



# D.P.U. 19-55

## DISTRIBUTED GENERATION INTERCONNECTION

Technical Conference  
July 18, 2019



# AGENDA

- Introduction to D.P.U. 19-55 Inquiry
  - Purpose/Goals
  - Expected process and timeline
  - Stakeholder input on initial phase topic priority and associated timeline
- Affected System Operator Study Investigation
  - Topic summary
  - DPU directed process
  - DPU interim guidance discussion
- Lunch (12:00pm – 1:00pm)
- Interconnection of Energy Storage Systems - Breakout Sessions
- Next Steps



# INTRODUCTION TO INQUIRY

- The purpose of this Inquiry is to investigate the current standards and procedures related to the interconnection of distributed generation (“DG”) to the electric power system.
- Limited scope of initial phase of Inquiry.
- Collaborative process.
- We will take advantage of a variety of processes (i.e. technical conferences, DPU directed collaboration, TSRG, working groups, etc.)
- To succeed we will need hard work and active participation from all parties.



# STAKEHOLDER INPUT ON TOPIC PRIORITY AND TIMELINES

Initial Phase Topics (after affected system operator studies):

- Interconnection of energy storage systems;
- Methods to manage high volume queues for DG interconnection;
- Timeline Enforcement Mechanism;
- Interconnection process for DG facilities interconnecting to the transmission system; and
- IEEE 1547



# AFFECTED SYSTEM OPERATOR STUDIES

## INTRODUCTION

- DG Interconnection Tariff Section 3.4
- DPU 3 part process:
  1. National Grid ongoing ASO Cluster Study
  2. Improving process for the future (potential tariff revisions)
  3. Interim guidance



# AFFECTED SYSTEM OPERATOR STUDIES NATIONAL GRID CLUSTER STUDY

- High-level summary of cluster study and expected process moving forward
  - Additional information available at:  
<https://ngus.force.com/s/article/Affected-Substations>
- DPU priorities and current actions
  - We will be addressing and providing updates through D.P.U.19-55, however, DPU is also working with National Grid, DOER, and ISO in tandem with D.P.U. 19-55.
  - Facilities in cluster study with executed ISAs and/or late stage construction.
- Stakeholder opportunity to provide input- limited scope comment period July 19, 2019 through August 2, 2019.



# AFFECTED SYSTEM OPERATOR STUDIES POTENTIAL TARIFF REVISIONS

- DPU requests that EDCs and interested stakeholders collaborate and submit proposed revisions to the DG Interconnection Tariff concerning ASO studies. Including:
  - Clear roles and division of responsibilities for EDCs and transmission operators; and
  - Requirements for communications with stakeholders and DPU.
- EDCs shall jointly submit proposed revisions by August 29, 2019.
- To participate in collaboration contact either: [jhabib@keeganwerlin.com](mailto:jhabib@keeganwerlin.com), [awagner@keeganwerlin.com](mailto:awagner@keeganwerlin.com) or [jmcdiarmid@necec.org](mailto:jmcdiarmid@necec.org).
- ISO representatives will be available to answer questions.
- Limited scope comment period following August 29<sup>th</sup> filing, deadline September 9, 2019.
- Additional technical conference will be scheduled to discuss ASO issues not agreed upon.



# AFFECTED SYSTEM OPERATOR STUDIES DPU INTERIM GUIDANCE

- DPU intends to issue an interim guidance document in this docket to direct process related to ASO studies from the date of issuance of the guidance document until further resolution is found through this investigation, or otherwise directed by the DPU.
- DPU staff will facilitate a discussion to obtain stakeholder recommendations of items to be included in the interim guidance document.
- This discussion will be limited to no more than one hour.
- If you would like to submit your suggestions in writing you may do so by July 23, 2019. Each submission may be no longer than 1 page.



# AFFECTED SYSTEM OPERATOR STUDIES

## DPU INTERIM GUIDANCE

Feedback on Affected System Operator Interim Guidance should include comments on the following:

1. How and when EDCs should communicate with customers about their placement (or potential placement) in a transmission study
2. How EDCs should communicate with the DPU about a facility or group of facilities being placed into a transmission study
3. How EDCs should communicate the process that affected projects will be following
4. Other recommended best practices



# INTERCONNECTION OF ENERGY STORAGE SYSTEMS

## Breakout Session By Table

- Introduction (5-10 mins)
- Breakout (30 mins)
- Reconvene (15 mins)
- Submit questionnaire to DPU staff

## DPU staff facilitating

- Rotating through groups
- Keeping groups on task
- Not the scribe or presenter



# SUMMARY OF COMMENTS RECEIVED

The DPU asked stakeholders to provide input on what topics should be covered in the breakout sessions at today's conference and received responses covering a variety of topics, including:

1. Metering requirements, particularly for solar + storage facilities in SMART
2. Standards for reviewing energy storage system applications
3. Procedures for adding energy storage systems to existing applications
4. Recloser requirements for projects  $\geq 500$  kW
5. Timeline management issues
6. EDC rights to energy, capacity, and environmental attributes



# INTERCONNECTION OF ENERGY STORAGE SYSTEMS – TOPIC # 1

## **Establishing Standards for Reviewing Applications for Energy Storage Systems**

- Recommendations for definitions to be added to the tariff (e.g. energy storage system, technical system size, maximum export, etc.)
- Establishment of uniform application requirements
- Studying system impacts based on how a facility will operate versus its nameplate rating (i.e. power control systems)



# INTERCONNECTION OF ENERGY STORAGE SYSTEMS – TOPIC # 2

## **Procedures for Adding Energy Storage Systems to Existing Applications**

- How does addition of energy storage system impact queue position?
- Should the addition of storage add time to the EDC's review process for the overall project?
- Define major vs. minor changes
- Studying incremental system impacts based on how a facility will operate versus its nameplate rating (i.e. power control systems)
- Should DC-coupled and AC-coupled systems be treated differently?

# KEY DEADLINES AND SUMMARY OF NEXT STEPS

Date	Comments Due	Notes
Tuesday, July 23, 2019	Recommendations for DPU interim guidance on ASO studies	Submissions should be no more than one page
Friday, August 2, 2019	Comments on National Grid ASO Cluster Study	
Thursday, August 29, 2019	EDCs submit joint stakeholder revisions to DG interconnection tariff concerning ASO	Contact <a href="mailto:jhabib@keeganwerlin.com">jhabib@keeganwerlin.com</a> , <a href="mailto:awagner@keeganwerlin.com">awagner@keeganwerlin.com</a> , or <a href="mailto:jmcdiarmid@necec.com">jmcdiarmid@necec.com</a> to participate in collaboration
Monday, September 9, 2019	Stakeholder comments on revisions to interconnection tariff concerning ASO	

- Additional technical conferences to be scheduled in D.P.U. 19-55, with more details provided soon.
- DPU will contact electronic distribution list with technical conference notifications and other process updates.
- Email [Kate.Tohme@mass.gov](mailto:Kate.Tohme@mass.gov) to be added to electronic distribution list.

