



An **AEP** Company

FERC Order 2222 Indiana Implementation



*BOUNDLESS ENERGY*SM

Overview

I&M recognizes the Electric Distribution Company (EDC) is the enabler of Distributed Energy Resource (DER) connection to the Grid and intends to work with the Commission and stakeholders to establish rules that:

- Are fair to all participants;
- Develop a common implementation schedule across the state;
- Provide equitable allocation of costs to participants and non-participants;
- Maintain operational reliability of the transmission and distribution grid, ensuring safe and reliable service to all customers; and
- Preserve the utility's ability to prioritize outage restoration and to take sections of the electric system out of service if there is a safety, maintenance or system operational issue.

Fundamental System Changes

- Traditionally, small solar and wind generators have been treated as load offsets
- Order 2222 will require new equipment so that solar, wind generators can be aggregated together and “dispatched” into the market when market conditions warrant
- An aggregation of DERs could involve multiple DERs located on multiple circuits across several regions of the EDCs service territory
- Since EDCs are responsible for providing safe and reliable service to ALL customers, they have the responsibility to review the aggregation before it is approved by the RTO

Reliability must remain the focus

- EDCs are responsible for providing safe reliable service to all retail customers whether there is a DER located on a given circuit or not
- An EDC must be able to take a circuit out of service to restore service, perform maintenance and extend service to new customers in a safe and reliable manner now and in the future.
- Equipment should be installed on DERs such that the EDC could isolate the DER from the grid remotely if an emergency occurs
- Commission will have to develop dispute resolution procedures if/when disputes between EDCs and DER or DER aggregators arise

Interconnection & DER Aggregation Registration

EDCs will develop a new interconnection agreement & related processes to enable FERC 2222 participation

Sample of PJM Requirements

State interconnection required for resources in aggregation

EDC must approve or reject aggregation registration by analyzing reliability impacts

EDC must determine if individual DERs are “double-counting” with retail programs

Anticipated EDC Action/Impact

Increased volume of interconnection requests. Re-evaluation of existing interconnection agreements

Develop new technical processes & standards for inclusion/exclusion of DER

Develop a new DER Aggregation tariff that governs relationship between EDC and DER Aggregator as well as individual DERs in the Aggregation.

IURC rules should address

- Common definition of DER – what is permitted to be aggregated?
- Implementation timeline should be consistent statewide and reflect RTO plans once approved by FERC
- Double counting - can be avoided if a DER is required to choose retail or wholesale treatment at the time of interconnection – new tariffs for wholesale treatment and aggregation will need to be developed
- New monitoring equipment will be necessary on all DERs and EDCs will need to plan/forecast for DERs on the system
- Interconnection standards must be updated - different terms and conditions are required for wholesale aggregation and generally more visibility into the DER operations by the EDC is necessary for system planning and operations
- DERs must be operated in a safe and reliable manner, their equipment should be properly maintained to minimize risk to the system and the public

Questions?

