

TNERC Consultative Paper for Procurement of Solar and Wind power by Distribution Licensee and related issues

TNERC issued consultative paper for procurement of solar and wind power by the distribution licensee. The summaries are given below for solar and wind power procurement, respectively:

Issues	Description	
Power Procurement by DISCOM	Competitive bidding.	
Applicable Charges	Open access (OA) charges, transmission and wheeling charges, and line losses are proposed to be same as applicable for conventional plants.	
Cross-subsidy Surcharge	Levy 100% cross-subsidy surcharge for OA consumers.	
Grid Availability Charges	7.00 AM to 6.00 PM	Charged at HT Industrial tariff
	7.00 AM to 6.00 PM	Excess generation to be charged at HT Industrial tariff.
Energy Accounting and Billing Procedure	<ul style="list-style-type: none"> • Excess energy generated is proposed to be paid at 75% of the respective solar tariff. • In case no tariff is available, 75% of lowest tariff discovered through competitive bidding in the state or by SECI during the year may be applicable. 	
Capping of Solar Generating Capacity	For OA consumers, excess generation above 10% of annual consumption not to be considered for payment.	
Harmonics	Harmonics beyond the stipulated limit can be charged at 15% of applicable generation tariff. The DISCOMs to measure harmonics.	

The consultative paper for solar procurement can be accessed [here](#).

Particulars	Description
Tariff Determination	Competitive bidding
CDM Benefits	Sharing for project developer, 100% in 1 st year, 90% in 2 nd , and so on till the sharing becomes 50-50 between the developer and consumer.
Applicable Charges	transmission, wheeling charges, system operation charges, and line losses are proposed to be same as applicable for conventional plants.
Cross-subsidy Surcharge	Levy 100% cross-subsidy surcharge for OA consumers.
Reactive Power Charges	Reactive Power drawl up to 10% of the net active energy generated can be charged at 25 paise/kVARh, and 50 paise/kVARh beyond that.
Stand by Charges	Excess consumption by captive/third party consumers is proposed as per the TNERC orders.
Energy Accounting and Billing Procedure	<ol style="list-style-type: none"> 1. The licensee to maintain slot-wise record of generation and consumption, and to raise bill for excess consumption. 2. After implementation of DSM, time block-wise adjustments are proposed.
Security Deposit	Captive/third party user to pay twice the maximum net consumption (any month in last financial year) to the DISCOM.
Harmonics	Harmonics beyond limits can be charged at 15% of applicable generation tariff.

	The DISCOM to measure harmonics.
Parallel Operation Charges	100% of applicable parallel operation charges is proposed.
Banking of energy	
Category A - WEG machines commissioned up to 31.3.2018	
Option 1	
Banking Period	1st April till 31st March
Settlement	Energy should be settled each month and excess injection can be credited at 75% of the applicable wind tariff/APPC for existing normal captive users/under REC scheme.
Option 2	
Banking Period	1st April till 31st March
Settlement	Energy settlement on 31st December. Excess energy can be encashed at 75% of the applicable wind tariff/APPC for existing captive users/under REC scheme. Drawl not allowed during January to March.
Category B - commissioned during the control period of Order No.6 of 2018 dt.13.4.2018	
Banking Period	Monthly
Settlement	Every month excess energy can be encashed at 75% of the applicable wind tariff/APPC for existing captive users/under REC scheme.
Category C - commissioned from the date of the proposed order	
Banking Period	Monthly
Settlement	<ol style="list-style-type: none"> 1. Every month excess energy can be encashed at 75% of the applicable wind tariff/APPC for existing captive users/under REC scheme. 2. For OA consumers, no payments for excess generation beyond 10% of annual consumption. 3. No banking facility for projects beyond a life of 10 years and excess banked energy to be paid at 75% of respective tariff.

The consultative paper for wind procurement can be accessed [here](#).

CER Opinion

1. **Cost Impact on Captive and 3rd Party Sale of RE Power Procurers:** Emergence of solar and wind power as captive generation and for third party sale is primarily on account of higher tariffs (industrial and other large consumers), and improving economics of such technologies. Additional cost on account of removal of exemptions for wheeling and intrastate transmission charges would only reduce the cost advantage for Captive and OA consumers but would not eliminate it. Further cost reduction in cost of RE projects and increasing tariff of such consumers in future would negate any adverse implications of the proposed amendments.

2. **Revenue Implications for Utilities:** The additional revenue to the utilities on account of removal of above exemptions would be much smaller as compared to the total cost of power procurement of the state and the revenue gap. This is not likely to address the financial gap and enhance the 'financial performance' of the utilities. Enumeration of such implications would assist decision making by the TNERC.

3. Challenges for System Operation - Improve Grid Accountability of VRE: It is understood that increasing share of energy injection by Variable Renewable Energy (VRE) sources is placing stress on system operation on account of variability and uncertainty associated with the electricity generation from such sources. The state's grid code and the applicable regulations for forecasting and deviation settlement should be tightened to ensure that the generators improve the forecasting accuracy and bear the financial impact on account of deviations due to forecasting error. This would improve grid operation and reduce overall financial impact on the sector due to the associated uncertainty.

4. Emerging Role of Storage: Tightening of the forecasting error band and the associated deviation penalty would also provide room for innovation and adoption of grid connected storage, as they become more economical in future.

5. Valuing of Excess Energy Injection by RE plants - The paper proposes that generation (and injection of energy) in excess of 10% of annual consumption would not be paid for by the distribution licensee. Following two options can help ameliorate the financial loss to generators while also addressing concerns of the distribution utility and the system operator.

- Payment for excess energy injection to be linked to the prevailing rate under the deviation settlement mechanism.

- Such excess energy to be either paid for REC equivalent price (floor price) or equivalent RECs be allocated to the generators.

REC registration for excess RE energy injected would need procedural amendments to the CERC Terms and Conditions for Recognition and Issuance of REC for Renewable Energy Generation Regulations, 2010, wherein only a part of excess energy (in current case 10%) is to be recognized to issues REC certificate. Since this may take time, the alternative of offering REC floor price may be considered.