

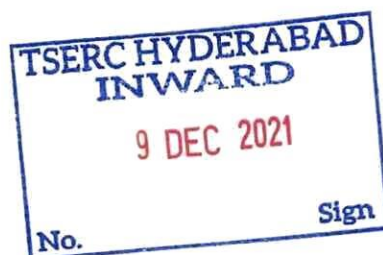


SARVOTHAM CARE

Office : 1-20-248, Umajay Complex,
Rasoolpura, Secunderabad - 500 003. INDIA
Tel: EPABX : +91 40 27903226, 66575454
F a x : + 9 1 4 0 2 7 9 0 8 7 0 8
Email : umajay@sarvothamcare.com

8th December,2021.

To,
The Commission Secretary,
TSERC, 5th Floor, 11- 4- 660, Singareni Bhavan,
Red Hills, Hyderabad- 500 004



Dear Sir,

Sub:- Submission of comments, Objections and suggestions in the matter of approval of model connection agreement as per TSERC Regulation No.4 of 2018- Reg.

Insofar as electricity generated from renewable sources of energy is concerned, the provisions of the act contained in the preamble, section 61(h), and 81(1)(e) requiring promotions of such sources of energy must be given due consideration.

With reference to the public notice, inviting comments, suggestions, and objections on the subject matter, we are submitting the following points for the consideration of Hon'ble Commission.

S.no	Comments/Suggestions/Objections
1	Telangana State Electricity Grid Code 2018, clause 13.1 stipulates that standard format of application shall be prepared by STU. Request this STANADARD FORMAT that covers all scenarios under draft connection agreement be published.
2	It is settled legal Jurisprudence that any statute, regulation or order shall be made applicable prospectively. Therefore, this connection agreement shall be made applicable prospectively i.e. for projects getting sanctioned/commissioned after this connection agreement is approved by this Honourable commission.
3	Clause 2.2(b) mentions that unless there is a commercial arrangement between the parties regarding evacuation of power, generator shall not inject/draw power from/into IN-STS network. Challenge: 1. What is this commercial arrangement in case of Solar Open access plants?? 2. At what stage of project development generator needs to enter this commercial arrangement?? 3. What are the pre-requisites and application to enter such commercial arrangement?? 4. What are the timelines for DISCOM/TRANSCO to enter such commercial arrangement once such application received? 5. Generator should be allowed to inject/draw power into the grid even application for such commercial arrangement has been requested/ in-progress. Unless above questions are categorically answered, this COMMERCIAL ARRANGEMENT requirement can be left to interpretations as per convenience of DISCOM/TRANSCO.

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- BTS OFFICES
- SOLAR POWER

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Phone : 040 66636566



4	<p>Page 20.Clause 2.2(j) The feature talked about in this clause requires a lot of capital investment and running operational expenses from generator side. as such data from small solar plants that run at less than 20% of PLF is of least significance for SLDC to manage. Hence we request commission to consider a capacity of more than 10MW for solar projects to make this requirement mandatory. Solar projects less than 10 MW capacity shall be exempted from providing such telemetering and other provisions contemplated under this clause.</p>
5	<p>@Page21.Clause 2.2(m) (viii),(ix) & (x) Talks about certain additional features of Solar Inverters as per 2019 regulations. This requirement shall be made applicable prospectively i.e. for solar projects getting commissioned after approval of this connection agreement as some of these features are not possible to retrofit and might require replacement of entire solar inverter, that calls for complete change of project design architecture, which is practically not possible after such project is commissioned. As a matter of fact Central electricity Authority (Technical Standards for connectivity to the grid) (Amendment) regulations,2019 at clause B3, has provided clarification that generating stations already commissioned before the regulation or commissioned with 6(six) months of publishing of this regulations shall comply with provisions as if they were not amended"</p>
6	<p>@Page22.Clause 2.5(b) Once the solar plant is commissioned, DISCOM/TRANSCO becomes the owner of metering equipment as per metering code and hence putting the scope of NABL testing on the user is not appropriate as user is no more the owner of meters after commissioning of the plant.</p>
7	<p>@Page 23.Clause 2.8 There is a great sense of confusion created by DISCOM/TRANSCO on Power Quality subject. The Principle regulation CEA(Technical standards for connectivity to the grid) regulation 2007 stipulates "The project of the generator shall not cause Voltage and current Harmonics on the grid which exceeds the limit specified in IEEE519 Satndards" Amendment regulation 2013(applicable for generating stations using inverters such as solar) stipulates: "Harmonics Current injections from a Generating station shall not exceed the limits specified in IEEE519" This regulation takes into account of the fact that, solar inverters take grid voltage anf frequency as reference to operate and they are not voltage source but a current source and hence mandates only to limit current harmonics from a generating station during day time/ generation time. In this context, IEEE1547 standard that was published in 2018, specifically for fuel cells and photovoltaics up to 35kv. In this context, we request Honourable commission to include following portion at clause 2.8 1. For Generating stations using inverters, only current harmonics injections shall not exceed limits under IEEE Standard(As per CEA technical standards for connectivity to the grid Amendment regulation 2013) 2. IEEE1547 standard has to be used for Solar Projects connected at 33kv and below. Here in this standard they have allowed slightly higher limits for higher & even order harmonics only. For your ready reference both of the comparative standard values are shown in below table 1.</p>

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HARMONIC NUMBER	STANDARD			
	IEEE 519		IEEE1547	
	ODD	EVEN	ODD	EVEN
2 TO 10	4	1	4	2H=1,4H=2,6H=3, 8H=4
11 TO 16	7	0.5	2	2
17 TO 22	1.5	0.375	1.5	1.5
23 TO 34	0.6	0.15	0.6	0.6
35 TO 50	0.3	0.075	0.3	0.3

8	Page25, Clause (b) Only if it is warranted in our bay area.
9	Page25, Caluse (c) we shall consider only after submission of proof that the damage occurred due to our negligence.

Thanking you Sir,

For Sarvotham Care,

Authorised Signatory.



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