

Before the Tamil Nadu Electricity Regulatory Commission

In the matter of:

Consultative paper on procurement of solar power by the distribution licensee and related issues of open access

Submission by Prayas (Energy Group), Pune

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The Tamil Nadu Electricity Regulatory Commission (TNERC) issued a consultative paper to discuss the approach on procurement of solar power by the distribution licensee and the related issues of open access (OA) on 27th February 2021, and invited public comments on the same.

The draft proposes some positive measures such as the procurement of solar power by the DISCOM through competitive bidding, recognising the importance of competitive tariffs towards the interests of the consumer and licensee. This should be continued in the future and made the default mode of procurement. Additionally, the TNERC should initiate proceedings to set the ceiling tariff to be applicable for competitive procurement under component A/C of the KUSUM scheme. The Commission could also consider directing the DISCOM to initiate competitive bidding based procurement of renewable energy (RE)+storage capacity in the near future.

In addition to this, Prayas (Energy Group) has some comments towards effective implementation of the procurement mechanism and ensuring clarity of process. We also have some suggestions with regard to addressing existing and future concerns, towards a robust RE sector. These are listed below:

1. Provision of banking for solar power

The provision of banking is seen to be necessary towards promoting RE based OA and captive generation. A banking framework based on an in-kind banking charge is in place for wind energy generators in Tamil Nadu. However, such charges are not likely to be reflective of the value of the services provided by the DISCOM.

The banking framework should instead be based on a per unit banking charge, which should be determined based on the difference between power purchase cost at the time of banking and drawal.

Such a banking provision should also extend to new solar projects. But such changes for new projects should be introduced after providing sufficient lead time, of say one year, to the Solar Power Generators (SPG). This is essential towards providing operational clarity and certainty to the generators.

For existent SPG, the conditions as per their prevalent agreements must be honoured.

The need to move from a concessions regime to ensure that the RE sector grows without financial stress is discussed in further detail in Prayas' recent article 'Renewables, moving beyond concessions and waivers', which can be accessed at <https://www.prayaspune.org/peg/resources/power-perspective-portal/253-renewables-moving-beyond-concessions-and-waivers.html>

2. Phasing out of concessions

The consultative paper proposes the cross subsidy surcharge (CSS) to third party open access consumer be set at 70% of that applicable to conventional power. It also proposes to levy 50% of the charges applicable to conventional power for OA (transmission, wheeling, scheduling, and system operation charges). These concessions have also been allowed over the last two years.

However, RE is fast gaining cost competitiveness, as illustrated by the falling prices of solar, and can be allowed to grow without being driven by concessions. Many states, such as Maharashtra, have removed such provisions, and others, like Gujarat, have proposed to do so. Tamil Nadu must also consider moving away from concessions for RE. But such a transition away from concessions must provide regulatory certainty, must not deter competition through OA, and must account for the financial health of the DISCOM.

Given this, any concessions provided for RE should come with clear sunset clauses. This will extend regulatory certainty in the medium term, enabling the move towards medium or long term open access, while ensuring a robust RE sector. Concessions should be set at a level that enables revenue recovery for the financially stressed DISCOM without deterring OA competition. However, this should only be applicable to new projects, and the conditions in place as per the agreements of the existing projects should be honoured.

Thus, it is suggested that:

- *the OA charges for SPG could be increased to 75%, applicable over the next year, after which the concession could be phased out.*
- *It is also suggested that the CSS should be fixed at a level that ensures compensation to the DISCOM without dissuading competition through OA. This charge should be applicable over a period of 5 years. After the suggested time period, this concession can be phased out, after taking into account state level realities. This could be addressed by amending the OA regulations themselves, as discussed in section 4 of this submission.*
- *Additionally, no RE specific concessions should be provided in the long term. Currently no additional surcharge is applicable in the state, but if such charge were to be applicable in the future, it should also be implemented without RE specific concessions.*

3. Revision of parallel operation charges (POC) and integration with stand by charges

The paper in discussion has proposed to allow POC for SPG at 50% of the applicable POC to the distribution licensee, as it has done for the last two years. However, the POC currently applicable to captive generators has not been revised since 2014, and is not reflective of the growing DISCOM costs. Further, as discussed in section 2 of this submission, RE has achieved sufficient cost competitiveness and should be allowed to grow on the basis of economic affordability, without concessions.

Toward this end, an upward revision of POC, to reflect increasing DISCOM costs, is suggested. These charges should be applicable to all generators uniformly. It is also suggested that POC be parameterized based on demand charges, and revised to 25% of the fixed charge applicable to HT-1A consumers. Such a framework would ensure compensation to the DISCOM in the future as well. Further, addressing these issues requires comprehensive action, and should be undertaken via revision of the OA regs, as is further discussed in section 4 of these submissions.

In addition, the current proposal states that the stand by charges for captive users or third party buyers shall be regulated as per the TNERC's Open Access regulation, Deviation Settlement Mechanism regulation, and other relevant orders. However, captive consumers choose parallel operation with the DISCOM for reliable power supply and operation. Given this, POC is equivalent to payment made for standby services, and thus, POC and standby charges should be integrated. But the cost of standby services provided in case of planned and unplanned shutdown of the generator varies. Also, when the drawal of contracted standby power is higher than the contracted capacity for which POC is paid, penal demand charges should apply.

In light of these scenarios, the following three-tiered service charge framework, which can apply to all captive consumers, is suggested:

Table 1. Proposed framework for standby services

Scenario	Energy Charges	Demand Charges on standby contracted capacity	Penal Charges	Additional Demand
When standby demand is not utilized	Not applicable	25% of applicable demand charges on standby contracted capacity (same as POC)	Not applicable	
Standby services in case of planned shut-down	Energy charge as approved in Tariff Order for HT-1A industrial category	As approved in tariff Order for HT-1A industrial category on total contracted standby capacity (on monthly basis).	2 times Demand Charges (on monthly basis)	
Standby services in case of unplanned shut-down	Applicable Energy charge for HT-V temporary supply category	25% of applicable demand charges on standby contracted capacity	2 times Demand Charges (on monthly basis)	

This proposed framework would ensure that the standby charges are reflective of the DISCOM's costs. Without such charges, the supply quality and tariffs of the DISCOM's regulated consumers will be affected. The suggested three-tiered framework can be brought into effect by amending TNERC's tariff regulations to incorporate the same.

4. Revision of Open Access (OA) regulations

The TNERC has brought up consultative papers, such as this current one, relating to solar OA in the recent past. While this is a positive step towards addressing issues and updating processes pertaining solar OA, the larger OA regulations in Tamil Nadu have not been updated since 2014. This has led to a lot of complications in OA operations, which should be dealt with through amendments to the regulations, as opposed to orders.

Thus, the revision of the Grid Connectivity and Intra-State Open Access Regulations 2014, subject to public consultations, is suggested.

Such amendment of the regulations should:

- Allow a wider set of consumers: Currently OA has been allowed for consumers with contracted demand of 1 MW and above. This has provided large industrial and commercial consumers with the option of choosing their generator. OA in the state can be furthered if this provision is extended to consumers with a connected load of greater than 500 kW. This threshold can further be reduced, after say 5 years, to 100 kW. While there is a danger of overdrawal during industrial holidays under this proposal, this can be avoided by ensuring SEM meters, having strict DSM measures, and standby power provisions.
- Introduce mechanism to charge embedded open access and captive consumers for contribution to DSM charges incurred by DISCOM
- Ensure that uniform charges are applicable to all generators and OA/captive consumers: with no RE specific concession in the long term.
- Fix charges such as the POC and CSS to reflect DISCOM costs
- Provide a framework that ensures legal clarity, and by extension reduces OA related litigation

In addition to this, the OA and captive process in the state can be streamlined by introducing an online portal to enable filing for applications and checking of their status. This would provide clarity with regard to delays in stipulated timelines. The online portal could also be a tool to ensure compliance, and include provisions for reporting by captive and OA consumers as per TNERC regulations. Smooth operation of the portal could be ensured by allowing the DISCOM, SLDC, and TRANSCO to have administrative access to

the portal, and assigning unique IDs to each consumer, trader, and generator for access. The Commission should direct TANGEDCO to launch such a portal within six months of this order.

5. Provision for data collection and reporting

Frameworks for solar power procurement, such as that envisaged in this consultative paper, should be based on detailed analyses of actual sector trends, which are not provided in the paper. Currently, the TNERCs reporting processes do not track crucial data, owing to which there is insufficient data regarding OA and captive in Tamil Nadu, despite the impact of sales migration in the dynamics and economics of the state's power sector.

A comprehensive framework should address these data gaps, and carry reporting formats for all generators, including solar OA and captive consumers. Such formats should ensure reporting of data on:

- Number of consumers, energy wheeled and energy consumed by solar captive consumers
- Revenue recovered from wheeling and POC charges from captive consumers (separate reporting for all parameters for group captive), and extent of concessions provided
- Number of long term, medium term and short term solar OA consumers, contracted demand for each group of consumers, energy wheeled, revenue from CSS and wheeling charges, and the extent of concessions provided.
- Number of inter-state open access and captive units wheeled
- Monthly energy banked, unbanked, banking charge by peak/off peak time slots.

This data would be useful in understanding sector trends. The TNERC should also ensure that the collected data is reported to them on a regular basis, say bi-annually.

The data collected should be available on the TNERC's website and further analysis of the same should be included and form the basis of the next consultative paper on OA. Such reporting would also aid in monitoring and verification of OA and captive consumption in the state, bringing in accountability to the sector.

6. Other comments

- TNERC has come out with consultative and discussion papers to address both solar and wind procurement, and their related OA issues. However, there are projects which are a hybrid of the two technologies. To prevent future challenges, there should be clarity regarding the framework within which such solar-hydro hybrid projects will be regulated.
- The control period considered as per this consultative paper is one year. This is a short duration, and does not provide regulatory certainty over a sufficiently long time, which in turn is likely to discourage investors. Toward this end, the validity for the process and parameters discussed in the paper could be considered for a longer control period, of say 3/5 years.
- As per paragraph 5.11.1, it is proposed that the SPG's shall follow the CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013, with regard to harmonics. However, given that these projects could operate even above 33kV they should follow the CEA (Technical Standards for Connectivity to the Grid) (Amendment) Regulations, 2019 as well, where applicable.

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