

# FERC Order Nos. 827, 828 and 842

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DER Workshop

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# Agenda

- **DERs Subject to NYISO Interconnection Procedures**
- **FERC Order 827**
- **FERC Order 828**
- **FERC Order 842**

# DERs Subject to NYISO Interconnection Procedures

- NYISO's *pro forma* Interconnection Procedures apply to DERs if:
  - Developer intends to make wholesale sales and
  - Developer proposes to interconnect to (i) transmission or (ii) distribution facilities on which there is already a generator making wholesale sales (i.e., “FERC-jurisdictional distribution”)

# FERC Order No. 827

- In FERC Order Nos. 2003 and 2006, FERC included reactive power requirements in the *pro forma* Interconnection Procedures
  - Requiring synchronous generators to design their facilities to provide 0.95 leading to 0.95 lagging reactive power at the Point of Interconnection (“POI”)
- On 6/16/2016 FERC issued a Final Rule (Order No. 827) extending reactive power requirements to non-synchronous generators
  - Effective 9/21/2016 (with limited exceptions under a transition rule), all newly interconnecting non-synchronous generators subject to the NYISO’s Interconnection Procedures are required to provide reactive power at the high-side of the generator substation as a condition of interconnection

# FERC Order No. 828

- FERC's *pro forma* Large Facility Interconnection Procedures require Large Facilities to have frequency and voltage ride-through capability
- In FERC Order Nos. 2006 and 792, FERC considered, but ultimately determined not to require Small Generating Facilities (SGF) to have the same capability to ride through voltage or frequency disturbances
- On 7/21/2016 FERC issued a Final Rule requiring SGF to have ride through capability for abnormal frequency and voltage events (FERC Order No. 828)
  - Effective 10/5/2016, all SGF (generators subject to NYISO interconnection procedures  $\leq 20$  MW) cannot disconnect automatically or instantaneously from the system or equipment of the transmission provider and any affected systems for an under/over frequency/voltage condition

# FERC Order No. 842

- Orders Nos. 2003 and 2006 did not specifically address a generator's ability to provide primary frequency response.
- On 2/6/2018, FERC issued a Final Rule (Order No. 842) requiring all newly interconnecting large and small generation facilities, both synchronous and non-synchronous:
  - To install and enable primary frequency response capability as a condition of interconnection
  - To establish certain operating requirements, including maximum droop and deadband parameters, and provisions for timely and sustained response, e.g., a maximum droop setting of 5% and a deadband setting of  $\pm 0.036$  Hz for primary frequency response, and requirements for a timely and sustained response
  - Does not mandate maintaining headroom to provide primary frequency response and does not mandate compensation for generating facilities required to provide primary frequency response
  - Effective 5/15/18 - primary frequency requirements apply to newly interconnecting generating facilities subject to the NYISO's Interconnection Procedures

# Questions?

We are here to help. Let us know if we can add anything.

# The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policymakers, stakeholders and investors in the bulk power system



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