Roof Top Solar Power Net Metering Solution

Guidelines for implementation of Net Metering for Roof Top Solar Power System

1. Net Metering arrangement is permitted for 3 Phase connections only. The interconnection schematic is enclosed in Appendix A to these guidelines.
2. Consumers can avail Government of AP subsidy and MNRE subsidy, as applicable, in installation of solar power net metering solutions through NREDCAP.
3. Entire circuitry (Appendix A), including panels, inverter, bi-directional meters, cabling, manual switch, safety circuit breaker etc., should be installed by the vendor under a turnkey approach.
4. Mandatory safety precautions/features which have to be installed as part of SPV system are:
    i. Certified Inverter controlled relays which can trip on grid failure and thus prevent any solar power injection to Grid when there is no power in Grid.
    ii. Solar Circuit should be separately grounded/ earthed.
    iii. Additional switchgear/relay (sensing phase-angle shift) required as a second rung of safety. It shall be positioned between interconnection point and the bi-directional meter (Please refer Appendix A).

iv. Harmonics suppression/Filtering feature in the inverter for local network's safety and for accurate measurement of energy.

5. A single bi-directional meter shall be installed for export and import. This bi-directional meter should have the following characteristics:

   i. Separate registers for Export and Import with MRI downloading facility.

   ii. kVAr, kWh, kVA measuring registers for Capacity above 1 KW.

   iii. AMI facility with RS232 (or higher) communication port.

   iv. Class 1 accuracy meters for PV systems up to 10 kW, 0.5 accuracy class meters for PV systems above 10 kW and 0.2 class accuracy meters for HT systems (56 kW and above).

   v. Meters should be BIS/ISI Certified.

   vi. CT functionality meters for PV systems above 50 kW.

6. Vendor executing turnkey solution should be a channel partner of MNRE.

7. If on inspection, at the time of release of permission to install a net metering solution or on any periodic inspection thereafter, non-IEC/ISI/BIS certified equipment is found to be part of net metering solution on a consumer's premises, the vendor will be blacklisted and the same shall be notified to MNRE.

8. MNRE subsidy, Government of AP subsidy and any other subsidy relevant to Solar Panel based net metering solution which may be rolled out in future, should be front loaded on the consumer cost.

For example, for a solution costing Rs.100, if 30% MNRE and 20% GoAP subsidy is being availed, then the vendor should charge consumer only Rs.50 for installing the solution. Vendor should claim subsidy component from NREDCAP.

9. NREDCAP shall be the nodal agency for release of both MNRE and GoAP subsidy.

10. Net metering bills raised by DISCOM for the first 2 months since installation should be produced by the vendor for the release of subsidy. These bills should be countersigned by concerned DE Operations and District Manager of NREDCAP. Within 15 working days of receipt of such bills subsidy payments shall be cleared.

11. DISCOMs shall accord approvals on a first come first serve basis for Solar Net Metering till the Solar installed Capacity reaches 50% of the closest upstream DTR's rated capacity. After reaching this limit, the capacity of DTR shall be enhanced within next 45 working days to process remaining application from other consumers/SPV source.

12. The nodal point of contact for solar net metering programme shall be the local Divisional Engineer (Operations). The consumer can download solar net metering rooftop application from official websites of APDISCOMs and submit the filled in application to the concerned Divisional Engineer/ Operation/ APDISCOM.

13. DISCOMs personnel shall conduct a feasibility analysis of the DTR within 15 working days of the receipt of completed Application Form.

14. Based upon feasibility study, approval shall be granted to the consumer for installation of SPV system. This approval shall contain maximum permissible capacity of the SPV system and shall be valid for a period of 6 (six) months from the date of approval.

15. The consumer shall install a SPV system (within permitted capacity limits) and request the DISCOM authorities for inspection within 6 months of receiving approval.

16. Upon receiving consumer's request, inspection of equipment, circuitry and meter shall be carried out under the supervision of nodal authority and the SPV system shall be synchronized (On successful outcome of evaluation) within 10 (ten) working days.

17. During the period of synchronization of the SPV with the gird, the DISCOM personnel shall inspect, calibrate and seal the bi-directional meters. DISCOM personnel reserve the right to inspect the entire plant routinely at any time and otherwise in accordance with Electricity Act 2003.

18. Guidelines on Billing and Payment:

    i. The consumer shall receive a net import/export bill indicating either net export to the grid or net import from the grid.

    ii. In case of net import bill, consumer shall settle the same as per existing norms.

    If it is a net export bill, then credit amount shall be carry forward to next month for adjustment against next month import bill. No interest will be payable on this credit forward amount. Net credit available in his account will be refunded

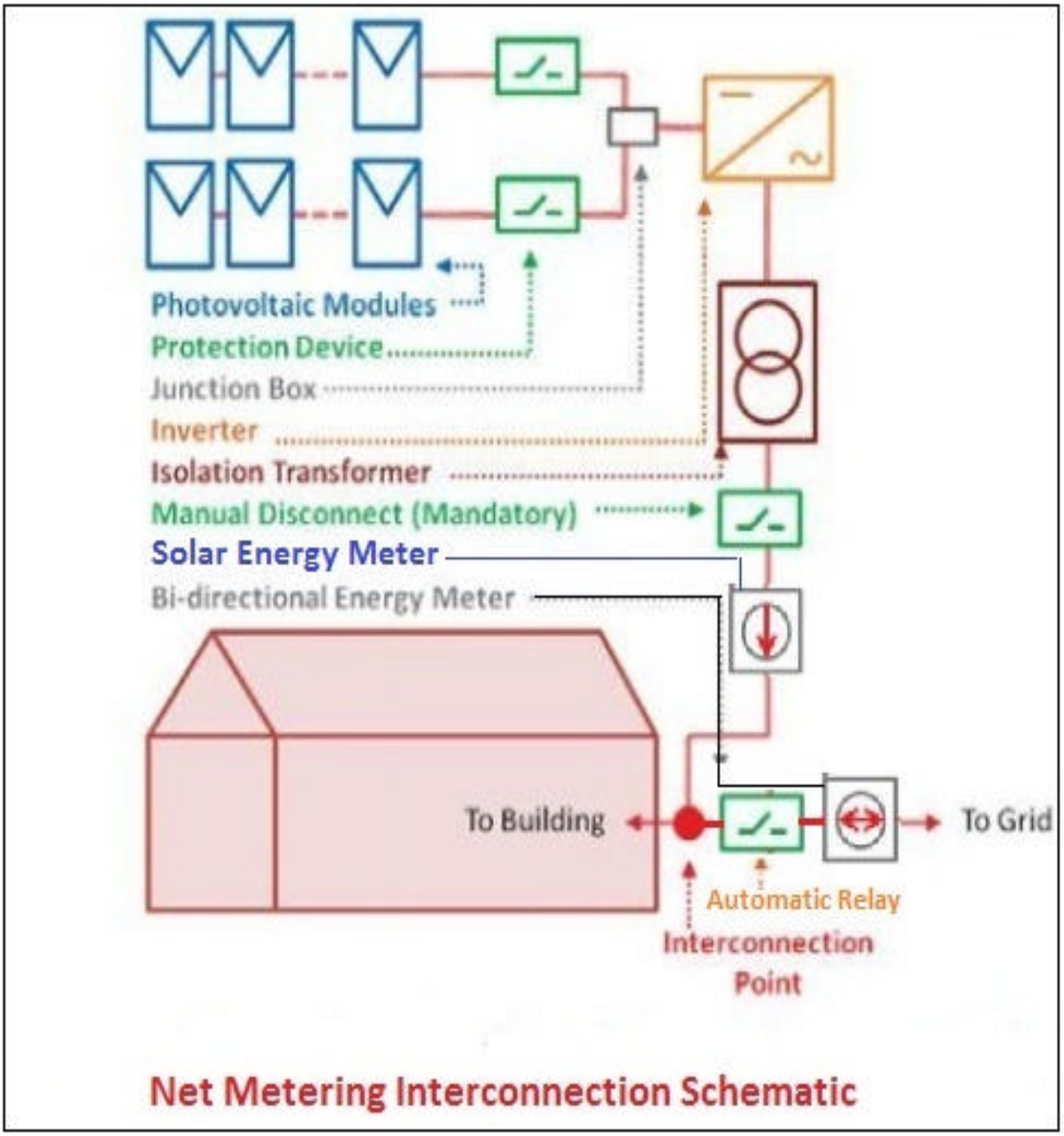
twice in a year based on June and December Month bills of each year. Net Credit amount payable will be deposited by DISCOM in consumer's bank account bearing a/c number provided by consumer at the stage of application, by June and December month end as the case may be. The amount payable for net export of energy will be based on pooled cost decided by APERC for that year.

iii. 2 months net bill should be submitted by vendors to NREDCAP to claim subsidy.

iv. DISCOMs shall effect suitable changes in the billing software to capture the impact of above guidelines.

v. Consumer shall file application in the attached Format.

Appendix-A



Note: ***1) The schematic diagram shown is a model Solar net metering system.***
2) Isolation transformer and solar energy meter are desirable, but not essential.