e., on non-CGP. The petitioner was directed to file additional affidavit providing necessary data following either Gujarat model or Haryana model.

#### **5. Additional submissions of the Petitioner:**

5.1. The Petitioner has submitted that according to the above Daily Order, submitted its revised calculation of Additional Surcharge worked out at Rs.1.23/kWh under Gujarat ERC model for determination of tariff. However, TANGEDCO found it is not justifiable in the procedure for arriving stranded capacity due to open access consumer based on the average open access quantum allowed, as per Gujarat model. TANGEDCO calculated the additional surcharge based on the maximum open access quantum allowed which is much lower than the total back down quantum i.e., capacity not availed. Further it is submitted that TANGEDCO is ready with back up capacity for the maximum OA quantum allowed, since day 1 of giving OA approval.

5.2. TANGEDCO has stated that they have considered the OA energy consumption for arriving additional surcharge instead of OA scheduled energy, since Cross subsidy is also being collected for the units consumed from Open Access. The apportionment of cost should be for actual utilisation only. The calculation of Add. Surcharge submitted by the petitioner is as below:-

Description	Nomenclature	Unit	Value
1 Contracted Capacity	A	MW	21654.00
2 Maximum Availability	B	MW	14588.94
3 Minimum Availability	C	MW	10199.01
4 Average Availability	D	MW	12758.81
5 Maximum Scheduled	E	MW	13805.68
6 Minimum Scheduled	F	MW	7337.51
7 Average Scheduled	G	MW	10797.18
8 Capacity not availed (Max)	H	MW	4287.36
9 Capacity not availed (Min)	I	MW	239.67
10 Capacity not availed (Avg.)	J	MW	1961.63
11 OA Allowed (Max)	K	MW	609.56
12 OA Allowed (Min)	L	MW	330.12
13 OA Allowed (Avg.)	M	MW	609.56
14 Capacity stranded due to OA	N	MW	609.56
15 Total Fixed Charge (PPA)	O	Rs. Cr	8521.41
16 Fixed charges per MW available	$P=O/D$	Rs. Cr	0.67
17 Fixed charges of stranded capacity	$Q=P*N$	Rs. Cr	407.11
18 Transmission Charges paid	R	Rs. Cr	2013.11
19 Energy Scheduled	S	MU	48693.00
20 Transmission Charges per kWh	$T=R/S*10$	Rs/Kwh	0.41
21 Distribution Charges (As approved in the TO)	U	Rs/Kwh	0.21
22 Total T & D Charges per kWh	$V=T+U$	Rs/Kwh	0.62
23 Energy Consumed by OA consumer from Discom	W	MU	2669.24
24 T & D charges payable to Discoms by OA consumers	$X=W*V/10$	Rs. Cr	166.54
25 Demand Charges Recovered by Discoms from OA	Y	Rs. Cr	330.56
26 Demand Charges to be Adjusted	$Z=Y-X$	Rs. Cr	164.02
27 Net stranded charges recoverable	$AA=Q-Z$	Rs. Cr	243.10
28 OA scheduled energy	AB	MU	1969.21

29 Additional surcharge	$AC=AA/AB*10$	Rs/Kwh	1.23
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## **6. Process under Clause 24(3) of the TNERC's Grid Connectivity and Intra-State Open Access Regulations 2014:**

*"24. Additional Surcharge:*

xxxx                      xxxx                      xxxx

*(3) The distribution licensee shall submit to the Commission on six monthly basis, a detailed calculation statement of fixed cost which the licensee is incurring towards his obligation to supply. The Commission shall scrutinize the statement of calculation of fixed cost submitted by the distribution licensee and obtain objections, if any, and determine the amount of additional surcharge."*

The Commission before going into the process of determination of any Additional Surcharge, directed the Petitioner, in the Daily order dated 29.12.2020, to webhost the petition along with other documents for seeking comments from the stakeholders.

## **7. Stakeholders comments on the petition and the petitioner's replies :**

7.1. As directed by the Commission under the daily order dated 29-12-2020, the Petitioner hosted the entire details of the petition in the TANGEDCO's official website [www.tangedco.gov.in](http://www.tangedco.gov.in) on 30-12-2020 for obtaining comments / suggestion from the stakeholders. It was hosted for 30 days from 30-12-2020 to 28-01-2021 for offering the comments and suggestions. The suggestions / comments were received from 6 stakeholders and the petitioner TANGEDCO made its reply to all their comments directly as below.

7.2. Comments have been received from M/s.Indian Energy Exchange, M/s.Southern India Mills Association, M/s.Tamilnadu Spinning Mills Association,

M/s.Tamil Nadu Electricity Consumers' Association, Thiru.P.Selvaraj, Erode and Thiru.S.Neelakantapillai, Chennai.

### **7.3. M/s.Indian Energy Exchange Limited :**

7.3.1. M/s.IEX has stated that, under National Tariff policy 2016 - para 8.5.4, the petitioner is required to demonstrate the continuous stranded capacity, only then the claim of Additional surcharge is applicable.

7.3.2. The continuous period for which certain capacity has been stranded due to Open Access should be construed as the period for which Additional Surcharge is claimed by the Petitioner. In the present case since the period is October 2019 to March 2020, therefore the Additional Surcharge can be claimed by the Discom only when it is able to demonstrate that there has been no shortage in any of the 15 minutes time block during this period. The Additional surcharge can be claimed only when Discom demonstrates that it has been able to meet its peak demand during 10/2019 to 3/2020 and there was no load shedding during such peak demand period.

7.3.3. The petitioner has not been able to demonstrate continuous stranded capacity as per above mentioned principle. In fact, when seen with respect to the short term power and Renewable energy power procured (to the tune of 531 MW and 2720 MW) during Oct'19 to Mar'20, the backed down quantum seems to have emerged due to short/medium term power & RE power procurement by TANGEDCO rather than OA.

Oct 19 - Mar 20	MUs	MW
STOA	2,329	532

RE power	2,978	2,719
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7.3.4. Continuous shortage of power on account of various reasons, and the petitioner is arranging it through various modes of short term purchases; hence the Additional surcharge, no case to be made out for imposition by Discom.

7.3.5. When the Open Access Consumer procures power from sources other than incumbent distribution licensee, the distribution licensee avoids procuring power in merit order i.e. highest variable cost generation is avoided first than the second highest variable cost generation on so on. The open access consumers help the Discom in meeting their demand requirements and in avoiding expensive power purchases; and they who are helping in managing the power supply during shortage scenarios in a cost effective manner.

7.3.6. The Commission is requested to analyze the generation back-down data of each of the 15 min time block period along with the reason of such back-down as the back down could be on account of reasons other than Open Access to assess the case for Additional Surcharge. The methodology adopted by the Discom is not rational and may lead to spurious imposition of Additional Surcharge on the open access consumers and will impede competition and power market in the State

7.3.7. The increase in power purchase / ARR needs to be passed through tariff revisions in ARR / True up exercises.

7.3.8. RE being must-run may have been a reason for backing down of thermal capacity. The Honorable Commission is requested to analyze the generation back-down data against RE procurement by the Discom.



7.3.9. The assessment of Additional Surcharge should be carried out in scientific method for each season. The period of 12 months in a financial year may be divided into two or more seasons based on shape of load curves. In case Discom is not able to meet peak demand of the season, no additional surcharge to be imposed. In case Discom is resorting to load shedding, it can be inferred that Discom is in shortages and therefore no stranded capacity can be claimed on account of Open Access.

7.3.10. STOA charges and Transmission cost cannot be included in the Fixed cost obligation; but TANGEDCO has inadvertently included the transmission cost and STOA charges in its obligations viz. Rs. 2013 Cr. of transmission cost and Rs. 420 Cr. of STOA charges in the Fixed cost of Rs. 10,534.52 Cr. during Oct'19 to Mar'20. Similarly, in the revised computations, the fixed charge (PPA) includes Rs 420 Cr. of STOA charges which does not relate to the fixed cost obligation of Discom.

7.3.11. Certain errors in the revised computations of ASC of Rs. 1.23/kWh as mentioned below:

Sl.no. 13 - OA allowed (avg.) considered as 609.56 MW instead of 469.84 MW.

Sl.No. 15 - Total Fixed Charge (PPA) considered as Rs. 8521.41 Cr. instead of Rs. 8100.70 Cr. (STOA charges should be excluded)

Sl.No. 28 - OA scheduled energy corresponding to OA allowed (avg.) of 469.84 MW should be considered.

#### **7.4. M/s.The Southern India Mills' Association, Coimbatore:**

7.4.1. TANGEDCO is planning to install 6700 MW before the end of 2020-21 to create their power capacity to 37,196 MW. The increasing capacity, creating a stranded capacity and fixing additional cost on the HT side alone is not justifiable. HT industries cannot be burdened with Additional surcharge.

7.4.2. The petitioner can claim additional surcharge only when they are able to demonstrate that there has been no shortage of power during this period.

7.4.3. The assessment of Additional Surcharge should be carried out in scientific method for each season. The period of 12 months in a financial year may be divided into two or more seasons based on shape of load curves.

7.4.4. Determination of additional surcharge falls under the Tariff category, therefore shall be scrutinized only when filing of Tariff petition.

**7.5. M/s.Tamil Nadu spinning mills association and M/s.Tamil Nadu Electricity Consumers' Association.**

M/s.TASMA and M/s.TECA has furnished the same comments as below:

7.5.1. The Additional Surcharge can be claimed by the TANGEDCO only when it is able to demonstrate that there has been no shortage in any of the 15 minute time block of Oct-Mar 2020. In other words, Additional Surcharge can be claimed, only when the TANGEDCO demonstrates that it has been able to meet its peak demand during Oct'2019–Mar'2020 and there was no load shedding during such peak demand period. The petitioner has not been able to demonstrate the continuous stranded capacity.

7.5.2. With reference to Regulation 40 of TNERC ISOA Regulations, the stranding of capacity in case of LTOA by a Transmission Licensee can be there only for a maximum period of one year. Similarly, in case of MTOA, the stranding of capacity by a Transmission Licensee can be there, only for a maximum period of 30 days and

in case of STOA, for Two days. As such, the fundamental requirement to levy additional surcharge is not existing in the present environment.

7.5.3. On account of various reasons, TANGEDCO has been arranging to source power through various modes of short term purchases also; power deficit scenario rules out any possibility to justify to collect and levy the additional surcharges.

7.5.4. TANGEDCO while praying for imposition of additional surcharge, has not categorized the reasons for back down of generation by generators and surrender of power by TANGEDCO. Backing down of tied-up generation capacity is not necessarily due to power being supplied through open access. It can also be due to various other reasons such as: -

- (a) Wrong planning leading to excess tie up than projected demand
- (b) Sporadic weather disturbances leading to load crash
- (c) Transmission Constraints
- (d) Non-availability of fuels (e.g. gas, coal, etc.)
- (e) Spinning reserves created as part of the safety measures
- (f) Temporary allocations in Central Generating Stations
- (g) Accommodation to peak generation of Hydro Power Plants
- (h) Accommodation of generation of Renewable Energy sources leading to backing down other generators
- (i) Replacement of costlier power with the reasonable source

7.5.5. TANGEDCO has also not provided any details of available generation capacity, as per PPAs executed, approved allocations in Central Sector and shares in partnership projects, generation capacity approved by the Commission, peak demand observed and projections for future years to establish that PPAs have not been executed for excess capacity. The above details together with projected

demand of the State alone will reveal, whether the generation back down and power surrendered, is due to open access consumers or for any other reasons. In the absence of the same, straightaway filing a Petition seeking to levy additional surcharge, is considered to be totally insufficient to offer any comments or remarks. Hence, the Commission should direct the TANGEDCO to provide all the above details demonstrating that only because of Open Access Consumers, generation backing down is being enforced.

7.5.6. The long term PPAs contracted by TANGEDCO are based on peak load basis and therefore, inherently, there will be surplus capacity during non-peak and less demand periods (such as Monsoon period). Such, inherent surplus will certainly cause stranded capacity during off peak periods / seasons and thus the same cannot be anyway attributed to open access consumers alone.

7.5.7. TANGEDCO has filed the instant petition in M.P.No.18 of 2020, by way of an Additional Affidavit on the directions of the Commission, for the purpose of getting approval for the levy of Additional Surcharge on certain categories of Open Access Consumers alone, on the ground that the open access provided, has stranded generation capacity to TANGEDCO, resulting in under-recovery of Fixed Cost. Such a statement is highly opposed, since TANGEDCO has not finalized its Annual Accounts for years ended 31.03.2018, 31.03.2019 & 31.03.2020, which ought to be audited and finalized by 30th September of each year (except for FY 2020-21 due to Covid-19 background), as per Section 137 read with Section 96 of Companies Act 2013. This has to be circulated for repudiating the claim of TANGEDCO.

7.5.8. The Tariff Policy in Para 8.5.1 clearly mandates that Additional Surcharge should be levied with a caveat that it should not be onerous and affect the competition. Competition is one of the main and vital objectives of Electricity Act 2003. It is stated that in case of levy of the additional surcharge of Rs.1.23/Unit over and above the present level of CSS at the rate of Rs.1.67/Unit is accepted, it will increase the ultimate price of Power, being purchased through Open Access tremendously and will render the option of Open Access financially unviable and otiose. Thus, the additional surcharge sought to be levied through the present petition, is clearly violative of the main objectives of the Electricity Act, 2003 itself, (i.e.) to provide for and promote open access in India and to create competition in the field of supply of electricity.

7.5.9. The different categories of open access consumers have different pattern of open access consumption. On the one hand, there are consumers who purchase power through Exchange platform, based on their day to day requirement basis. On the other hand, there are other types of open access consumers like captive open access consumers/medium open access consumers whose consumption pattern is known well in advance to the DISCOMs and thereby minimizing the stranded capacity on their account is always possible and open. This fact of the availability of different types of consumers, has to be analyzed thoroughly before any proposal is made to levy Additional Surcharge.

7.5.10. The Petitioner is attempting to seek approval for the levy of Additional Surcharge, based on an impracticable concept that because of the total energy consumed by the Open Access Consumers, in a given time block, the TANGEDCO finds stranded capacity and on that reason, the TANGEDCO has to back down its

own Generating Stations in that given time block. No such evidence was provided by the TANGEDCO in support of such an argument.

7.5.11. From the details furnished by the petitioner, it is noticed that around 43% of increase in the Fixed cost of power purchase, from its own generating stations, as compared to approved values in T.O.11.08.2017. Power from own generating stations seems to be at the highest end of MOD; therefore the decision to reduce the own generation may ought to have been taken, on account of certain commercial decisions of TANGEDCO, which is no way connected to the reason of OA power availed by OA consumers. The increase in fixed cost incurred towards own generating stations needs prudence in a truing up exercise.

7.5.12. Tamil Nadu being a Renewable energy rich State, around 18-20% of energy is being continuously backed down from the RE sources, whether it is Wind or Solar, without which the TANGEDCO ought to have met out its average power cost. Considering its RPO also, TANGEDCO might have backed down its conventional generation, therefore it cannot be assigned to the reason of OA power procurement by OA consumers. RE being must-run might have been a reason for backing down of thermal capacity. The Commission may analyse the background of the generation back down data, against RE procurements by the TANGEDCO.

7.5.13. STOA charges and Transmission cost cannot be included in the Fixed cost obligation. As per the filings, Rs.420 crores of STOA charges which does not relate to the fixed cost obligation of the TANGEDCO.

7.5.14. Certain errors in the revised computations of ASC of Rs. 1.23/kWh as mentioned below:

Sl.no. 13 - OA allowed (avg.) considered as 609.56 MW instead of 469.84 MW.

Sl.No. 15 - Total Fixed Charge (PPA) considered as Rs. 8521.41 Cr. instead of Rs. 8100.70 Cr. (STOA charges should be excluded)

Sl.No. 28 - OA scheduled energy corresponding to OA allowed (avg.) of 469.84 MW should be considered.

7.5.15. The stakeholders other comments are similar to the comments furnished by other stakeholders as already stated above.

**7.6. Thiru.P.Selvaraj, Erode :**

7.6.1. The levy of Additional surcharge may be reviewed at the time when TANGEDCO files the ARR and Tariff review petition.

7.6.2. The statement of TANGEDCO that due to the fixed cost incurred by the TANGEDCO , it wants to levy variable cost on the consumer is not an appropriate reason to introduce surcharge. Therefore for Fixed expenses, Fixed charges must only be charged not by way of variable cost.

**7.7. Thiru.S.Neelakantapillai, Chennai :**

The details of the quantum of power purchase stated by the petitioner differs between the data obtained by the stakeholder through his RTI petition.

**7.8. Tamil Nadu Generation and Distribution Corporation Limited (the petitioner) replies to the stakeholders comments :**

7.8.1. The Electricity Act 2003, under Section 42(4) provides for levy of additional surcharge. The Act provides for Wheeling charges, Cross subsidy surcharge and Additional surcharge, which are to be levied by the Distribution licensee on Open

access consumers and which are levied for particular purposes; and different from one another.

7.8.2. This petition has been filed before the Commission as per the provisions in the regulation 24 of the TNERC Grid Connectivity and Intra State Open Access Regulations 2014, which is reproduced below:-

*24. Additional Surcharge:—*

***(1) An open access customer, receiving supply of electricity from a person other than the distribution licensee of his area of supply, shall pay to the distribution licensee an additional surcharge on the charges of wheeling, in addition to wheeling charges and cross-subsidy surcharge, to meet out the fixed cost of such distribution licensee arising out of his obligation to supply as provided under subsection (4) of section 42 of the Act.***

*(2) This additional surcharge shall become applicable only if the obligation of the licensee in terms of power purchase commitments has been and continues to be stranded or there is an unavoidable obligation and incidence to bear fixed costs consequent to such a contract. However, the fixed costs related to network assets would be recovered through wheeling charges.*

***(3) The distribution licensee shall submit to the Commission on six monthly basis, a detailed calculation statement of fixed cost which the licensee is incurring towards his obligation to supply. The Commission shall scrutinize the statement of calculation of fixed cost submitted by the distribution licensee and obtain objections, if any, and determine the amount of additional surcharge:***

*Provided that any additional surcharge so determined by the Commission shall be applicable only to the new open access customers.*



*(4) Additional surcharge determined **on per unit basis shall be payable, on monthly basis, by the open access customers based on the actual energy drawn** during the month through open access:*

*Provided that such additional surcharges shall not be levied in case distribution access is provided to a person who has established a captive generation plant for carrying the electricity from such plant to the destination of his own use.*

7.8.3. As per the provisions of Electricity Act 2003 the distribution utilities are mandated with Universal Service Obligation to all its consumers (other than open access consumers). Present tariff structure approved by the Commission has cross subsidization mechanism whereby the tariff for some category of consumers are lower than the cost of supply to them. The Commission vide Order dated 11th August 2017, determined the Cross Subsidy Surcharge payable by a consumer availing open access to the Transmission / Distribution System as provided in Open Access Regulations.

7.8.4. The purpose of levying cross subsidy and additional surcharge are entirely different, as the former compensates or cross subsidization of charging lesser than average cost to certain tariff category and later compensates for capacity stranded due to open access consumers buying power from outside TANGEDCO.

7.8.5. In order to ensure viability and sustainability in operations of TANGEDCO, it is necessary that both cross subsidy surcharge and additional surcharge are imposed on the open access consumers.

#### 7.8.6. National Tariff Policy

## National Tariff policy Section 8.5

- 8.5.1 National Electricity Policy lays down that the amount of cross-subsidy surcharge and the additional surcharge to be levied from consumers who are permitted open access should not be so onerous that it eliminates competition which is intended to be fostered in generation and supply of power directly to the consumers through open access. A consumer who is permitted open access will have to make payment to the generator, the transmission licensee whose transmission systems are used, distribution utility for the wheeling charges and, in addition, the cross subsidy surcharge. The computation of cross subsidy surcharge, therefore, needs to be done in a manner that while it compensates the distribution licensee, it does not constrain introduction of competition through open access. A consumer would avail of open access only if the payment of all the charges leads to a benefit to him. While the interest of distribution licensee needs to be protected it would be essential that this provision of the Act, which requires the open access to be introduced in a time-bound manner, is used to bring about competition in the larger interest of consumers.
  
- clause 8.5.6 also stipulates that in case of outages of generator supplying to a consumer on open access, standby arrangements should be provided by the licensee on the payment of tariff for temporary connection to that consumer category as specified by the Appropriate Commission. Provided that such charges shall not be more than 125 percent of the normal tariff of that category.

### 7.8.7. TANGEDCO's capacity and power position:

- (a) TANGEDCO made arrangements to meet the entire demand of the consumers through own generation and Power purchase agreements with Independent power producers, Central generating stations and NCES categories through LTOA, and MTOA. The total of TANGEDCO's contracted capacity is 21654 MW which is excluding Captive power plants. TANGEDCO is preparing the demand forecasts based on previous growth of demand and supply of power

in the State and provides 24x7 uninterrupted supply to all categories of the consumers.

- (b) The Restriction & Control measures in the State of Tamil Nadu Government was lifted in 2015 itself as there was no shortage of power supply in Tamil Nadu. Further, there was no load shedding and Tamil Nadu has become power surplus State. The fact of lifting of R&C measures itself is a testimony to demonstrate that there has been no shortage during the months of October 2019 to March 2020 and that the stranded capacity has always been maintained by TANGEDCO during the above said months.
- (c) In respect of the judgement of the Hon'ble APTEL in the case of Appeal No 38 of 2013 dated 01.08.2014, it is stated that the same is issued at time when TANGEDCO was facing power shortages due to various reasons. But now TANGEDCO is supplying power 24x7 and having better power position. Hence, in the present scenario the levy of Additional surcharge is necessary to compensate the burden of fixed cost due to capacity stranded which is the obligation for DISCOM to pay as per the PPA.
- (d) Regulation 75(1) of the Tariff Regulations 2005 specifies as under:-  
***"75. Cost of Power Purchase***  
*(1) The Distribution licensee shall procure power on least cost basis and strictly on merit order despatch and shall have flexibility to procure power from any source in the country.*  
*A two-part tariff structure shall be adopted for all long term contracts to facilitate merit order dispatch."*

- (e) In the Tariff order No. 1 of 2017 dt.11.08.2017 the Hon'ble TNERC directed TANGEDCO in para No.4.15.7 as follows.

*4.15.7 The Commission also observes that TANGEDCO does not appear to be availing the low cost short-term power available in the Power Exchanges. While the majority of power purchase should preferably be from long/medium-term sources, TANGEDCO should assess the opportunities available to meet around 10% of its power requirement from Power Exchanges in case the landed power purchase rates are lower than the variable cost of power available to TANGEDCO from other sources, with the view to minimise the power purchase cost. TANGEDCO should frequently review the prevailing rates in the Power Exchanges in order to optimise the power purchase cost".*

As directed by the Commission and complying with Regulations, TANGEDCO is procuring the power based on Merit Order Ranking and meets the demand and supply position in Tamil Nadu.

- (f) It is mentioned that the additional surcharge can be claimed only when DISCOM demonstrates that it has been able to meet its peak demand during October 2019 to March 2020 without any load shedding and it is stated that the DISCOM has already met its peak demand during the above said period without any load shedding [15664 MW at 19.05 hrs on 19.03.20, during Oct 2019 to Mar 2020].

7.8.8. TANGEDCO is implementing the Open Access system as per the TNERC Grid Connectivity and Intra State Open Access Regulations 2014 successfully and the Regulation allows the consumers to buy power from sources other than TANGEDCO. Due to non availment of power by open access consumers the equivalent quantum become stranded capacity and TANGEDCO ends up paying

capacity charges for the entire contracted capacity as per the power purchase agreements. The average stranded capacity of TANGEDCO is 1962 MW and the quantum of open access allowed is 609.56 MW only, during the said period from Oct 2019 to March 2020.

7.8.9. The point raised by stakeholder that “Purchasing power and converting it as stranded power cannot be a ground for claiming additional surcharge” is not true. The DISCOM is always in the obligation to maintain the 100% capacity, taking into account the open access consumers, because TANGEDCO will not know when the open access consumer will buy in IEX and when it will avail supply from the DISCOM and thus serves as a ready recokner/ reliable source to the open access consumer.

7.8.10. As per the OA Regulations 40, the LTOA and MTOA consumers should relinquish their open access rights with a notice period and should come forward to pay the 66% of the estimated transmission charges for the period falling short of notice period and in addition pay 66% of the estimated transmission charges for the stranded transmission capacity for the above said period. The contracted capacity becomes stranded as and when the open access consumer avails power outside DISCOM, and not as stated by the stakeholder that during the relinquishment period ranging from 2 day to 1 year. The levy of additional surcharge based on proportionate days could not be implemented since fixed cost payable for the entire period and as per the open access regulation 24 (4) *Additional surcharge determined on per unit basis shall be payable, on monthly basis, by the open access customers based on the actual energy drawn during the month through open access.*

7.8.11. TANGEDCO always supports the open access and encourages the competitiveness in power sector. Tamil Nadu is rich in renewable energy power and pioneer in promoting wind power even though which is infirm in nature. Most of the renewable energy power producers are captive and selling power through open access. TANGEDCO is managing the grid with high renewable energy sources for power supply to the entire State. Despite infirm nature of renewable energy power balancing with grid stability TANGEDCO is maintaining uninterrupted supply and serving to all categories of consumers.

7.8.12. TANGEDCO is planning the power purchase and forecasting the demand and supply based on MOD guidelines and as per the directions of Hon'ble TNERC. Apart from RTC (Round the Clock) power purchases through LTOA & MTOA, TANGEDCO is purchasing the power from exchange and STOA during peak hour.

7.8.13. Though the DISCOM is obligated to purchase power from RE sources as and when available through 100% scheduling, it is always the infirmness of the RE power, the open access consumers fall back on DISCOM for supply, which forces the SLDC to plan availability based on long term firm conventional power generation to meet the demand, which eventually becomes stranded.

7.8.14. For instance, the OA consumer purchase on a Sunday around 600 MW from the IEX when power is available but on Monday the purchase in the IEX by Open Access consumers is very less due to non availability at cheap price for which the DISCOM had to supply the power. The DISCOM is always in the obligation to maintain the standby capacity taking into account the open access consumers because it could not predict when the open access consumer will buy in IEX and

when it will avail supply from the DISCOM and thus serves as a ready recokner/ standby mode to the open access consumer.

7.8.15. The petitioner states that there is no power shortage in Tamil Nadu and it is managed by the petitioner as below: -

7.8.15.1. The power procured by TANGEDCO through various energy sources to augment its availability cannot be construed as power shortage and hence the stakeholders' claim of shortage of power situation in Tamil Nadu is baseless.

7.8.15.2. As the OA consumers are already taken into account for deciding the demand projection, since DISCOM is having the obligation to supply power to the OA consumers 24/7. The open access consumers could not be excluded from the power planning of TANGEDCO as there is so much volatility in their consumption pattern/ availing power from DISCOM. Therefore, the demand that is not availed by the OA consumers cannot be treated in isolation with respect to the contracted quantum in the various power arrangements made by TANGEDCO and hence payment of fixed charges becomes mandatory. For example the changes in power availment through exchange is given below:-

7.8.15.3.

DATE	POWER OFF TAKE BY OA CONSUMERS IN IEX IN MW	TIME IN HRS FROM	TIME IN HRS TO	POWER AVAILED FROM TANGEDCO
31.01.21	545	19:00	20:00	NIL
01.02.21	5	19:00	20:00	540

Since TANGEDCO had maintained the stranded capacity of 545 MW the OA consumer who went to the exchange for purchase of cheaper power on 31.1.21 and subsequently on 01.02.21 not availed in the exchange clearly shows that they have been availing power from TANGEDCO. Hence the question of linking backing down of generation on account of excess RE power, or MOD ranking should not be taken into account, for capacity becomes stranded. SLDC, always operates based on the merit order stack as per the direction of the Commission and hence the statement of the stake holder in this regard is not justified.

7.8.15.4. The surplus load/ capacity could not be sold as only the surplus generation if any could alone be sold. Hence the suggestion to sell part of excess load or generation comment is not correct.

7.8.15.5. The DISCOMs face lots of hardships in maintaining the grid as well as in planning the availability of power because they purchase power from the power exchange when it is available cheap and draw from the DISCOM without any prior intimation during the peak period. Therefore, DISCOM due to the instable nature of availing the supply from the DISCOM by the open access consumers, has always been forced to maintain the stranded capacity by purchasing power from conventional power stations and forced to pay fixed capacity charges.

7.8.15.6. The power procurement planning is a dynamic process wherein the availability and variability of existing contracted capacities are evaluated, future demand growths are assessed and the necessity of contracting from new sources is decided. TANGEDCO, being a DISCOM is duty bound to execute the contracts for purchase of power for such a quantum that they are able to supply to the consumers



under various conditions, including outages of the generating units, transmission constraints, peak demand in a particular season considering seasonal load variations, and also increase in demand due to addition of new consumers/loads. With this context, short term & medium power procurement were carried out to ensure the benefit of public during public exams for schools/colleges in summer.

7.8.16. The petitioner further replied that:-

7.8.16.1.Regulatory framework of Open Access: As per the Hon'ble Telangana Electricity Regulatory Commission in its order No. O. P. No. 23 of 2020 Dated 18.09.2020, in the matter of mechanism for determination of stranded capacity and framing the terms & conditions for levy of Additional Surcharge on open access users to meet the fixed cost of the distribution licensee arising out of its obligation of supply (Suo - Moto) the findings of the commission is as follows:-

*“PARA 9. The Commission finds merit in DISCOMs proposal to determine the Additional Surcharge in intervals of six months period to which some of the stakeholders have concurred and accordingly the Commission directs the DISCOMs to submit their filings for determination of AS for the 1st half of the ensuing financial year i.e., for the period from April to September of the ensuing financial year latest by 30th November of the current financial year and for the 2nd half of the ensuing financial year i.e., for the period from October to March of the ensuing financial year latest by 31st May of the ensuing financial year. The Commission's view regarding the approach for determination of stranded capacity due to OA is as under.*

*10. The DISCOMs are obligated to meet the demand of its consumers up to the total contracted demand of all consumers. The DISCOMs are also under Section 43 of Act 'Duty to Supply on request' to provide connections to any new applicant within stipulated period. To meet this obligation, the DISCOMs have to source adequate generation capacity to meet the demand of its consumers at any time through PPAs. The DISCOMs are duty bound to*

*execute the contracts for purchase of power for such a quantum that they are able to supply to the consumers under various conditions, including outages of the generating units, transmission constraints, peak demand in a particular season considering seasonal load variations, and also increase in demand due to addition of new consumers/loads. The procurement of power by the DISCOMs is governed by the Commission's regulations, guidelines and orders issued from time to time. Depending upon the type of power procurement, the DISCOMs are obligated to pay fixed/capacity and/or variable charges for their contracted capacities. Though, the capacity utilization is generally on the basis of the lowest variable cost under the merit order system, the capacity charges has to be paid for the total capacity declared as available even if the entire available capacity is not scheduled due to load variations or any other reason including procurement of power by consumers through OA.*

xxxx                  xxxx                  xxxx

*12. The stakeholders submitted that the capacity continuously stranded because of OA consumers and the backed down capacity due to no other reason should be considered in the determination of stranded capacity. The Distribution Licensee has to contract sufficient power to meet the aggregate demands of its consumers and to provide for unforeseen outages of the generators. However, even in normal scenario, full availability of such contracted capacity may not be required by the Distribution Licensee. As such the total quantum of backing down cannot be considered for determination of AS. Nevertheless the relevant figure would be the capacity stranded due to the consumer who opt to purchase power from third parties through open access instead of drawing their full requirement from the Distribution Licensee. As such, it is important to ascertain the surplus power available with the Distribution Licensee vis-à-vis power procured by the consumers from third parties. Therefore, this aspect is adequately taken care in methodology for computation of AS.*

*13. The Commission is of the view that the stakeholders submission that the existence of certain circumstances does not entitle the DISCOMs from claiming stranded capacity is not tenable due to the following reasons:-*

*i. Load shedding or imposition of load restrictions on the consumers could be due to varied reasons. It is incorrect to attribute load shedding or imposition of load restrictions entirely due to non-availability of power.*

*ii. The power procurement planning is a dynamic process wherein the availability and variability of existing contracted capacities are evaluated, future demand growths are assessed and the necessity of contracting from new sources is decided. Some part of the current contracted capacity may be stranded but it is incorrect to imply that such capacity will always be stranded. The methodology for computation of AS ensures that the DISCOMs are compensated only to the extent of capacity stranded due to OA and for no other reason*

*iii. It is incorrect to state that short-term or medium-term purchases by DISCOMs imply that there is no stranded capacity. The demand pattern in the State varies over a wide range as evident from the demand pattern during FY 2018-19 and FY 2019-20.*

*iv. It is uneconomical and undesirable to plan to meet maximum demand entirely from long-term sources as the maximum demand may be witnessed for only some part of the day or even a fraction of time. Therefore, the power procurement planning entails contracting an optimal mix of long-term, medium term and short-term sources. When a consumer of the Distribution Licensee is provided the freedom to procure power through OA from a source other than the Distribution Licensee to reap the savings in cost, it is equally meritorious for the Distribution Licensee to prefer short-term or medium-term purchases over the existing long-term purchases as long as such preference leads to net savings ultimately in the interest of the consumers.*

*v. Given a scenario that during a particular time period there is OA consumption as well as short-term purchases by the Distribution Licensee and the capacity is backed down, then the total backing down will be on account of both the reasons and the Distribution Licensee is still to be compensated for*

*the backing down on account of OA and methodology of AS computation ensures the same.*

*vi. Given another scenario that during a particular time period there is OA consumption as well as short-term purchases by the Distribution Licensee but no capacity is backed down, then compensating the Distribution Licensee does not arise and the methodology of AS computation ensures the same. Nevertheless, existence of such a scenario in a particular time period does not disqualify the backed down capacity due to OA in other time periods for being considered as stranded capacity.*

*vii. It is incorrect to state that inability to meet the peak demand does not entitle for claiming stranded capacity. As stated earlier, the maximum demand may be witnessed for only some part of the day or even a fraction of time. Non availability of power for such a short duration does not imply that there is no stranded capacity during the entire period under consideration.*

xxxx                      xxxx                      xxxx

*16. Based on the above analysis, the Commission approves the following mechanism for demonstration of stranded capacity.*

- i. The 15-minute time-block data of available capacity and scheduled capacity of all generating stations having long term PPAs with the DISCOMs and the scheduled capacity of OA consumers of six months period is to be taken.*
- ii. In case of hydel generating stations, the scheduled capacity is to be treated as available capacity in that time block.*
- iii. The lower of the surplus capacity (i.e., available capacity less scheduled capacity) and capacity scheduled by OA consumers is to be considered as stranded capacity for the 15-minute time block.*
- iv. Accordingly, the average stranded capacity for six-month period due to open access has to be arrived.”*

Further, the commission finds that it is incorrect to state that inability to meet the peak demand does not entitle for claiming stranded capacity. Merely power purchase through exchange or STOA does not means that there is no

stranded capacity.

7.8.16.2. Therefore, considering the above order, it is the duty of the TANGEDCO to provide the supply and meet the entire demand along with all variations of consumers demand in the high infirm renewable energy power capacity scenario.

7.8.17. The Methodology adopted by the petitioner for Computation of Additional Surcharge is justifiable because,

7.8.17.1. The petition is filed as per section 24 (3) of TNERC Grid Connectivity and Intra State Open Access Regulations 2014 in which it is stated as follows:

*“The distribution licensee shall submit to the Commission on six monthly basis, a detailed calculation statement of fixed cost which the licensee is incurring towards his obligation to supply. The Commission shall scrutinize the statement of calculation of fixed cost submitted by the distribution licensee and obtain objections, if any, and determine the amount of additional surcharge:*

*Provided that any additional surcharge so determined by the Commission shall be applicable only to the new open access customers.”*

7.8.17.2. The fixed charges of TANGEDCO's Own Stations were prepared based on the TNERC Tariff Regulations 2009. The Central Generating Stations and other Inter State Power purchases are as per the claims made by CGS and based on CERC approved tariff rates only.

7.8.17.3. TANGEDCO has finalised the accounts and completed the Statutory audit of FY 2017-18 to 2019-20 and the same has been submitted before the TNERC as per the compliance of the Companies Act 2013.

7.8.17.4. The inclusion of Transmission charges is necessary to include in the calculation as the cost payable based on quantum of agreement and part of fixed cost only. TANGEDCO is following the workings as per Gujarat ERC approved model as per the direction of the TNERC.

7.8.17.5. As directed by the TNERC, TANGEDCO arrived the additional surcharge based on Gujarat State ERC approved model. The calculation itself having all the required data to compute the additional surcharge and it clearly shows that fixed cost under recovery and fixed charges paid by the consumer is adjusted against the stranded capacity charges. However, TANGEDCO found it is not justifiable in the procedure of Gujarat model in the following items:-

- a. Capacity Stranded due to OA:** In Sl.No.14 in the calculation of Gujarat Model to arrive stranded capacity due to open access consumer instead of maximum open access quantum allowed. The average open access quantum allowed, was considered which is not justifiable. Since TANGEDCO is ready with backup capacity for the maximum OA quantum allowed, from day 1 of giving OA approval. The Capacity may varies frequently and this way TANGEDCO suffers managing the demand to meet out the variations of Open access quantum and it is necessary to have adequate capacity and
- b. OA Scheduled Energy:** In Sl.No.28 in the calculation of Gujarat Model TANGEDCO considered OA Energy consumption energy for arriving additional Surcharge instead of OA scheduled energy which is not justifiable, since the apportionment of cost should be for actual utilisation only and the levy of additional Surcharge will be only for the adjusted units only. For both levy and determination of additional surcharge same factor has to be considered.

Further, the Cross subsidy surcharge is also being collected for the units consumed

from Open Access consumers only.

7.8.17.6. The Hon'ble Telangana Electricity Regulatory Commission in its Order No. O.P.No. 23 of 2020 Dated 18.09.2020, in the matter of mechanism for determination of stranded capacity and framing the terms & conditions for levy of Additional Surcharge on open access users, to meet the fixed cost of the distribution licensee arising out of its obligation of supply (Suo - Moto), the methodology for computation of additional Surcharge is as follows:-

**Approved Methodology for Computation of Additional Surcharge**

Sl. No.	Description	Unit	Value
{A}	Long term available capacity	MW	
{B}	<b>Capacity stranded due to OA</b>	<b>MW</b>	
{C}	Fixed Charges paid	Rs. Crore	
$\{D\}=\{C\}\div\{A\}$	Fixed Charges for stranded capacity	Rs. Crore/MW	
$\{E\}=\{D\}\times\{B\}$	<b>Fixed Charges for stranded capacity</b>	<b>Rs. Crore</b>	
{F}	Transmission charges paid	Rs. Crore	
{G}	Actual Energy scheduled	MU	
$\{H\}=\{F\}\div\{G\}$	Transmission charges per unit	Rs./kWh	
{I}	Distribution charges as per Tariff Order	Rs./kWh	
$\{J\}=\{H\}+\{I\}$	Total transmission and distribution charges per unit	Rs./kWh	
{K}	Energy consumed by OA consumers from the DISCOMs	MU	
$\{L\}=\{K\}\times\{J\}$	Transmission and distribution charges paid by OA consumers	Rs. Crore	
{M}	Demand charges recovered by the DISCOMs from OA consumers	Rs. Crore	
$\{N\}=\{M\}-\{L\}$	Demand charges to be adjusted	Rs. Crore	
$\{O\}=\{E\}-\{N\}$	Demand charges to be adjusted	Rs. Crore	
{P}	<b>OA sales</b>	<b>MU</b>	
$\{Q\}=\{O\}\div\{P\}$	Additional Surcharge	Rs./kWh	

7.8.18. From the above orders of the Hon'ble Telungana Electricity Regulatory Commission which is in line with the TANGEDCO calculation and assumptions.

7.8.19. The details of additional surcharge levied by various states are as follows.



Maharashtra	- Rs.1.30 per unit
Haryana	- Rs.1.15 per unit
Gujarat	- Rs.0.60 per unit
Telangana	- Rs.0.52 per unit
Kerala	- Rs.0.60 per unit
Madhya Pradesh	- Rs.0.70 per unit
Rajasthan	- Rs.0.80 per unit

Therefore, TANGEDCO has filed the petition to determine the additional surcharge payable by Open Access consumers before the Commission as per the Regulations in force and the same is in order.

#### 7.8.20. Reply on the remarks of Mr. Selvaraj

7.8.20.1. The petition is filed based on section 42(4) of Electricity Act and Regulation 24 of the TNERC's Grid Connectivity and Intra-State Open Access Regulations, 2014, in which under Regulation 24(4) it is stated that, *"Additional surcharge determined on per unit basis shall be payable, on monthly basis, by the open access customers based on the actual energy drawn during the month through open access"*. Hence the additional surcharge is arrived based on the provision of Regulation.

7.8.20.2. Under Regulation 24(3) it is stated that, *"The distribution licensee shall submit to the Commission on six monthly basis, a detailed calculation statement of fixed cost which the licensee is incurring towards his obligation to supply. The Commission shall scrutinize the statement of calculation of fixed cost submitted by the distribution licensee and obtain objections, if any, and determine the amount of additional surcharge"*. As per the Regulation the petition is filed before the Hon'ble TNERC for determination of additional surcharge. Transmission and STOA charges



are fixed cost incurred for the LTOA and MTOA power purchased for the agreed quantity to provide supply to the consumers.

7.8.20.3. The capacity of available scheduled and stranded capacity details are furnished in the Annexure of the petition as per the approved model of the Gujarat Electricity Regulatory Commission as directed by the Commission. TANGEDCO is claiming the under recovery of fixed cost from the open access consumers as per the regulations of Grid Connectivity and Intra-State Open Access Regulations, 2014.

7.8.20.4. The load variation of 3000 MW is from minimum demand period (00:00 – 05:00 Hrs) to the peak demand period (07:00 - 09:00 & 18:00 - 22:00 Hrs) is also due to OA consumers because even during this minimum demand period they have gone to IEX for power purchase to the tune of 600 MW due to less rates in the IEX, which has led to backing down of all possible sources. Subsequently, they have availed IEX power to the tune of 200 MW at 08:00 Hrs and 40 MW at 09:00 Hrs.

7.8.20.5. It is clearly evident that whenever the rates are less in Power Exchange, the OA consumers availed Exchange power and when the rates are more they availed TANGEDCO power. Hence, the contention of the petitioner that “load variation is not because of the fault of the Open Access consumers” is not correct.

7.8.21. Reply on the remarks of Mr. Neelakandapillai:

The Petitioner has stated that details of the quantum of power purchase stated by the petitioner is net generation off NCTPS stage-II whereas the data provided to the stakeholder for his RTI petition is the details of Gross generation of respective years.

**8. Findings of the Commission on the petition filed by TANGEDCO for determination of Additional Surcharge :**

8.1. The petitioner, in this M.P.18 of 2020 stated that, TANGEDCO has the contracted capacity of 21654 MW. The State's power requirement has created peculiar circumstances, for which the TANGEDCO has tied up considerable quantum of power considering the overall growth and therefore tied up power for upcoming consumers also. On the other hand the open access users are not availing power supply from TANGEDCO and the generation capacity tied up by the TANGEDCO remain idle. In such a situation the TANGEDCO have to pay fixed (Capacity) charges to the Generators as per the terms and conditions of PPA irrespective of utilization of generation of power. During the year 2019-20, SLDC / TANGEDCO had to back down the generation; and consequent to contractual obligations under PPA, the petitioner ended up to pay the total fixed (capacity) charges to the tune of Rs.8521.41 Crores for the period October 2019 to March 2020. In the meantime, Open access consumers are now buying considerable quantum of power under open access and on the other hand TANGEDCO also have tied up considerable quantum of power considering requirement of power in the present and in the future. This has resulted in stranded generation capacity which has caused under recovery of fixed cost.

8.2. The Commission cautiously gone through the petition initially filed by the petitioner before considering for admission of the petition and its maintainability and in result of various directions by the Commission, the petitioner finally submitted the proposal with the claim of Rs.1.23 / kWh for Additional surcharge on Open Access consumers along with the supported documents.

### 8.3. The Provisions for levy of Additional Surcharge under the Electricity Act 2003 –

Under Section 42(4) of the Electricity Act 2003 may be referred as below -

#### *42. Duties of distribution licensee and open access –*

xxxx                      xxxx

*(4) Where the State Commission permits a consumer or class of consumers to receive supply of electricity from a person other than the distribution licensee of his area of supply, such consumer shall be liable to pay an additional surcharge on the charges of wheeling, as may be specified by the State Commission, to meet the fixed cost of such distribution licensee arising out of his obligation to supply.*

8.4. The Commission made the Additional surcharge applicable under the conditions, as stipulated under the TNERC (Grid Connectivity and Intra-State Open Access) Regulations 2014, as below :-

#### *24. Additional Surcharge:-*

*(1) An open access customer, receiving supply of electricity from a person other than the distribution licensee of his area of supply, shall pay to the distribution licensee an additional surcharge on the charges of wheeling, in addition to wheeling charges and cross-subsidy surcharge, to meet out the fixed cost of such distribution licensee arising out of his obligation to supply as provided under subsection (4) of section 42 of the Act.*

*(2) This additional surcharge shall become applicable only if the obligation of the licensee in terms of power purchase commitments has been and continues to be stranded or there is an unavoidable obligation and incidence to bear fixed costs consequent to such a contract. However, the fixed costs related to network assets would be recovered through wheeling charges.*

*(3) The distribution licensee shall submit to the Commission on six monthly basis, a detailed calculation statement of fixed cost which the licensee is incurring towards his obligation to supply. The Commission shall scrutinize the*

*statement of calculation of fixed cost submitted by the distribution licensee and obtain objections, if any, and determine the amount of additional surcharge:*

*Provided that any additional surcharge so determined by the Commission shall be applicable only to the new open access customers.*

*(4) Additional surcharge determined on per unit basis shall be payable, on monthly basis, by the open access customers based on the actual energy drawn during the month through open access:*

*Provided that such additional surcharges shall not be levied in case distribution access is provided to a person who has established a captive generation plant for carrying the electricity from such plant to the destination of his own use.*

8.5. The Commission framed the Open Access provisions in the Regulations to provide the opportunity to the Consumers source the power from anywhere in the Country. And according to the Section 42(2) of the Electricity Act 2003, open access shall be allowed on payment of a Wheeling charges in addition to the cross subsidy surcharge. Thus the consumers are being allowed Open access without any discrimination from any source of power.

8.6. But it is also provided under Section 42(4) of the Electricity Act 2003 that, a consumer or class of consumers receiving supply of power from a person other than the distribution licensee, shall be liable to pay the Additional surcharge, to meet the fixed cost of such distribution licensee arising out its obligation. TANGEDCO in its petition has stated that it has the stranded capacity of 1961.63 MW during October 2019 to March 2020, for which TANGEDCO has to pay fixed (capacity) charges to

the Generators as per the terms and conditions of PPA irrespective of utilisation of generation.

8.7. Though the petitioner has claimed for determination of Additional surcharge on the Open access consumers, under Regulation 24 (2), it is the obligation of the licensee to demonstrate the unavoidable obligation of the licensee to bear fixed costs and the power purchase commitments has been and continues to be stranded.

8.8. TANGEDCO initially submitted the details of its stranded capacity and the gap of fixed (capacity) charges at its own model; after going through the filings, it was directed to furnish necessary detailed affidavit under Gujarat or Haryana ERC model. Under the TNERC's (Grid connectivity and Intra state open access) Regulations, 2014, the petitioner was directed to file its Fixed cost incurred, on six monthly basis based on audited accounts of the TANGEDCO.

8.9. The petitioner filed its Maximum availability, Minimum availability, Average availability, Maximum scheduled, Minimum scheduled, Average scheduled, Capacity not availed (Maximum, Minimum, Average), Open Access allowed (maximum, minimum, average), Capacity stranded due to OA and Net stranded charges recoverable.

8.10. Most of the stakeholders expressed their opinion that the Commission has to take the generation availability, scheduled power and back-down data of each 15 minutes time block for its analysis and; the petitioner has to demonstrate that whether the TANGEDCO's stranded capacity is continuous one and the petitioner's prayer to be considered based on block wise 15 minutes data. The Commission felt it is fair, and it is also in line with the method of other State ERCs. Accordingly, the

petitioner has provided every 15 minutes block wise data of Available capacity, Scheduled capacity, Capacity not availed and OA quantum - to the Commission to arrive at the actual stranded capacity. For the process of this petition, Commission has considered all such details furnished by the TANGEDCO.

8.11. M/s.IEX, M/s.SIMA, M/s.TASMA and M/s.TECA stated that the short term power and renewable power procured was to the tune of 531 MW and 2720 MW during October 2019 to March 2020 and the back down seems to have emerged due to short / medium term power and renewable power purchased by the TANGEDCO rather than open access. Hence it has not been demonstrated there is a continuous stranded capacity on account of open access.

The petitioner, on this replied that, the petitioner faces hardship in maintaining the grid and planning the availability of power, because the OA consumers purchase power from the power exchange when it is available cheap and draw from the Discom without any prior intimation during the peak period. The petitioner due to the instable nature of availing the supply from the TANGEDCO, the petitioner has always been forced to maintain the stranded capacity by purchasing power from the conventional power stations and forced to pay fixed capacity charges. TANGEDCO is duty bound to execute the contracts for purchase of power for such a quantum that they are able to supply to the consumers under various conditions, including outages of the generating units, transmission constraints, peak demand in a particular season considering seasonal load variations and also increase in demand due to addition of new consumers. The STOA & MTOA were carried out to ensure the benefit of public during public exams for schools / colleges in summer.

From the above explanation, we see that, the STOA and MTOA were executed to meet the peak demand during summer and to maintain the readiness to supply the power whenever the Open access consumers return back to discom to avail supply whether it is partially or fully. No other option to the petitioner other than to execute STOA to meet the short term known seasonal variations and the Commission accepts the submission of the Petitioner.

8.12. The Petitioner has the total sanctioned demand for the Sale of power to the tune of (8890+75990) 84880 MW consisting both HT and LT category consumers. From the submissions of the petitioner, we find that, TANGEDCO has the contracted capacity of 21654 MW for power purchase including own generation; during the period from October 2019 to March 2020, as stated by the State Load Despatch centre, maximum availability was 14483.20 MW and the average availability was 11783.01 MW. So the Fixed capacity charges payable by the TANGEDCO can be claimed and restricted to the maximum level of 14483.20 MW only. Discoms are always has its obligation to supply under 42(4) of the Electricity Act 2003. Though it has the huge sanctioned demand of sale of power, the petitioner is managed the liability towards fixed charges restricting to the level to meet its peak demand and forecasted demand during a particular period of time; or otherwise, fixed charges would be manifold than the claimed one. From this, we accept that, the Petitioner is obligated to maintain the readiness of the supply to the consumers under various conditions, including outages of Gen.units, transmission constraints, seasonal load variations and increase in demand due to addition of new consumers. Moreover, it cannot be denied by the stakeholders (Open Access consumers) that OA consumer has chosen a person other than the distribution licensee of its area to supply the

power to him, even well knowing the availability of power in the Distribution licensee's grid, which makes the petitioner's capacity stranded.

8.13. M/s.IEX, M/s.SIMA, M/s.TASMA and M/s.TECA stated that Short term open access charges and Transmission charges shall not be included in the fixed cost obligation. Though TANGEDCO has incurred the Transmission charges for its entire contracted transmission capacity which includes stranded capacity, in its petition the same has not been included for calculation of fixed capacity charges for the period of six months. Similarly, the Commission has not considered the Transmission charges paid by the petitioner towards LTOA/MTOA/STOA contracts furnished under the head "STOA charges" of Rs.420.71 crores for determination of 'total fixed charges'.

8.14. And as stated by some of the stakeholders, there is no need to adjust the fixed component of Cross subsidy surcharge while determining the Additional surcharge, since the CSS and Additional surcharge are levied on account of completely different underlying principles. CSS levied to meet the requirement of current level of cross subsidy of distribution licensee, in other words Additional Surcharge is to be levied to meet the fixed cost of such Distribution Licensee arising out of his obligation to supply and its planned power supply has been stranded due to shifting/switching over of Consumers from Distribution Licensee to Open Access mode.

8.15. The Commission is of the considered view that, unless fixed costs due to stranded capacity are recovered from OA consumers, this burden would be unjustly loaded onto other Consumers of Distribution Licensee. The Commission believes it would be unfair and unwarranted to pass such burden of fixed cost recovery of such stranded cost to other consumers through tariff hike.



8.16. Under Section 42(4) of the Electricity Act 2003, the Additional surcharge shall be levied to meet the fixed cost incurred by the distribution licensee arising out of his obligation to supply. The Additional surcharge shall become applicable only if the obligation of the licensee in terms of power purchase commitments has been and continues to be stranded. Under Regulation 24(2) of Grid connectivity and Intra state open access Regulations, the distribution licensee is obligated to prove the stranded capacity. Therefore, in extract, to justify the claim of Additional Surcharge, the petitioner has to provide the (i) Fixed capacity charges incurred by the petitioner towards the available capacity and (ii) the quantum of continuously stranded capacity of the petitioner. These issues are discussed below in detail.

8.17. Determination of fixed capacity charges incurred by the Petitioner:

The (i) Fixed capacity charges incurred for its own generating stations and (ii) the fixed cost payable towards Power purchase from other sources (with whom the petitioner has two-part tariff PPA), were considered by the TANGEDCO to arrive the stranded fixed capacity charges. The Fixed capacity charges worked out by the petitioner for its own generating stations is an amount of Rs.3842.10 Crores for the period from October 2019 to March 2020. The Statutory Auditor has certified based on the audited Annual Report that these expenditure were incurred by the TANGEDCO in respect of its generating stations for the Oct'2019 to Mar'2020. All these components of fixed cost were taken into consideration for preliminary true-up.

8.17.1. The Station-wise Fixed capacity expenses incurred by the TANGEDCO for the period from October 2019 to March 2020 were taken into consideration by the Commission; further, the petitioner has submitted the component wise details in respect of its own generating stations as given in Annexure-1.

8.17.2. Every component of these details were taken for scrutiny by the Commission based on the details certified by the Statutory auditor. As the true-up of expenditure and revenue is pending for the year from 2016-17 to till date, the Commission decided to carry out preliminary true up of fixed cost for the period from October 2019 to March 2020. From the certified details obtained from the TANGEDCO, certain items of the Fixed cost were disallowed for the reasons stated below, to arrive the Fixed capacity charges for the period from October 2019 to March 2020.

**Table-1 : Calculation of Fixed cost i.r.o. TANGEDCO's own generating stations for the period from October 2019 to March 2020**

<b>Fixed cost components</b>	<b>Fixed cost claimed</b>	<b>Fixed cost disallowed by the Commission</b>	<b>Net Fixed cost approved (own gen.units)</b>
	<b>(Rs.in Cr.)</b>	<b>(Rs.in Cr.)</b>	<b>(Rs.in Cr.)</b>
Depreciation	461.02	-	461.02
Interest on Loan capital	2095.39	-	2095.39
Interest on Working capital	267.61	-	267.61
Other Interest & Finance charges	14.34	-	14.34
Return on Equity	258.34	258.34	0.00
O&M expenses	655.67	-	655.67
Other debits	1.66	1.66	0.00
Extra ordinary charges	138.42	138.42	0.00
<b>Subtotal</b>	<b>3892.45</b>	<b>398.42</b>	<b>3494.03</b>
Other income	50.35	-	50.34
<b>Net fixed cost - Own generating stations</b>	<b>3842.10</b>	<b>398.42</b>	<b>3443.69</b>

8.17.3. The petitioner has stated that total fixed charges incurred during the six months period is 3842.10 Crores. On verification of the above submissions, it is considered that certain expenses are to be considered to be disallowed in line with

the true up data for the year 2015-16 and approved ARR for the year 2018-19 of the Commission's Tariff Order dated 11.08.2017. Component wise data has been verified as below:-

8.17.4. Depreciation, Interest on Loan capital, Interest on Working Capital, O&M expenses and other interest and finance charges:

The petitioner has claimed Depreciation, Interest on Loan capital, Interest on Working capital, O&M expenses and Other Interest & Finance charges to the tune of Rs.461.02 Crores, 2095.39 Crores, 267.61 Crores, 655.67 Crores and 14.34 Crores respectively. These fixed charges claimed for the period of six months are found reasonable while comparing with the cost approved for the year 2015-16 based on the normative of TNERC (Terms and conditions for determination of Tariff) Regulations 2005. In the process of Suo-motu Tariff Order dt.11-12-2014 and subsequent Tariff Order dt.11-08-2017, the TANGEDCO has not furnished its bifurcated GFA or separated capital and revenue account; therefore Commission could not demark the nature of loan liability, however the interest on loan is considered as claimed, since the Commission has not at all allowed any Return on Equity to the TANGEDCO so far.

8.17.5. Return on Equity :

The petitioner has claimed RoE of Rs.258.34 Crores to be approved under the Fixed capacity charges to arrive the stranded capacity charges. In this connection, it would be appropriate to mention the earlier observation of the Commission on the claim of RoE by the TANGEDCO. In the T.O. dated 11-08-2017, the Commission stated that, the Commission is of the view that TANGEDCO is mixing the revenue account with capital account and the equity approved may be again diverted to Revenue account; the actual borrowings are significantly higher than capital expenditure. Hence, the

Commission in line with the decision taken in Suo motu order dated 11<sup>th</sup> December 2014, adopted the same approach while approving the RoE. The Commission finally observed under para 3.10.8 of the T.O. dt.11-08-2017 that, “Funding of Capital expenditure has been considered entirely through loans and hence, no RoE was approved for the FY 2015-16. Here, in this case too, the petitioner has not demonstrated the portion of equity deployed in the operation of its business. Hence, the Commission hereby decides to disallow the cost claimed under the RoE fully.

8.17.6. Extra Ordinary charges, Other Debts:

The petitioner has claimed an amount of Rs.138.42 Crores and Rs.1.66 Crores under the head Extra ordinary charges and Other debts respectively. TNERC's Tariff Regulations has neither defined any such 'Extra ordinary charges' or 'Other Debts' to be allowed and nor fixed any norms. The petitioner also not justified on its claims under this extra ordinary charges in detail. Therefore, the Commission hereby disallowed the claim made under these heads.

8.17.7. Moreover, if there is any variation in the fixed cost details considered in this order, the same will be duly considered in the next petition for determination of additional surcharge based on the final true up accounts.

8.17.8. Net fixed capacity charges (own generating stations) calculated under the above Table-1, of Rs.2710.30 is to be considered for arriving the stranded capacity charges.

8.18. Calculation of Fixed capacity charges incurred by the petitioner towards power purchase:

8.18.1. To arrive at the 'Fixed capacity charges' of the stranded capacity, admissible total fixed capacity charges incurred by the petitioner is calculated as below:-

The TANGEDCO itself has not considered Rs.2013.11 Crores incurred towards Transmission charges under the 'Fixed capacity charges'. Therefore, in this calculation, the charges considered under "STOA charges" are also in the nature of Transmission charges towards LTOA, MTOA and STOA contracts, Rs.420.71 crores is not considered under 'Fixed capacity charges'.

8.18.2. The fixed charges of TANGEDCO's own generating stations were arrived in the earlier para based on the TNERC Tariff Regulations 2005. The Central Generating Stations and other Inter State power purchase are as per the claims made by CGS and based on Hon'ble CERC approved tariff rates, therefore it is taken as furnished; likewise, the fixed capacity charges paid to the other LTOA's are the charges as discovered through competitive bidding and already approved by the Commission, and the same has been considered as it is.

**Table-2 : Calculation of Consolidate Fixed capacity charges for the period from October 2019 to March 2020 (All the sources of Power purchase)**

Sl. No.	Particulars	Quantum (MU)	Fixed Cost claimed by the TANGEDCO (Rs.Cr.)	Fixed cost disallowed by the Commission (Rs.Cr.)	Fixed cost approved by the TNERC (Rs.Cr.)
<b>1</b>	<b>Own Generating Stations</b>				
	TTPS	2000.92	582.59	37.28	545.31
	MTPS	1750.32	385.04	19.54	365.50
	NCTPS	1401.84	635.81	108.79	527.02
	MTPS-II	1045.90	296.74	34.30	262.45
	NCTPS-II	2542.02	660.25	83.81	576.44
	Thiruma Kottai GTPS	126.51	107.40	6.92	100.49
	Kuttalam-GTPS	94.95	95.10	6.65	88.45
	Basin Bridge-GTPS	0.00	153.63	20.38	133.26
	Valuthur-GTPS	574.97	157.84	10.77	147.07
	Erode-HPS	611.33	229.43	27.94	201.49

	KadamParai-HPS	537.40	109.49	7.92	101.58
	Kundah-HPS	1191.47	249.08	25.56	223.52
	Tirunelveli-HPS	624.23	179.68	8.59	171.09
	<b>Sub Total</b>	<b>12501.86</b>	<b>3842.10</b>	<b>398.42</b>	<b>3443.68</b>
<b>2</b>	<b>CGS</b>				
	Neyveli Lignite Corpn Ltd. TS-II	1376.85	115.79	0	115.79
	Neyveli Lignite Corpn Ltd. Expn.TS-I	742.40	76.15	0	76.15
	Neyveli Lignite Corpn Ltd. Expn.TS-II	352.38	97.03	0	97.03
	NLC/NNTPP	345.25	76.84	0	76.84
	NTPC/SR	1502.06	123.36	0	123.36
	NTPC/SR STAGE –III	383.08	32.98	0	32.98
	NTPC/KUDIGI	262.88	206.56	0	206.56
	NTPC/TALCHER	1719.76	137.63	0	137.63
	NTPC/ER	116.70	11.10	0	11.10
	NTPC/SIMHADRI ST-2	437.77	117.19	0	117.19
	NTECL/VALLUR	2155.55	706.35	0	706.35
	NTPL	1103.63	254.02	0	254.02
	Kudankulam Nuclear Power Corpn.	2935.85	0.00	0	0.00
	NPC/MAPS	560.78	0.00	0	0.00
	NPC/KAIGA	828.47	0.00	0	0.00
	<b>Sub Total</b>	<b>14823.41</b>	<b>1955.00</b>	<b>0</b>	<b>1955.00</b>
<b>3</b>	<b>IPP</b>				
	TAQA (STCMS)	662.62	116.31	0	116.31
	LANCO Power (Aban co)	330.44	33.21	0	33.21
	PIONEER Power co. (Penna)	141.25	12.92	0	12.92
	<b>Sub Total</b>	<b>1134.31</b>	<b>162.44</b>	<b>0</b>	<b>162.44</b>
<b>4</b>	<b>Renewable</b>				
	Windmill	434.16	0.00	0	0.00
	Co-generation	170.65	23.37	0	23.37
	Biomass	1.80	0.26	0	0.26
	Captive generation	7.70	0.00	0	0.00
	Solar	2092.43	0.00	0	0.00
	UI Power	270.98	0.00	0	0.00
	<b>Sub Total</b>	<b>2977.71</b>	<b>23.63</b>	<b>0</b>	<b>23.63</b>
<b>5</b>	<b>Traders-MTOA</b>				
	PTC India Ltd.	677.98	0.00	0	0.00
	Jindal Case1 Bidding	1171.93	0.00	0	0.00
	<b>Sub Total</b>	<b>1849.91</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>
<b>6</b>	<b>Traders-LTOA</b>				
	Coastal Energen Pvt. Ltd.	1476.70	351.14	0	351.14
	Ind-Barath Energy	180.34	42.46	0	42.46
	Reliance	1743.56	349.77	0	349.77
	PTC India Ltd.	362.25	108.04	0	108.04

	Dhariwal Infrastructure Ltd.	371.14	53.94	0	53.94
	DB Power Ltd.	821.20	175.44	0	175.44
	IL&FS Tamil Nadu Power	1962.37	476.53	0	476.53
	Bharath Aluminium	773.91	81.51	0	81.51
	KSK Mahanadi Power	1746.80	357.88	0	357.88
	GMR Energy Trading Ltd.	605.91	120.82	0	120.82
	Nvvn Solar	14.33	0.00	0	0.00
	<b>Sub Total</b>	<b>10058.50</b>	<b>2117.52</b>	<b>0</b>	<b>2117.52</b>
<b>7</b>	<b>Traders –STOA</b>				
	Manikaran Energy	213.23	0.00	0	0.00
	Arunachel Power	73.38	0.00	0	0.00
	POSOCO	73.38	0.00	0	0.00
	Sembcorp Gayatri Power	143.52	0.00	0	0.00
	<b>Sub Total</b>	<b>503.50</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>
<b>8</b>	<b>STOA Charges</b>	0.00	420.71	420.71	0.00
	Power Exchanges	1825.06	0.00	0	0.00
	<b>Sub Total</b>	<b>1825.06</b>	<b>420.71</b>	<b>420.71</b>	<b>0.00</b>
	<b>Grand Total</b>	<b>45674.26</b>	<b>8521.40</b>	<b>819.13</b>	<b>7702.27</b>

**8.19. Determination of stranded capacity for the period Oct'2019 to Mar'2020 (based on 15 minutes block wise data) :**

8.19.1. Under the provisions of Regulation 24 of the TNERC Grid Connectivity and Intra State Open Access Regulations 2014, the Open access consumer shall pay to the distribution licensee, to meet out the fixed cost, an additional surcharge whenever receiving supply from a person other than the distribution licensee. In this connection, the licensee is obligated to demonstrate that its power purchase commitments has been and continued to be stranded. The licensee shall have to submit a detailed calculation statement on six monthly basis.

8.19.2. To ascertain whether the distribution licensee's committed capacity is stranded, 15 minutes block wise data for the period from October 2019 to March 2020 was collected from the petitioner duly certified by the State Load Despatch Centre.

8.19.3. The data furnished by the SLDC was carefully gone through by the Commission. The Block wise 'Availability of generation' is compared with the 'Scheduling of the energy' and the difference is considered as the 'capacity not availed'

8.19.4. The block wise energy scheduled by the Open Access consumers is compared with the stranded capacity i.e., 'capacity not availed' on the Distribution licensee's part; the comparison is made to justify that since the claim is made only from the Open access consumers. In every block, the least of the 'OA scheduled energy' or 'Capacity not availed' is considered to arrive at the 'Average stranded capacity' for the entire period of six months i.e., October 2019 to March 2020. The data furnished in this petition is scrutinised with reference to the SLDC's data and corrected wherever required. From this comparison, we find that, there is an average stranded capacity of 557.55 MW during the six months period.

#### **8.20. Approach for the determination of Additional surcharge:**

8.20.1. The Open Access consumer is liable to compensate to the distribution licensee to the extent of fixed capacity charges obligated by the licensee for such quantum of average stranded capacity due to OA consumer. Total fixed capacity charges of this average stranded capacity is recoverable from the Open access consumers with due adjustment of net 'Demand charges' paid by such OA consumers, as given in the Table-3 below.

8.20.2. In this exercise, the commission has not considered the request of the petitioner to consider the 'maximum OA allowed' quantum as the actual stranded



capacity; since, it cannot be construed as continuously stranded capacity throughout the period of six months. On having block wise data, it would be fair that to arrive the average of the stranded capacity as described under para 8.19.4.

8.20.3. The scheduled open access energy and scheduled TANGEDCO energy have been considered to arrive the stranded capacity in the given calculation table. Therefore, net recoverable stranded cost shall have to be divided by the scheduled Open access energy only, and not based on actual energy utilised/adjusted as claimed (1969.21 MU) by the petitioner. The petitioner has scheduled 1915 MU of Non-RE power (as stated by SLDC) and 309.29 MU of RE power, therefore the total OA scheduled quantum of 2224.29 MU is considered for the calculation by the Commission.

**8.21. : Determination of Additional surcharge payable by Open access consumers:**

**Table-3**

S. no.	Description	Nomenclature	Unit	Submitted by TANGEDCO	Approved by TNERC
1	Contracted Capacity	A	MW	21654.00	21654.00
2	Maximum Availability	B	MW	14588.94	14483.20
3	Minimum Availability	C	MW	10199.01	7767.59
4	Average Availability	D	MW	12758.81	11783.01
5	Maximum Scheduled	E	MW	13805.68	13826.93
6	Minimum Scheduled	F	MW	7337.51	5355.46
7	Average Scheduled	G	MW	10797.18	9826.75
8	Capacity not availed (Max)	H	MW	4287.36	5209.62
9	Capacity not availed (Min)	I	MW	239.67	48.00
10	<b>Capacity not availed (Avg.)</b> i.e., The average of block-wise (Capacity available - Scheduled capacity)	J	MW	1961.63	1956.26
11	OA scheduled (Max)	K	MW	609.56	766.37
12	OA scheduled (Min)	L	MW	330.12	69.64
13	OA scheduled (Avg.)	M	MW	609.56	496.77

14	<b>Capacity stranded due to OA consumer</b>	N	MW	609.56	<b>557.55</b>
15	Total Fixed Charge	O	Rs. Cr	8521.41	7702.27
16	Fixed charges per MW available	$P=O/D$	Rs. Cr	0.67	0.65
17	Fixed charges of stranded capacity	$Q=P*N$	Rs. Cr	407.11	<b>364.46</b>
18	Transmission Charges paid	R	Rs. Cr	2013.11	2433.82
19	Energy Scheduled	S	MU	48693.00	43159.00
20	Transmission Charges per kWh	$T=R/S*10$	Rs/Kwh	0.41	0.56
21	Distribution Charges (Wheeling charges as approved in the Tariff Order)	U	Rs/Kwh	0.21	0.21
22	Total T & D Charges per kWh	$V=T+U$	Rs/Kwh	0.62	0.77
23	Energy Consumed by OA consumer from Discom (Gross consumption less OA scheduled energy)	W	MU	2669.24	2017.80
24	T & D charges payable to Discoms by OA consumers	$X=W*V/10$	Rs. Cr	166.54	156.16
25	Demand Charges Recovered by Discoms from OA	Y	Rs. Cr	330.56	330.56
26	Demand Charges to be Adjusted	$Z=Y-X$	Rs. Cr	164.02	174.40
27	Net stranded fixed charges recoverable	$AA=Q-Z$	Rs. Cr	243.10	190.06
28	OA scheduled energy	AB	MU	1969.21	2224.29
29	<b>Gap of Additional surcharge calculated</b>	<b><math>AC=AA/A</math> <b><math>B*10</math></b></b>	Rs/Kwh	<b>1.23</b>	<b>0.85</b>

8.21.1. The petitioner has furnished the Capacity Availability, Scheduled, not availed and Open access allowed details (Maximum, minimum, Average) based on monthly average basis. Most of the stakeholders have suggested to consider the 15 minutes block wise data to ascertain the stranded capacity if any. In this connection, it would be pertinent to mention that Telangana ERC has considered the 15 minutes block wise data to arrive the average stranded capacity. The Gujarat ERC has considered the hourly data comparison to arrive the average stranded capacity and calculated the Additional surcharge.

Therefore, the Commission has considered the 15 minutes block wise data in respect of the Available capacity, Scheduled capacity, OA scheduled capacity, etc.,

From the scrutiny of these data, it is found that, the average unavailed capacity during the October 2019 to March 2020 is 1956.26 MW

#### **8.21.2. OA scheduled energy:**

The petitioner has considered that the capacity stranded due to OA consumer is 609.56 MW; the petitioner has considered the 'maximum scheduled quantum of OA Power' as the capacity stranded.

In this regard, it would be pertinent to state that, the maximum scheduled quantum of 609.56 MW cannot be said to be the stranded capacity throughout the period of six months, it may not be fair. Therefore, the actual OA scheduled energy have been taken into consideration based on the block wise data given.

#### **8.21.3. Capacity stranded due to OA consumer:**

In every block, the least of the 'OA scheduled energy' or 'Capacity not availed' is considered to arrive at the 'Average stranded capacity' for the entire period of six months i.e., October 2019 to March 2020. Based on this comparison, 557.55 MW has been arrived as stranded capacity for which the OA consumer is entitled to compensate to the Distribution licensee.

#### **8.21.4. Total Fixed charges:**

The Petitioner has calculated Rs.8521.41 Crores as its Fixed capacity charges incurred during the said period of Oct'19 to Mar'20. The Commission has gone through each element of Fixed charges and allowed Rs.7702.27 Crores as calculated under Table-2 above. Therefore, the Fixed charges per MW arrived by the petitioner for Rs.0.67 Crores is not accepted; it has been revised to Rs.0.65 Crores/MW based on the details revised under Table-3.

**8.21.5. Energy scheduled:**

The Scheduled energy furnished by the petitioner is 48693 MU; but the petitioner has not furnished any break up for this scheduled energy. Hence, we could not verify the correctness of the data furnished. On verifying with the SLDC data, it is found that, during the period from October 2019 to March 2020, TANGEDCO has scheduled the energy for the quantum of 43159 MU only, therefore, it has been taken into calculation of per unit Transmission charges incurred by the Licensee.

**8.21.6. Transmission charges :**

The petitioner has considered Rs.2013 Crores as its actual Transmission charges, but the Transmission charges paid towards LTOA/MTOA/STOA under the head "STOA charges" has been erroneously considered by the petitioner under "Fixed capacity charges". Therefore, the STOA charges paid to tune of Rs.420.71 Crores has been disallowed under "Fixed capacity charges" and taken into consideration under Transmission charges. The total Transmission charges has been arrived at Rs.2433.82 Crores and Transmission charges incurred per unit by the petitioner is arrived as Re.0.56.

8.21.7. Energy consumed by OA consumer from Discom is arrived at 2017.80 MU i.e., Gross consumption less OA scheduled energy. The petitioner's claim of 2669.24 MU is not considered since it has considered both the OA consumption as well as power drawn from Discom. The Net demand charges to be adjusted from the Stranded fixed capacity charges is Rs.174.40 Crores based on the Transmission & Distribution charges calculated under Sl.no.24 in the Table-3 above.

8.21.8. Based on the above approach, a gap for recovery of Additional surcharge is arrived at the rate of Re.0.85 / kWh.

8.21.9. The Additional surcharges determined by the others State ERCs are given as below:

State	Addl.surcharge (Rs./Unit)	Cross subsidy surcharge (Rs./Unit)
Maharashtra	1.30	1.70
Haryana	1.15	0.78
Gujarat	0.60	1.41
Telangana	0.52	1.66
Kerala	0.60	1.23
Madhyapradesh	0.674	1.49
Rajasthan	0.80	1.78
Karnataka	0.80	1.79
Tamilnadu	0.85 (calculated)	1.67

From the above details, the Additional surcharge determined by the Commission in this Order is comparable to the rates determined by other State ERCs. On comparison, the rate now determined is so reasonable and lesser than some of the States; even in the consumer point of view, it is competitive to them with the consumers of other States.

8.21.10. It is also to be ensured that, the Additional surcharge rate so calculated is as per the guidelines prescribed under the National Tariff Policy 2016 (refer - para 8.5.1)

*“8.5.1 National Electricity Policy lays down that the amount of cross-subsidy surcharge and the additional surcharge to be levied from consumers who are permitted open access should not be so onerous that it eliminates*

*competition which is intended to be fostered in generation and supply of power directly to the consumers through open access”*

It is understood from the given guidelines of the policy that, the levy of Cross subsidy surcharge and Additional surcharge on the Open access consumer shall not eliminate the competitiveness of the electricity price available before the consumer.

Therefore, the Commission is more concern about the competitiveness of the price of the electricity available to the consumer. In this regard, the Commission taken into consideration of the price of the Open Access power available to the consumer through 3<sup>rd</sup> party sale or Exchanges and other charges viz., Transmission charges, Scheduling charges, System operation charges and Cross Subsidy surcharge payable by every OA consumer against the Tariff charges payable to the Distribution licensee.

8.21.11. We have our considered view that, if the Additional surcharge so calculated at Re.0.85 per Unit as above is fixed, the all inclusive price of the electricity may be higher than the electricity tariff now chargeable to the consumer by the Distribution licensee. On this score, the Commission taking into account the interest of both the parties in fixation of the Additional Surcharge, we have decided to levy 80% of the Additional surcharge so calculated above shall be recoverable from the Open Access consumers i.e., Re.0.70 per Unit ( $\text{Re.0.85} \times 80\% = \text{Re.0.68}$  rounded off to Re.0.70).

#### **8.22. Applicability of Additional Surcharge:**

In view of the above observations, the Commission decides that –

- ✓ The Additional Surcharge as determined under the Table-3 above is applicable to the consumers who purchase the power through Third party Sale and power exchanges (viz., IEX, PXI, etc.,)
- ✓ The Open Access consumers shall pay the Additional Surcharge at the rate of Re.0.70 per kWh on the quantum of the electricity scheduled by them.
- ✓ The additional surcharge of Re.0.70 per kWh is collectable by the petitioner TANGEDCO from 16.4.2021 to 30<sup>th</sup> September 2021.

**8.23. Directions to the Tamil Nadu Generation and Distribution Corporation Limited:**

TANGEDCO is directed to file the petition, to determine the applicability of the Additional Surcharge, on six monthly basis as directed under Regulation 24(3) of the TNERC Grid Connectivity and Intra State Open Access Regulations. Therefore, even there is no stranded capacity, TANGEDCO shall have to file the necessary details as considered in this petition periodically.

TANGEDCO shall obtain the 15 minutes block wise data in respect of the Capacity available, Power scheduled by the TANGEDCO, Power scheduled by the Open Access consumers (for both Non-Renewable energy & Renewable energy), so as to file the details at the time of filing the petition for Additional surcharge.

TANGEDCO shall strive to maintain the optimum availability of power, so as to avoid the payment of fixed charges on the stranded availability.

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

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

/True Copy /

Secretary  
Tamil Nadu Electricity  
Regulatory Commission





Annexure-1

Summary of Fixed Cost of (Own Generation) from Oct-19 to Mar-20 (Rs. Crore)												
S no.	Name of the plant	Depreciation	Interest on loan capital	Interest on Working Capital	Other Interest and Finance Charges	Return on Equity	Operation and Maintenance Expenses	Other Debits	Prior period credits / charges	Extra Ordinary Charges	Other Income	Total Annual Fixed Cost
1	TTPS	41.04	326.71	50.54	3.80	-	137.37	-	0.00	-	14.14	545.31
2	Mettur TPS	17.11	196.54	45.66	3.02	-	120.83	-	0.00	-	17.65	365.50
3	NCTPS	18.18	347.67	38.95	1.93	-	125.23	-	0.00	-	4.94	527.02
4	MTPS-II	42.74	145.36	29.50	0.86	-	54.74	-	0.00	-	10.74	262.45
5	NCTPS-II	218.50	215.93	56.66	1.03	-	86.96	-	0.00	-	2.64	576.44
6	Thiruma Kottai GTPS	9.77	78.89	4.26	0.07	-	7.51	-	0.00	-	0.00	100.49
7	Kuttalam-GTPS	12.32	67.43	3.19	0.16	-	5.36	-	0.00	-	0.00	88.45
8	Basin Bridge-GTPS	0.00	126.72	6.54	0.00	-	0.00	-	0.00	-	0.00	133.26
9	Valuthur-GTPS	23.31	104.47	9.37	0.07	-	9.86	-	0.00	-	0.00	147.07
10	Erode-HPS	20.34	145.81	8.22	1.20	-	25.92	-	0.00	-	0.00	201.49
11	KadamParai-HPS	6.38	71.95	3.02	0.56	-	19.90	-	0.00	-	0.22	101.58
12	Kundah-HPS	21.05	163.02	7.12	0.88	-	31.46	-	0.00	-	0.00	223.52
13	Tirunelveli-HPS	30.26	104.93	4.61	0.76	-	30.53	-	0.00	-	0.00	171.09
14	<b>Total Generation</b>	<b>461.02</b>	<b>2095.39</b>	<b>267.61</b>	<b>14.34</b>	<b>-</b>	<b>655.67</b>	<b>-</b>	<b>0.00</b>	<b>-</b>	<b>50.34</b>	<b>3443.68</b>