

Residential/Commercial DG Customer SMART SOLAR Metering Notes

DER: Distributed Energy Resource
DG: Distributed Generator (a subset of DER)
EPS: Electric Power System
IC: Interconnection Customer
PCC: Point of Common Coupling
PoC: Point of Connection
Wh: Watthour Meter (may include demand quantities of Watts and VA)

NOTES:

1. All Interval metering requires telemetry.
2. Grouped meter location and installation shall be according to National Grid's jurisdiction applicable service and tariff requirements. See ESB 750 and ESB 756 Appendix C for the MA service jurisdiction (<https://www.nationalgridus.com/ProNet/Technical-Resources/Electric-Specifications>).
 - IC installs meter socket trough grouped at service location accessible for National Grid's AMR meters (net type for load + DER and bi-directional for MA SMART DER).
 - < 60 kW applications are watthour type revenue meters and > 60 kW are interval type.
 - All kWh measured through the MA SMART meter is compensated through the MA SMART incentive rate.
3. Generator disconnect installed according to NEC and National Grid's MDPU Interconnection Tariff.
4. Inverters shall be UL 1741 or UL 1741 SA certified for parallel operation with the utility (area EPS).
5. Where existing PCC meter is inside, the IC will upgrade their service connection to change it to outside location grouped with MA SMART Solar meter.
6. Bypass meter sockets required in accordance to ESB 750 table 7.2-1.
7. Certified Inverter-based DER Interconnections <25kW may not be required to have an additional disconnecting means in accordance with ESB 756 Appendix C.
8. The following drawings are conceptual only. It is the responsibility of the customer to adhere to all applicable codes, standards and requirements.
9. For systems 25 kW and below a disconnecting or isolation means shall be required to be located between the Company meter installation and the DER device to allow for Company testing of the meter socket prior to meter installation.⁽¹⁾ This device may be located based on customer preference, although where this device is not accessible to the Company ⁽²⁾, this may cause delay with associated meter installation and testing.
10. Line side Disconnect in addition to the load side disconnect required for 480/277 Volt installations.
11. All Interval Meters will require telemetry
12. Ganged metering sockets are not allowed in this program.
13. PV and ESS will be wired to the load side of the Meter Socket.

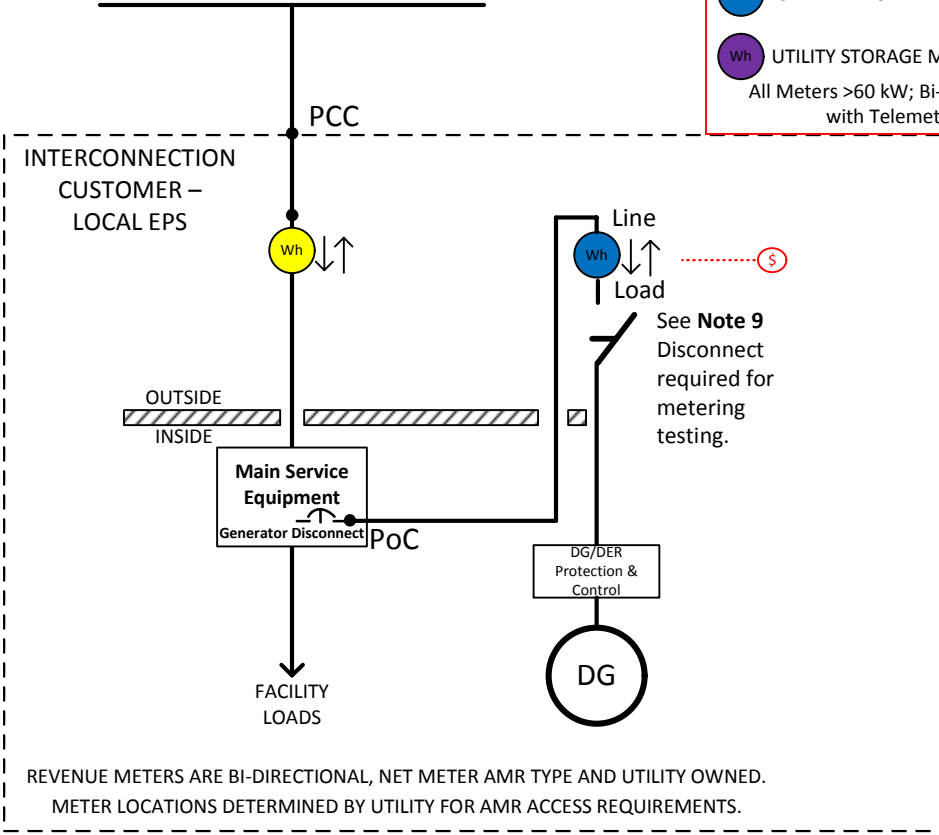
(1) The need for this disconnect is not a new requirement for testing meter socket installations. With existing load customer as well as behind-the-meter DER installations, the customer's main service or parallel power production disconnect is in a position where isolation has been available. This isolation has typically been the main service overcurrent protection device. With the inclusion of sub metering installations, the main service OCP is no longer between the circuit path between the sub meter and the connected DER device, therefore an isolation point to allow for testing is required.

(2) The Company recommends locating this outside, adjacent to the meter socket to allow for the most flexibility for meter installation and future change-outs.

RETAIL

Residential/Commercial DG Customer Behind the Meter MA SMART < 60 kW (Behind Main Service Equipment)

UTILITY – AREA EPS



This diagram is representative of one proposal and the utility may require other configurations.

- Wh UTILITY SERVICE METER
- Wh UTILITY PV GENERATION METER
- Wh UTILITY STORAGE METER

All Meters >60 kW; Bi-directional with Telemetry

REVENUE METERS ARE BI-DIRECTIONAL, NET METER AMR TYPE AND UTILITY OWNED.
METER LOCATIONS DETERMINED BY UTILITY FOR AMR ACCESS REQUIREMENTS.