

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

Date: 07-12-2021

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 the 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 promotion 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 STANDARD FORMAT that covers all scenarios under draft connection agreement be published.
2	It is a 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	@Page 7. Point 20 of Definitions section defines installed capacity of solar plant in terms of AC capacity in KW. Challenge: This definition causes confusions and leaves with discretionary interpretation of DISCOMS/TRANSCO whether it should be AC transformer capacity of inverter capacity that need to be considered. Change suggested: For solar the AC capacity is summation of name plate capacities of all installed inverters. The design and installation of solar capacity on DC side should be left to generator. The relationship between DISCOM/TRANSCO is only in terms of AC Capacity, which is in line with Advisory/Clarifications provided by Grid Solar Division



	of Ministry of New & Renewable Energy, Government of India
4	<p>@Page19. 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.</p> <p>Challenge:</p> <ol style="list-style-type: none"> (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 is received? (5) Generator should be allowed to inject/draw power into grid even application for such commercial arrangement has been requested/in-progress. <p>Unless above 4 questions are categorically answered, this COMMERCIAL ARRANGEMENT requirement can be left to interpretations as per convenience of DISCOM/TRANSCO.</p>
5	<p>@Page20. Clause 2.2 (j)</p> <p>The features talked about in this clause requires a lot of capital investment and running operational expenses from Generator side. As such such data from small solar plants that run at less than 20% PLF is of least significance for SLDC to manage. Hence, we request commission to consider a capacity of more than 10 MW 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>
6	<p>@Page21. Clause 2.2 (m) (viii), (ix) & (x)</p> <p>Talks about certain additional features of solar inverters as per 2019 regulations.</p> <p>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.</p> <p>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>
7	<p>@Page22. Clause 2.4</p> <p>Talks about responsibility of both parties to substation grounding. As such generator is paying the applicable wheeling and transmission charges that includes</p>



	<p>maintenance of substation and its equipment to DISCOM/TRANSCO and hence generator shall be relieved of this responsibility.</p>
8	<p>@Page22. Clause 2.5 (b)</p> <p>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>
9	<p>@Page 23. Clause 2.8</p> <p>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) regulations, 2007 stipulates:</p> <p><i>"The project of the generator shall not cause voltage and current harmonics on the grid which exceed the limits specified in IEEE 519 standards"</i></p> <p>Amendment regulation 2013 (Applicable for generating stations using invertors such as solar) stipulates:</p> <p><i>"Harmonic current injections from a generating station shall not exceed the limits specified in IEEE 519"</i></p> <p>This regulation takes into account of the fact that, solar invertors take grid voltage and 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.</p> <p>In this context, IEEE 1547 standard that was published in 2018, specifically for Fuel cells and photovoltaics upto 35 KV.</p> <p>In this context, we request Honourable commission to include following portion at clause 2.8</p> <ol style="list-style-type: none"> 1. For generating stations using invertors, only current injections shall not exceed limits under IEEE standard (As per CEA Technical Standards for connectivity to the grid Amendment regulations 2013) 2. IEEE 1547 standard has to be used for solar projects connected at 33KV and below.
10	<p>@Page26,27. Clause 2.12 (d) (i), (ii) & (iii)</p> <p>Deals with Bay and Line maintenance charges and methodology for O&M expenses escalation.</p>





We draw Honourable Commission's attention to the Order on Transmission Tariff for 4th Control Period (FY2019-20 TO FY2023-24) Dated: 20-03-2020 & Order on Wheeling Tariff for 4th Control Period (FY2019-20 TO FY2023-24) Dated: 29-04- 2020, wherein DISCOM/TRANSCO has mentioned revenue requirement for the universe of bay's and transmission lines installed without exception to the Bays & transmission lines belonging to generators and consequently respective wheeling and transmission tariffs are determined. As a matter of fact, DISCOMs/TRANSCO has not included non-tariff income received from charges so collected so far from generators in the subject matter.

Therefore, when generators are already paying applicable wheeling/transmission charges why should they be paying line & bay maintenance charges again.

This is double charging the generator for the same work and hence generator should be relieved from paying such charges.

For Arhyama Solar Power Pvt Ltd,

Authorized Signatory.

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Copy to:-

The Chief Engineer/Commercial & RAC/TSTRANSCO