



Small Generator Interconnection Agreements and Procedures

RM13-2-000
March 27, 2013

Final Agenda

9:30 – 9:45 a.m. **Welcome and Opening Remarks**

Introduction

On January 17, 2013, the Federal Energy Regulatory Commission (Commission) issued a Notice of Proposed Rulemaking (NOPR) proposing to revise the *pro forma* Small Generator Interconnection Procedures (SGIP) and *pro forma* Small Generator Interconnection Agreement (SGIA) originally set forth in Order No. 2006.¹ This workshop is convened to give stakeholders the opportunity to discuss the proposed reforms to the *pro forma* SGIP and the *pro forma* SGIA and other related issues.

¹ *Standardization of Small Generator Interconnection Agreements and Procedures*, Order No. 2006, FERC Stats. & Regs. ¶ 31,180, *order on reh'g*, Order No. 2006-A, FERC Stats. & Regs. ¶ 31,196 (2005), *order granting clarification*, Order No. 2006-B, FERC Stats. & Regs. ¶ 31,221 (2006).

9:45 – 11:00 a.m. Roundtable Discussion: Fast Track Process Eligibility

In the NOPR, the Commission proposed to revise the 2 megawatt (MW) threshold for participation in the SGIP Fast Track Process.² The Commission proposed to base Fast Track eligibility on individual system and generator characteristics, up to a limit of 5 MW. These characteristics include interconnection voltage level, the circuit distance of the interconnection from the substation, and generator capacity as the basis for determining whether an interconnection customer is eligible to be evaluated under the Fast Track Process, as shown in the table below.

Line Voltage	Fast Track Eligibility Regardless of Location	Fast Track Eligibility on ≥ 600 Ampere Line and ≤ 2.5 Miles from Substation
< 5 kilovolt (kV)	≤ 1 MW	≤ 2 MW
≥ 5 kV and < 15 kV	≤ 2 MW	≤ 3 MW
≥ 15 kV and < 30 kV	≤ 3 MW	≤ 4 MW
≥ 30 kV	≤ 4 MW	≤ 5 MW

Roundtable participants should be prepared to discuss the following:

- The individual system and generator characteristics included in the Commission's proposal (and the levels at which they are included); and
- Whether the proposal strikes an appropriate balance between allowing more small generating facilities to interconnect under the Fast Track Process and protecting system safety and reliability.

² See *Small Generator Interconnection Agreements and Procedures*, 142 FERC ¶ 61,049, at P 30-32 (2013).

Roundtable Participants

- Justin Chebahtah, Grid Integration Engineer, SolarCity (Solar Energy Industries Association)
- Michael Coddington, Senior Electrical Engineering Researcher, Distributed Grid Integration, National Renewable Energy Laboratory
- Paul Hutchison, Renewable Energy Analyst, Public Utilities Commission of Ohio
- Eric Laverty, Director of Transmission Access Planning, Midwest Independent Transmission System Operator, Inc.
- Rachel Peterson, Interim Energy Advisor, California Public Utilities Commission
- Bhaskar Ray, Senior Director of Engineering and Design, SunEdison L.L.C. (Solar Energy Industries Association)
- Tim Roughan, Director, Energy and Environmental Policy, National Grid (Edison Electric Institute)
- Michael Sheehan, P.E., Keyes, Fox & Wiedman L.L.P. (Interstate Renewable Energy Council)
- Holly Rachel Smith, Assistant General Counsel, National Association of Regulatory Utility Commissioners
- Sky Stanfield, Attorney, Keyes, Fox & Wiedman L.L.P. (Interstate Renewable Energy Council)
- Steve Steffel, Manager, Distributed Energy Resources Planning and Analytics, Pepco Holdings, Inc.
- Jeff Triplett, Utility System Consultant, Power System Engineering (National Rural Electric Cooperative Association)
- Michael Worden, Chief, Electric Distribution Systems, New York State Public Service Commission

11:00 – 11:15 a.m. Break

11:15 a.m. – 12:15 p.m. Roundtable Discussion: Pre-Application Report

The Commission proposed in the NOPR to include provisions in the SGIP that would allow the interconnection customer to request from the transmission provider a pre-application report providing existing information about system conditions at a possible point of interconnection (see section 1.2 of Appendix C to the NOPR for the proposed SGIP revisions related to the pre-application report).³

Roundtable participants should be prepared to discuss the following:

³ See *id.* P 26–29.

- The content of the pre-application report, including whether additional items should be included in the report; and
- Whether the proposed fee of \$300 for the pre-application report is appropriate.

Roundtable Participants

- Aaron Berner, Manager, Interconnection Analysis, PJM Interconnection, L.L.C.
- Justin Chebahtah, Grid Integration Engineer, SolarCity (Solar Energy Industries Association)
- Michael Coddington, Senior Electrical Engineering Researcher, Distributed Grid Integration, National Renewable Energy Laboratory
- Paul Hutchison, Renewable Energy Analyst, Public Utilities Commission of Ohio
- Eric Laverty, Director of Transmission Access Planning, Midwest Independent Transmission System Operator, Inc.
- Rachel Peterson, Interim Energy Advisor, California Public Utilities Commission
- Bhaskar Ray, Senior Director of Engineering and Design, SunEdison L.L.C. (Solar Energy Industries Association)
- Tim Roughan, Director, Energy and Environmental Policy, National Grid (Edison Electric Institute)
- Michael Sheehan, P.E., Keyes, Fox & Wiedman L.L.P. (Interstate Renewable Energy Council)
- Holly Rachel Smith, Assistant General Counsel, National Association of Regulatory Utility Commissioners
- Sky Stanfield, Attorney, Keyes, Fox & Wiedman L.L.P. (Interstate Renewable Energy Council)
- Steve Steffel, Manager, Distributed Energy Resources Planning and Analytics, Pepco Holdings, Inc.
- Jeff Triplett, Utility System Consultant, Power System Engineering (National Rural Electric Cooperative Association)
- Michael Worden, Chief, Electric Distribution Systems, New York State Public Service Commission

12:15 – 1:00 p.m.

Break

1:00 – 2:30 p.m. Roundtable Discussion: Supplemental Review Screens

In the NOPR, the Commission proposed to revise the supplemental review in section 2.4 of the *pro forma* SGIP following failure of the Fast Track Process screens in section 2.2.1 of the *pro forma* SGIP.⁴ The supplemental review screens include a minimum load screen (section 2.4.1.1 of Appendix C to the NOPR), a voltage and power quality screen (section 2.4.1.2 of Appendix C to the NOPR), and a safety and reliability screen (section 2.4.1.3 of Appendix C to the NOPR).

Roundtable participants should be prepared to discuss the following:

- The specific content of the supplemental review screens proposed in the NOPR, including:
 - Whether twelve months of minimum load data is appropriate for use in the minimum load screen, or whether additional data, if available, should be required to be considered;
 - The reasons that minimum load data are not available to transmission providers and what the Commission could do to encourage data availability where appropriate; and
 - Potential modifications to the supplemental review screens proposed in the NOPR to ensure the safety and reliability of the system.
- Whether the \$2,500 fee for the supplemental review proposed in the NOPR is appropriate.

Roundtable Participants

- Justin Chebahtah, Grid Integration Engineer, SolarCity (Solar Energy Industries Association)
- Michael Coddington, Senior Electrical Engineering Researcher, Distributed Grid Integration, National Renewable Energy Laboratory
- Paul Hutchison, Renewable Energy Analyst, Public Utilities Commission of Ohio
- Eric Laverty, Director of Transmission Access Planning, Midwest Independent Transmission System Operator, Inc.
- Rachel Peterson, Interim Energy Advisor, California Public Utilities Commission

⁴ See *id.* P 33–40.

- Bhaskar Ray, Senior Director of Engineering and Design, SunEdison L.L.C. (Solar Energy Industries Association)
- Tim Roughan, Director, Energy and Environmental Policy, National Grid (Edison Electric Institute)
- Michael Sheehan, P.E., Keyes, Fox & Wiedman L.L.P. (Interstate Renewable Energy Council)
- Holly Rachel Smith, Assistant General Counsel, National Association of Regulatory Utility Commissioners
- Sky Stanfield, Attorney, Keyes, Fox & Wiedman L.L.P. (Interstate Renewable Energy Council)
- Steve Steffel, Manager, Distributed Energy Resources Planning and Analytics, Pepco Holdings, Inc.
- Jeff Triplett, Utility System Consultant, Power System Engineering (National Rural Electric Cooperative Association)
- Michael Worden, Chief, Electric Distribution Systems, New York State Public Service Commission

2:30 – 2:45 p.m. Break

2:45 – 3:45 p.m. Roundtable Discussion: Interconnection of Storage Devices

The Commission did not propose to revise the definition of Small Generating Facility to include storage devices in Attachment 1 to the SGIP and Attachment 1 to the SGIA as devices that produce electricity. However, Commission staff would like to discuss whether such a revision to the definition of Small Generating Facility would be appropriate and whether other revisions to the SGIP and SGIA related to interconnecting storage devices would be appropriate.

Roundtable participants should be prepared to discuss the following:

- Their experiences related to the interconnection of storage devices; and
- Potential revisions to the *pro forma* SGIP and *pro forma* SGIA that would facilitate interconnection of such devices.

Roundtable Participants

- Alan Elmy, Manager, Interconnection Projects, PJM Interconnection, L.L.C.
- Tim Roughan, Director, Energy and Environmental Policy, National Grid (Edison Electric Institute)
- Robert Rounds, Director, Asset and Project Management, Beacon Power, L.L.C. (Electricity Storage Association)

- Michael Sheehan, P.E., Keyes, Fox & Wiedman LLP (Interstate Renewable Energy Council)
- Mark Siira, Director of Business Development, ComRent International (Institute of Electrical and Electronics Engineers)
- Steve Steffel, Manager, Distributed Energy Resources Planning and Analytics, Pepco Holdings, Inc.
- Michael Worden, Chief, Electric Distribution Systems, New York State Public Service Commission

3:45 – 4:45 p.m. Panel Discussion: Disconnection of Small Generating Facilities During Over- and Under-Frequency Events

In the NOPR, the Commission proposed to revise section 1.5.4 of the *pro forma* SGIA to require the interconnection customer to design, install, maintain, and operate its Small Generating Facility in accordance with the latest version of any applicable standards, such as the Institute of Electrical and Electronics Engineers Standard 1547 for Interconnecting Distributed Resources with Electric Power Systems, to minimize the likelihood of an off-normal frequency disturbance resulting in common mode disconnection of its Small Generating Facility.⁵

Panelists should be prepared to discuss the following:

- Their experiences and any relevant analysis involving frequency issues associated with distributed generation;
- Potential conflicts between existing disconnection requirements in current standards and new smart grid interoperability standards being developed under the auspices of the National Institute of Standards and Technology;
- Whether the proposed revision to section 1.5.4 of the *pro forma* SGIA appropriately addresses small generator disconnection due to common mode frequency disturbances at high penetrations of distributed generation; and
- Whether abnormal voltage conditions should also be addressed in the proposed revisions to section 1.5.4 of the *pro forma* SGIA.

⁵ See *id.* P 46.

Panelists

- Allen Hefner, Jr., Ph.D., National Institute of Standards and Technology
- Rachel Peterson, Interim Energy Advisor, California Public Utilities Commission
- Bob Saint, Principal Distribution Engineer, Energy and Power Division, National Rural Electric Cooperative Association
- Michael Sheehan, P.E., Keyes, Fox & Wiedman LLP (Interstate Renewable Energy Council)
- Mark Siira, Director of Business Development, ComRent International (Institute of Electrical and Electronics Engineers)

4:45 – 5:00 p.m. Wrap-Up