



Non-wholesale DER (BtMG) Observability

Operations Committee
6/5/18

- Non-wholesale DER – generation (including storage) that does not participate in the wholesale markets (either as "front of meter" generation or demand response) and is used to self-serve load
 - Behind the Meter Generation (BtMG)
 - Cogen/CHP, emergency diesel, CTs, batteries, solar, etc.
 - Non-retail Behind the Meter Generation (NRBtMG)
 - Primarily Muni/Coop generation

Why does PJM need non-wholesale DER information?

- System Operations
 - Mitigate impact of manual load dump or local load shed
 - Operational awareness
 - Improve short term load forecast and/or understand load forecast variance
- Planning
 - Improve long term load forecast or understand load forecast variance
- Manage existing NRBtMG and BtMG requirements (including telemetry & metering)



- PJM will identify non-wholesale DER (>1MW) on annual basis
 - Primarily use EIA860 public data
 - TO verifies/adds information so resources can be modelled for PCLLRW tool
 - PJM Transmission Substation, Voltage, Equipment Name
 - TO may provide additional information to PJM if available and able to release to PJM without confidentiality issues
- Communication to non-wholesale DER during grid emergency
 - TO will communicate downstream as needed to non-wholesale DER through EDC or muni/coop as necessary
 - NWDER will be modelled in PJM PCLLRW tool
 - Local issue – identify resources and their expected impact (helps/hurts)
 - Wider issue – list of resources in zone

PJM *Emergency Operations Manual* ([M-13](#)):

Load Shed Directive

- Local in nature;
- Typically to protect a single piece of transmission equipment.

Manual Load Dump Action

- Wide-area System issues;
- Typically to protect the System from collapse.

Overload / System Issue Occurs



PJM Directs TO to curtail load:
Protect equipment / System 1st!!!



Bring on NWDER help(s), if any:
If not on already & prolonged issue



Restore % of load while ensuring
equipment within limits / System
reliability

- Review draft Manual/Tariff language changes at DERS on 6/8
- Escalate changes through stakeholder process for approval
- First step to continue to improve coordination with non-wholesale DER (BTMG)