

Comments of MSEDCL in Case No. 86 of 2013

Grid Connectivity to Mini and Micro
Solar Plants

Promotion to RE Generation

- MSEDCL always promoted RE generation.
- Power procured from Solar generators at average pool purchase cost.
- These generators can avail REC benefits if eligible.
- Open Access to RE generators for self use/ third party sale provided:
 - I. Generator is grid connected at HT level.
 - II. CD of open access consumer \geq 1 MVA.
- Benefits under Open Access to Infirm RE generators:
 - I. TOD slot wise billing.
 - II. Banking facility.
 - III. Non reduction of contract Demand.
 - IV. Concessional CSS.

Grid Connectivity (GC)

- Presently GC to generators at HT level only - CEA guidelines and State Grid Code.
- GC to mini (100-2000 kW) and micro (up to 100 kW) Hydro generating plants - also at HT level.
- The evacuation infrastructure should be:
 - capable to evacuate all the generated power.
 - reliable.

Solar Generation and Consumption at different locations.

- Power wheeled under open access.
- Generator grid connected - HT level.
- Contract demand of OA consumer ≥ 1 MVA.
- ABT meters at both ends.
- Transmission and Wheeling charges applicable.
- CSS levied as applicable with exemption for captive consumption
- Scheduling mandatory

Issues for grid connectivity at LT level

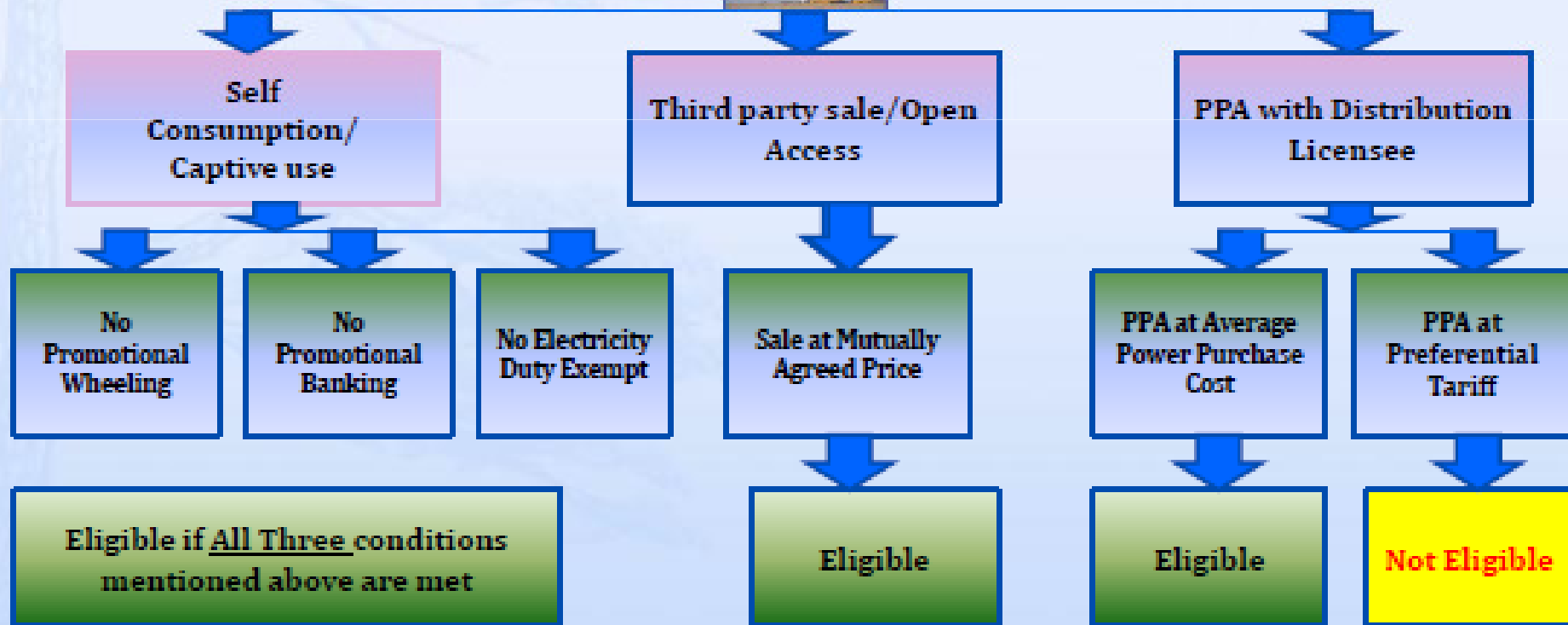
- Guidelines for GC at LT distribution network
 - not yet established either by CEA or appropriate Commission.
- Synchronizing at LT level is complicated as on LT side
 - the voltage fluctuates more
 - the three phase load is not balanced.
- In case of 11 KV and above grid connectivity:
 - the generator is connected to Grid through express feeder.
 - continuous corridor is available for evacuation of generated power.
- In case of LT distribution network grid connectivity:
 - LT feeders are subjected to Load shedding.
 - Load shedding on Agriculture feeders are upto 12 Hrs.
 - Thus, LT Feeder may not be available for evacuation of power.
 - If load in LT network is less than the generation, then the evacuation of power may not be possible resulting in overvoltage of the LT grid.

Issues for grid connectivity at LT level ...contd

- Safety and accidents:
 - The distribution LT network is feed through a single source.
 - If micro solar generators are permitted grid connectivity then, there will be multiple supply sources feeding the LT network.
 - The LT networks are operated daily by maintenance staff for attaining consumer “fuse call” complaints and to remove the faults.
 - It will be difficult to electrically isolate the network feed by multiple supply sources.
 - Thus, it may cause threat to the safety of maintenance staff.
- Scheduling of the such micro solar generation:
 - Very much complex and practically difficult.
 - In absence of proper scheduling, Utilities will not be able to forecast the micro solar generation.
 - The convention power will always be needed as hot standby.

REC Framework: Eligibility

Grid Connected RE technology approved by MNRE



Conclusion

- MSEDCL is always in favour to promote the RE power generation.
- MSEDCL is ready to implement policies/Regulations decided by various statutory Authorities such as MNRE/CEA/CERC/MERC etc. provided that these are techno-commercially feasible.
- With the advance in technology and after notification of suitable guidelines/ Regulations from MNRE/CEA/CERC/MERC, the micro solar generation may be grid connected in future.
- In present scenario, **the micro solar generation is best suitable for off-grid use.**

Thank You !!!