



# FERC Order No. 845 Compliance – 2<sup>nd</sup> Presentation

---

*Reform of Generator Interconnection  
Procedures and Agreements*

Al McBride

DIRECTOR, TRANSMISSION STRATEGY & SERVICES



# FERC Order No. 845 Compliance: Generator Interconnection

**Proposed Effective Date:** Upon FERC approval of ISO New England's Compliance Filing  
(Compliance Filing is required by *November 5, 2018*)

- On April 19, 2018, the Federal Energy Regulatory Commission (“Commission”) issued Order No. 845, its Final Rule on Reform of Generator Interconnection Procedures and Agreements
  - On June 1, 2018 the Commission granted an extension of the compliance deadline
  - Compliance filings directed in Order No. 845 are now due on or before November 5, 2018
- At the [May 24, 2018 Transmission Committee](#) (TC) meeting, ISO-NE discussed the background on Order No. 845, the compliance requirements associated with the Order, and how ISO-NE proposes to comply with the Order
- At this meeting, ISO-NE will discuss additional details regarding some of the 10 required reforms, and provide an updated schedule for compliance – given the extension approved by the Commission

# Summary of Order No. 845 Reforms

## *Improving certainty in the interconnection process*

- To improve certainty in the interconnection process, the Final Rule:
  1. Removes the limitation that interconnection customers may only exercise the option to build a transmission provider's interconnection facilities and stand-alone network upgrades in instances when the transmission provider cannot meet the dates proposed by the interconnection customer (***Discussed further in this presentation***); and
  2. Requires that transmission providers establish interconnection dispute resolution procedures that allow a disputing party to unilaterally seek non-binding dispute resolution.



# Summary of Order No. 845 Reforms

## *Promoting more informed interconnection decisions*

- To promote more informed interconnection decisions, the Final Rule:
  3. Requires transmission providers to outline and make public a method for determining contingent facilities;
  4. Requires transmission providers to list the specific study processes and assumptions for forming the network models used for interconnection studies;
  5. Revises the definition of “Generating Facility” to explicitly include electric storage resources; and
  6. Establishes reporting requirements for aggregate interconnection study performance (***Discussed in a separate presentation***).



# Summary of Order No. 845 Reforms

## *Enhancing the interconnection process*

- To enhance the interconnection process, the Final Rule:
  7. Allows interconnection customers to request a level of interconnection service that is lower than their generating facility capability;
  8. Requires transmission providers to allow for provisional interconnection agreements that provide for limited operation of a generating facility prior to completion of the full interconnection process (***Discussed further in this presentation***);
  9. Requires transmission providers to create a process for interconnection customers to use surplus interconnection service at existing points of interconnection (***Discussed further in this presentation***); and
  10. Requires transmission providers to set forth a procedure to allow transmission providers to assess and, if necessary, study an interconnection customer's technology changes without affecting the interconnection customer's queue position.



# Overview of ISO-NE's Proposed Compliance

- One of the compliance proposals will highlight that the ISO-NE procedures already meet or exceed the modifications required in Order No. 845
  - Reform #10
- Six of the compliance proposals will directly adopt the modifications required in Order No. 845
  - Reform #2, #3, #4, #5, #7, and #8
- Two of the compliance proposals will propose “independent entity” and/or “consistent with or superior to” variations to the requirement modifications required in Order No. 845
  - Reform #1 and #9
- One of compliance proposals will adopt the requirement modifications required in Order No. 845 and separately propose additional modifications to the Commission
  - Reform #6

# FURTHER DISCUSSION OF SOME OF THE TEN PROPOSED REFORMS



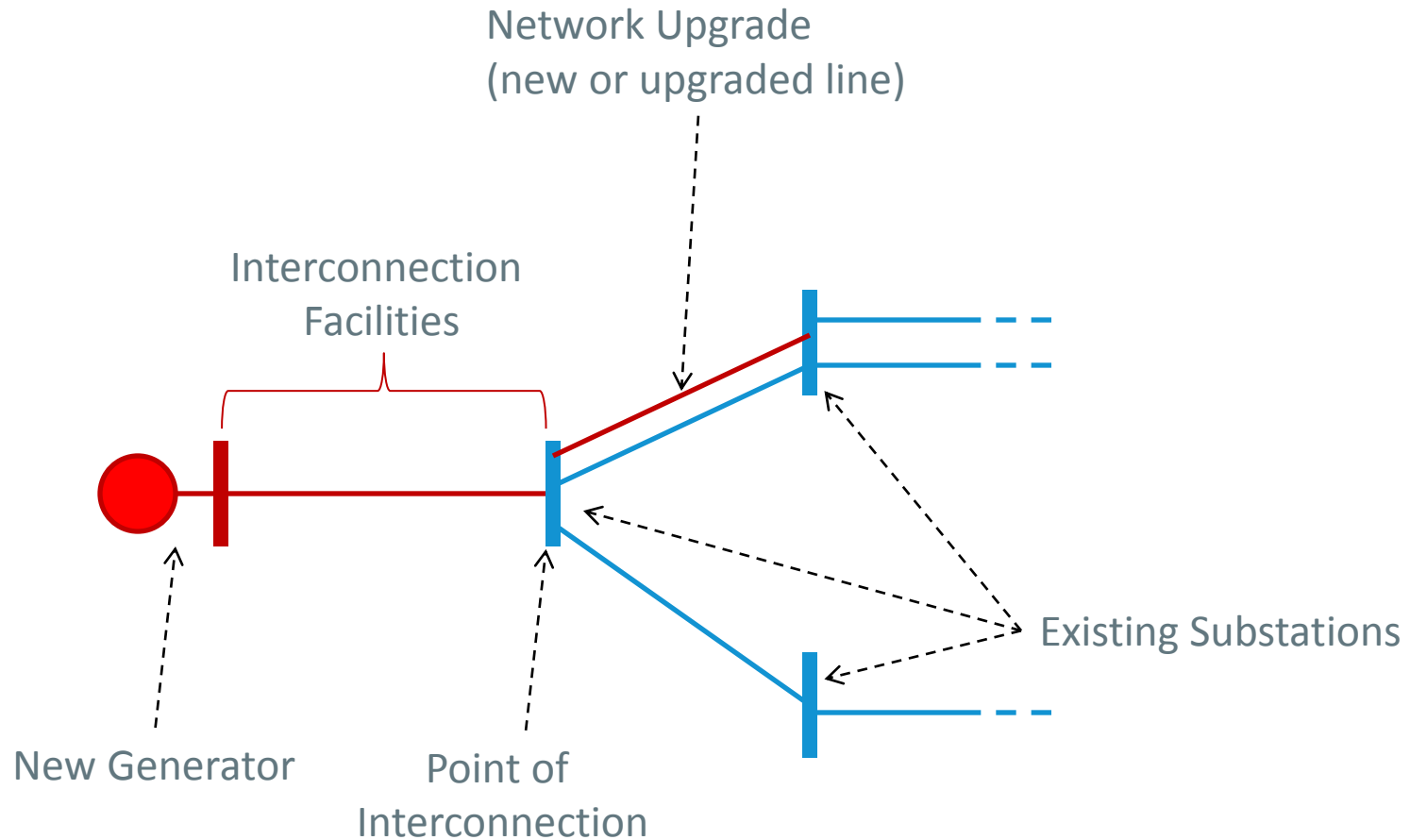
Reform	1 – Option to Build
Additional Background	<ul style="list-style-type: none"> <li>• The ISO-NE interconnection procedures already provide customers with the option to build interconnection facilities and “stand-alone” upgrades when the transmission provider cannot meet the requested in-service dates</li> <li>• Section 5.1 of the LGIA describes the option to build and Section 5.2 describes the conditions applicable to the option</li> </ul>
ISO-NE Compliance Proposal	<p>ISO-NE will propose to comply with Order No. 845 by removing the limitation that interconnection customers may only exercise the option to build a transmission provider’s interconnection facilities and stand-alone network upgrades in instances when the transmission provider cannot meet the dates proposed by the interconnection customer</p>
Additional Considerations	<p>ISO-NE will also propose additional language pursuant to the independent entity variation standard to clarify:</p> <ul style="list-style-type: none"> <li>• What constitutes a stand-alone upgrade</li> <li>• What Interconnection Agreement milestones will apply to this option</li> </ul>

**Stand Alone Network Upgrades** [*current definition*] shall mean Network Upgrades that an Interconnection Customer may construct without affecting day-to-day operations of the New England Transmission System during their construction. The System Operator, Interconnection Customer, Interconnecting Transmission Owner, and any Affected Party as deemed appropriate by the System Operator in accordance with applicable codes of conduct and confidentiality requirements, must agree as to what constitutes Stand Alone Network Upgrades and identify them in Appendix A to the Standard Large Generator Interconnection Agreement.





# Types of Upgrades



# Clarity on “Without Affecting Day-to-Day Operations”

- Proposed to apply to Interconnection Facilities and Stand Alone Network Upgrades
  - Interconnection Facilities and Network Upgrades that an Interconnection Customer may construct without affecting day-to-day operations of the New England Transmission System during their construction are those that do not involve the moving or outage of existing transmission equipment except for the outage necessary to tie-in the completed Interconnection Facilities or Network Upgrades to the existing system



# Tracking Milestone Progress for Option to Build

- The Interconnection Customer must provide a complete schedule for the completion of the upgrade
  - Notice to proceed for engineering and design
  - Notice to proceed for construction
  - Materials and major equipment purchases
- These milestones will be included in the Interconnection Agreement (IA)
  - Similar to the milestones for upgrades performed by the Transmission Owner (TO)
- Interconnection Customers failing to provide evidence of meeting the milestones in the IA may be found in breach of the agreement

# Other Rules for Option to Build

- Option to Build does not apply to upgrades for projects participating in a cluster
  - Except for the interconnection facilities associated with a single resource in the cluster
  - Elective Transmission Upgrades can participate in the cluster
    - Can replace a Cluster Enabling Transmission Upgrade upon agreement with the participants in the cluster
- Upon transition, the option will be available to those projects that have not yet signed an IA



Reform	8 – Provisional Interconnection Service
Additional Background	<ul style="list-style-type: none"> <li>The ISO-NE interconnection process largely meets the intent of the Commission design through the application of the “Limited Operation” provision in Section 5.9 of the Large Generator Interconnection Agreement</li> </ul>
ISO-NE Compliance Proposal	<p>ISO-NE will propose to comply with Order No. 845 by adopting the Provisional Interconnection Service modifications required by the Order</p>
Additional Considerations	<ul style="list-style-type: none"> <li>Note that any such proposed interconnection would still require Proposed Plan Application approval before entering service</li> <li>Because of the methodology used to allocate capacity interconnection service, Provisional Interconnection Service would only be available to energy-only interconnections (Network Capability Interconnection Service)</li> </ul>



# Provisional Interconnection Service

- A request to analyze the potential for Provisional Interconnection Service may be made before the System Impact Study has begun
  - The SIS itself determines the ability to operate un-provisionally, without limitation
  - The Interconnection Customer may request Limited Operation under Section 5.9 during the IA negotiations
- The limitations and conditions associated with the approval for provisional service and the expiration of the approval once those conditions no longer apply will be captured in:
  - A modified pro forma LGIA used to convey the provisional service
  - The I.3.9 approval of the provisional plan

## Reform

## 9 – Surplus Interconnection Service

### Additional Background

- The ISO-NE interconnection process already allows for the “re-use” of interconnection service through the incremental increase and repowering constructs for energy and capacity interconnection service

### ISO-NE Compliance Proposal

ISO-NE will propose to comply with Order No. 845 by adopting the surplus interconnection service modifications required by the Commission

### Additional Considerations

- “Unused” interconnection service will be defined as service that is not currently in use (and has not been retired):
  - The future proposed re-use of interconnection service (that is currently in-use) is a repowering and would not follow the surplus process
- The proposed change cannot be a material modification that would require its own Interconnection Request
- Proposed Plan Application approval is required before entering service
- A surplus-service application form will be developed
- These requests would not be listed in the ISO-NE queue
- Changes to the pro forma language will be made pursuant to the “consistent with or superior to” and/or the “independent entity variation” standards

# Unused Interconnection Service

- Surplus Interconnection Service can be requested for Interconnection Service that is currently unused
- Unused Interconnection Service is identified by the difference between the approved Network Resource Capabilities(NRC)/Capacity Network Resource Capabilities (CNRC) and the latest Seasonal Claimed Capabilities/Qualified Capacities (temperature corrected if appropriate)





# Surplus Interconnection Service

- Requests for Surplus Interconnection Service will not be listed in the queue
  - Order No. 845 states that these requests are processed outside of the interconnection process
- The facility owner/lead participant controls whether or not a request may be made for Surplus Interconnection Service
- Requests can only be made for facilities that are already in commercial operation



# Surplus Interconnection Service - Example

- The ISO already processes non-material changes outside of the Interconnection Process
  - The I.3.9 process is used to approve the proposed change
  - A common example is the non-material change of an Automatic Voltage Regulator
- Surplus Example:
  - The latest SCC values for an commercial generator are 10 MW less than the approved NRC values
  - The owner of the commercial generator submits a Surplus Interconnection Service proposal for the addition of a 10 MW generator at the same Point of Interconnection
  - The ISO can identify within 10 business days that the addition of the 10 MW device at this location is not an adverse material modification of the transient stability or short circuit performance of the overall facility
    - The generator owner may have performed analysis to support this determination
  - The generator owner must provide an acceptable description of how the overall output of the facility will be limited to the existing NRC values

# Next Step

- For the July 24, 2018 Transmission Committee meeting, ISO-NE will provide initial drafts of the Tariff redlines that will be proposed to achieve compliance with Order No. 845



# Stakeholder Schedule

Stakeholder Committee and Date	Scheduled Project Milestone
<b>Transmission Committee</b> <b>May 24, 2018</b>	Initial discussion
<b>Transmission Committee</b> <b>June 19, 2018</b>	Additional discussion
<b>Transmission Committee</b> <b>July 24, 2018</b>	First review of proposed Tariff language
<b>Transmission Committee</b> <b>September 18, 2018</b>	Second review of proposed Tariff language
<b>Transmission Committee</b> <b>October 23, 2018</b>	Additional discussion of Tariff language and vote
<b>Participants Committee</b> <b>November 2, 2018</b>	Vote

Compliance filing will be submitted in time to meet the compliance filing deadline of November 5, 2018

# Questions

