

Solar Plant Capacity Calculation Under Feeder Level Solarization

All SIAs are requested to take note of the following provisions of the Feeder Level Solarization Guidelines issued by MNRE on 04.12.2020 and instructions issued on queries received from the Implementation Agencies:

- (i) The requirement of total annual power for an agriculture feeder will be assessed and a solar power plant of capacity that can cater to the requirement of annual power for that agriculture feeder can be installed either through CAPEX mode or RESCO mode, which will supply solar power to that feeder. For example, a feeder having annual power requirement of say 10 lakh units, the power can be supplied by solar power plant of capacity around 600 kW with CUF of 19%.
- (ii) Average of consumption of last three years shall be considered for calculating the solar plant capacity as illustrated above.
- (iii) Mixed feeders can also be solarized, however, MNRE CFA will be available based on capacity calculated for agriculture consumption.
- (iv) Under the Scheme solarisation of pumps of any capacity is allowed, however, in case of pumps of capacity above 7.5 HP, the CFA will be limited to solar capacity for 7.5 HP pumps.
- (v) For calculating consumption for pumps of capacity higher than 7.5 HP, for the purpose of calculating plant capacity eligible for MNRE CFA, average consumption of 7.5 HP pumps on the same feeder may be considered. This average consumption may be used in estimating consumption for all pumps of capacity higher than 7.5 HP.
- (vi) The state may choose to install feeder level solar power plant of capacity higher than capacity required for supplying power to agriculture feeder. The additional solar power generated may be used for supplying nearby rural/urban loads during day time or alternatively stored/banked for supplying power during evening hours for lighting/induction cooking and other household purposes. However, in this case CFA will be limited for solar capacity required for supplying power to the agriculture feeder.
- (vii) Since the projects are to be commissioned near the point of consumption, distribution losses would be reduced, therefore, losses shall not be considered in plant capacity estimation.
- (viii) CUF shall be taken as per the solar insolation on site, however, CUF of minimum 19% shall be considered for calculation of plant capacity eligible for CFA. No restrictions to be made on installing DC capacity higher than total contracted AC capacity of the plant to help achieve higher CUF.
- (ix) In case of unmetered connections, following methods may be followed for calculation of consumption:

- a. Indexation approved by the State Electricity Regulatory Commission may be followed.
- b. If both metered and unmetered connections are there on the same feeder, capacity-wise average of consumption of the metered connections may be extended to the unmetered connections. This shall be cross-checked with the feeder level meter.
- c. Consumption on feeder level meters may be used for estimation of plant capacity. However, if pumps of capacity higher than 7.5 HP are there on such feeder, capacity may be calculated based on consumption reduced in proportion of the load if capacity capped at 7.5 HP and actual load on the feeder.
