



Eastern Power
Distribution Company of A.P. Ltd
ఆంధ్ర ప్రదేశ్ విద్యుత్ పంపిణీ సంస్థ

For Porusal	17/2/2020
For Law	
For Chairman	

From
The Chairman & Managing Director,
APEPDCL, Corporate Office
P& T Colony, Seethammadhara
Visakhapatnam -530013.

To
The Secretary, APERC,
11-4-660, 4th & 5th Floors,
Singareni Bhavan, Red Hills,
Hyderabad - 500 004.

I/263455

Lr.No.CMD/EPDCL/VSP/CGM/EC,EA & Solar/E- 266947/D.No. /20,Dt: 14.02.20.

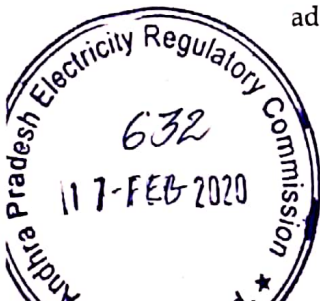
Respected Sir,

Sub: Electricity - APEPDCL - Seeking amendments to the Modalities/ Guidelines to the existing Solar Roof Top (SRT) Policy, 2018 - Requested - Reg.

- Ref:**
1. G.O.MS.No.22 Dated:25-03-2013
 2. G.O.MS.No. 27 of 2013 Dated 19-06-2013
 3. G.O.MS.No.8 of 2015 Dated:12-02-2015
 4. Order Passed in OP No.30 of 2015 Dated 19-12-2015 of APERC.
 5. G.O.MS.No.1, of E,I&I Dept ,dated.03-01-2019 .
 - 6.Lr.No.CGM/EC/EPDCL/VSP/GM/Solar/E-266947/D.No.I/207578/19, dt. 04.02.2019
 7. Order Passed Dated 25.05.2019 in the Matter of Modalities (Guidelines) for implementing the Solar RoofTop (SRT) Policy 2018 of APERC.
 8. G.O.MS.No.35 of Energy (Power -II) Dept, dated.18-11-2019

It is submitted that:

- (1) In the reference 1st cited, GoAP has issued policy on net metering for solar grid interactive roof-top and small SPV power plants. In the said policy, any excess/surplus energy injected in to the grid in a billing month will be treated as inadvertent and no payment will be paid for such energy.
- (2) In the reference 2nd cited, guidelines for excess/surplus energy injected into the grid from solar grid interactive roof-top and small SPV power plants was issued as " Surplus energy injected by Solar Roof Top/Small Solar PV generator shall be considered for payment by concerned APDISCOMs at pooled cost as may be decided by APERC for that year.
- (3) In the reference 3rd cited, GoAP has issued AP Solar Power Policy 2015. As per 3D of the Policy "the modalities for implementing the rooftop policy including metering, billing, settlement, payment(s) and technical aspects etc. shall be issued by APEPDCL". Accordingly, the modalities were formulated and submitted to Hon'ble APERC for consent.
- (4) In the reference 4th cited, the Hon'ble commission has passed Order approving to adopt item 3D of the A.P. Solar Power Policy, 2015 in promoting solar rooftop energy



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with gross / net metering options and to allow applicable tariff as equal to the average cost of service of the distribution companies for sale of power by the developer in either gross/Net Metering.

- (5) In the reference 5th cited, GoAP has issued A.P. Solar Power Policy 2018 superseding the earlier policy issued in GO Ms No.8, dated 12.02.2015. Accordingly, the modalities were formulated and submitted to Hon'ble APERC for consent vide 6th cited.
- (6) In the reference 7th cited, the Hon'ble commission after conducting public hearing and passed Order on 25.05.2019 approving to adopt item 3D of the A.P. Solar Power Policy, 2018 in promoting solar rooftop energy with gross / net metering options and allowed the applicable tariff is equal to the average pooled power purchase cost of the distribution company which will be determined by this Commission every year which facility should be extended for a period of 25 years for eligible developers who set up solar Rooftop projects. The said policy is now in force in AP State.
- (7) The para 3D of A.P. Solar Power Policy 2018 is extracted hereunder:

"D. Solar Rooftop Projects - Gross/Net Metering

The Government will promote solar rooftop systems on public buildings, domestic, commercial and industrial establishments on gross and or net meter basis. The consumer(s) are free to choose either net or gross meter option for sale of power to DISCOM under this policy. The applicable tariff for either of the cases shall be equal to the average pooled power purchase cost which will be determined by APERC for the year during which the project is synchronized with the grid and the applicable tariff at the time of CoD will be paid for 25 years, in case of projects executed under both net metering and gross metering basis.

The above tariffs shall be applicable for a period of 25 years for Eligible Developers who set up solar rooftop projects within the Operating Period of this policy."

- (8) The Energy Billing/Settlement as per the Modalities (Guidelines) for implementing Andhra Pradesh Solar Roof Top (SRT) Policy 2018 is as hereunder

"Energy Settlement shall be done on monthly basis. Group of persons/societies setting up SRP's will be treated as collective generation for supply of power to the households of each Society/group member. In case of apartments/ Group houses, common service meter may be used for net metering.

Net Metering: The energy generated from SRP shall be adjusted against the consumption of energy from the DISCOM by the Eligible Developer/ consumer every month. In case of group or societies, the energy generated shall be prorated as per the installed capacity share indicated in the agreement between the group/society and DISCOM. This computed energy share shall be adjusted against the consumption of energy for each consumer every month.

In case of excess generation (after energy adjustment) in any month, payment shall be made by the Discom quarterly for the net energy computed at the average Pooled Power Purchase cost as determined by APERC for the year during which the project is synchronized with the grid and the applicable tariff at the time of COD will be paid for a period of 25years.

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In case of excess consumption in any month, payments shall be made by the eligible Developer/Group/ Society for the net energy at the applicable tariff as determined by APERC every year.

Gross Metering: The payment for energy generated from SRP will be computed at the average Pooled Power Purchase cost as determined by APERC for the year during which the project is synchronized with the grid and the applicable tariff at the time of COD will be paid for a period of 25years.

This shall be adjusted against the total billing demand for consumption of energy for the

Eligible Developer/ consumer from the DISCOM every month. The balance amount after

adjustment for the month shall be made by the Discom.

A limit shall be defined for all the Eligible Developers in terms of energy, beyond which no payment shall be made by APDISCOM".

- (9) Consumers who are opting for Rooftop Policy are mostly Commercial Category Consumers, Industrial Category and Domestic Category. As per the SRP, the payment for the power injected into the grid shall be paid at the average Pooled Power Purchase Cost determined by the Commission. This provision of Net metering is causing financial loss to the DISCOMs as compared with Gross Metering and is explained below.

Average Pooled power Purchase cost = Rs. 3.74 / kWh (say)

Tariff as per the tariff order = Rs. 9/unit (Say)

- a) If a commercial consumer installs SRP under net metering, the financial implication is explained hereunder:

Month	Billed Demand/ Consumption from grid (Units) A	SRP Generation (Units) B	Net Energy (Rs.) C= A-B	Net Monthly Payment by Consumer to DISCOM (Rs.) C*APPPC
Jan	1000	1200	-200	-748
Feb	1200	1000	200	1052
Mar	1300	1050	250	2250
Net Amount Received to Discom during a Quarter (From Jan to Mar)				3302

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- b) If a commercial consumer installs SRP under Gross metering, the financial implication is explained hereunder:

Month	Consumption from grid (Units) A	Billed Demand for Consumption from grid (Rs.) $B = (A \times \text{Applicable Tariff as per APERC})$	SRP Generation (Units) C	SRP Payment (Rs.) $D = (C \times \text{APPPC})$	Net Monthly Payment by Consumer to DISCOM (Rs.) $E = (B - D)$
Jan	1000	9000	1200	4488	4512
Feb	1200	10800	1000	3740	7060
Mar	1300	11700	1050	3927	7773
Net Amount Received to Discom during a Quarter (From Jan to Mar)					19345

For the same consumption and Generation pattern in a quarter, the consumer pays to DISCOM an amount of Rs 3302/- in Net Metering Concept and Rs. 19,345/- in Gross Metering Concept.

From the above, it is evident that Net Metering policy is financial loss to the DISCOMs as compared to Gross Metering Policy.

- 10) The DISCOMs are supplying power whenever solar power is not there in the system and is acting as a standby power to the consumers having Solar Rooftop. The DISCOMs have to pay for infrastructure cost from interface point of Generator and APTRANSCO and upto the point of consumers and have to pay fixed costs to APTRANSCO and Generating companies and it has to meet its own distribution business fixed cost. The SRP consumer is generating power at the consumption point and supplying the excess power to the grid if available.
- 11) Making payment at exorbitantly high price to the SRP consumer may not be correct and this burden of making payment of higher tariff to SRP consumers would fall on the other Consumers. It is advisable to pay to SRP consumers at reasonable price supported by cost plus calculations and should not be unnecessarily enrich the SRP consumers at the cost of DISCOM consumers.
- 12) (a) **Net Metering:** In Net Metering, the DISCOM is paying to the SRP consumer for the units consumed effectively at the rate of relevant tariff of that category. For example, in case of commercial consumers the DISCOM is paying @ Rs. 9/unit and in case of industrial consumers and domestic consumers, the tariff paid would be around Rs. 5.50/unit. For surplus units fed into the grid, the DISCOM is paying at the rate of Average Pooled Power Purchase Cost, i.e., Rs. 3.74 per unit.

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The power generated from Generating Companies is being transmitted through Transmission Network and Distribution Network and finally it is supplied to a consumer. In Net Metering policy, the power generated at the SRP plant is being given equal treatment compared to the power generated from far end places and supplied through grid. Though the power supplied through the grid and the power generated at the SRP plant has similar characteristics, cannot be compared and given equal treatment.

(b) Gross Metering: In Gross Metering, the DISCOM is paying to the SRP consumer at the rate of Average Pooled Power Purchase Cost i.e., Rs. 3.74/unit for all units generated by the SRP. But now-a-days the solar power tariff rates have come down approximately to Rs. 2.50 per unit in the country.

- 13) To address the above issues, it is requested that only Gross metering concept may be permitted and a generic tariff may be fixed on the costs involved instead of making payment based on Average pooled power purchase cost. In the existing policy, provision is made for Long Term contract for 25 years and twenty five years is a too long period and this may be modified to 10 years.
- (14) In the initial days, the per MW infrastructure cost of Solar Photo Voltaic panels was around Rs. 13 to 14 crs. To encourage and promote clean power, the concept of Net /Gross Metering was introduced and MNRE is also giving Capital Subsidy to the consumers/developers. The generation cost of SRP is coming down year by year and the Retail Supply Tariffs (RST) of consumers are on upward direction. The present per MW installation cost of Solar rooftop plant cost is around Rs 5 crores. This has become an incentive to Solar roof top developers and is affecting the DISCOM revenues. Some Solar developers are making offers to big consumers to establish SRP plants under CPP concept at Consumer premises at the cost of developer, Own it, Operate it and Transfer the plant after 10 years. The power will be supplied at fixed price which is much lesser than DISCOM tariff. This business model has become very attractive as already mentioned that the capital cost of SRP is coming down and the RST is going up.
- (15) It is learnt that, the present installed capacity of Solar and Wind in the State is around 8500 MW. The smooth integration of this much RE (Solar and Wind power) power of 8500 MW which is variable in nature with the grid, having system demand of 9000 to 10000 MW is difficult task. Under the falling price regime of Solar/Wind power generation coupled with incentives granted to these generators, there is no healthy Competition envisaged in the Electricity Act, 2003. In order to fulfill the aim of the electricity Act, 2003, it is very much essential to withdraw the existing incentives.
- 16) The financial burden which is resulting out of the power generation ultimately needs to be borne by end consumers of the State. Thus public interest is involved. Making payment at higher rates to Solar Rooftop developers compared to reasonable return amounts lead to unnecessary enrichment of Solar Rooftop developers.
- (15) Considering the present scenario, the Govt of AP issued an amendment to the Solar/Wind Power Policy 2018 vide GO Ms No.35, Dt.18.11.2019 wherein it was

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mentioned that the applicable tariff for solar rooftop projects for either net metering/gross metering shall not exceed "difference of pooled variable cost and balancing cost" (or) the applicable tariff at the time of Commercial Operation Date (CoD) whichever is less.

(16) In view of the above facts, the Hon'ble Commission is requested to take necessary action to make appropriate amendments to the Modalities (Guidelines) in the existing Andhra Pradesh Solar Roof Top (SRT) Policy, 2018 duly incorporating the following aspects please:

- (a) To determine SRT tariff rates as per G.O.Ms No. 35, Dt 18.11.2019 , ie "The applicable tariff for solar rooftop projects for either net metering/gross metering shall not exceed difference of pooled variable cost and balancing cost (or) the applicable tariff at the time of Commercial Operation Date (CoD) whichever is less".
- (b) To limit the SRT agreement period to 10 years instead of 25 years.
- (c) In line with G.O.Ms No 35, Dt 18.11.2019, a decision may be taken in respect of Gross & Net metering .

Thanking you,

Yours Sincerely,

**Chairman & Managing Director,
APEPDCL :: Visakhapatnam.**

Copy submitted to The Principal Secretary, Energy Dept., Govt of AP, Amaravathi
Copy submitted to The Chairman & Managing Director/ AP TRANSCO, Vidyut Soudha,
Gunadala, Vijayawada
Copy communicated to the CMD / APSPDCL, Kesavayanagunta, Tirupati
Copy communicated to the CMD / APCPDCL/ Beside Govt. Polytechnic, Opp Ramesh
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Signature valid

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Date: 2020.02.14 15:19:50 IST
Reason: Approved