UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Requirements for Frequency and Voltage Ride Through Capability of Small Generating Facilities	**)** **)** **)**	**Docket No. RM16-8-000**

COMMENTS OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION IN RESPONSE TO NOTICE OF PROPOSED RULEMAKING

The North American Electric Reliability Corporation ("NERC") hereby provides Comments on the Federal Energy Regulatory Commission ("Commission") Notice of Proposed Rulemaking to revise the *pro forma* Small Generator Interconnection Agreement ("SGIA").[1] As highlighted in the NOPR, NERC studies demonstrate the increasing impact of small generating facilities on the grid.[2] The NOPR would require small generating facilities interconnecting through the SGIA to ride through abnormal frequency and voltage events and not disconnect during such events.[3] The NOPR also proposes to require transmission providers to coordinate protective equipment settings with automatic load shedding programs.[4]

The Commission's *pro forma* Large Generator Interconnection Agreement ("LGIA") currently includes ride through requirements. The NOPR notes that technological developments now permit small generators to maintain ride through capability.[5] With these developments, the NOPR states that it would be unduly discriminatory not to impose the same ride through

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1 *Requirements for Frequency and Voltage Ride Through Capability of Small Generating Facilities*, 154 FERC ¶ 61,222 ("NOPR").

2 NOPR, at P 7.

3 NOPR, at P 1. *See also*, NOPR, at n. 4 (defining "ride through" as "a Generating Facility staying connected to and synchronized with the Transmission System during system disturbances within a range of over- and under-frequency conditions, in accordance with Good Utility Practice."); *see id.* at P 12 (proposing new Section 1.5.7).

4 *Id.* at P 12.

5 NOPR, at P 8.

requirements on smaller generators under the SGIA that are applicable to larger generators under the LGIA.[6] As described below, revisions to the SGIA to support ride through capability would be consistent with NERC reliability assessments. In support of these Comments, NERC states the following:

I. COMMUNICATIONS

Notices and communications with respect to these Comments may be addressed to the following:[7]

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II. COMMENTS

As highlighted in the NOPR,[8] NERC has determined that the transforming resource mix may affect reliability of the Bulk Power System ("BPS"), unless proactive measures are taken to address the integration of greater levels of variable energy and distributed energy resources.[9]

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6 NOPR, at PP 1 and 8-9.

7 Persons to be included on the Commission's service list are identified by an asterisk. NERC respectfully requests a waiver of Rule 203 of the Commission's regulations, 18 C.F.R. §385.203, to allow the inclusion of more than two persons on the service list in this proceeding.

8 NOPR, at P 8.

9 *See*, *Comments of NERC in Response to NOPR on Reactive Power Requirements for Non-Synchronous Generation*, Docket No. RM16-1-000, at Attachment A, *NERC White Paper On FERC NOPR Proposal to Revise Standard Generator Interconnection Agreements*, at pp.14-18 (filed Jan. 27, 2016) ("Reactive Power White Paper") (supporting NERC's comments on the proposal to eliminate exemptions from reactive power requirements); *and* Essential Reliability Services Task Force Framework Report ("Framework Report") (Dec. 2015), *available at* http://www.nerc.com/comm/Other/essntlrlbltysrvcstskfrcDL/ERSTF%20Framework%20Report%20-%20Final.pdf.

For example, NERC's 2015 Essential Reliability Services Task Force Framework Report ("Framework Report") explained how distributed energy resources would increasingly affect the net amount of load on the distribution system. NERC noted that distributed energy resource frequency and voltage ride through capability are not well coordinated with NERC Reliability Standards (such as Reliability Standard PRC-024-2 (*Generator Frequency and Voltage Protective Relay Settings*)). Loss of resources located on the distribution system "can lead to events where the connection and/or disconnection of VERs [variable energy resources] may abruptly change the net distribution load during frequency excursions or voltage deviations."[10] NERC added that this might exacerbate a disturbance on the BPS, while better coordination of these resources, along with enabling them to ride-through certain levels of disturbances, could support reliability during these events.[11]

Similarly, NERC 2016 Reactive Power White Paper summarized key NERC findings regarding voltage ride through. The Reactive Power White Paper noted the risk of inequitable voltage ride through requirements applicable to variable energy resources, such as dispersed power producing resources,[12] and explained that consistent voltage ride through requirements for synchronous and asynchronous generation would ensure consistent resource performance during system disturbances.[13] Therefore, proposals to apply consistent frequency and voltage ride through requirements under the SGIA and LGIA would be consistent with NERC reliability assessments related to the transforming resource mix.

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10 Framework Report, at p. 21.
11 *Id.*
12 Reactive Power White Paper, at pp. 14-16.
13 *Id.*

III. CONCLUSION

Wherefore, for the reasons stated above, revising the SGIA to impose ride through requirements would be consistent with the results of a number of NERC's reliability assessments.

Respectfully submitted,

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Date: May 23, 2016

CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service lists compiled by the Secretary in Docket No. RM16-8-000.

Dated at Washington, DC this 23rd day of May, 2016.

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