UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Reliability Standards for Frequency and Voltage Protection Settings and Ride-Through for Inverter-Based Resources	**)** **)** **)**	**Docket No. RM25-3-000**

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

The North American Electric Reliability Corporation ("NERC") submits comments on the Federal Energy Regulatory Commission's ("FERC" or "Commission") Notice of Proposed Rulemaking ("NOPR") regarding its proposal to approve proposed Reliability Standards PRC-024-4 (Frequency and Voltage Protection Settings for Synchronous Generators, Type 1 and Type 2 Wind Resources, and Synchronous Condensers) and PRC-029-1 (Frequency and Voltage Ride-through Requirements for Inverter-Based Resources).[1] FERC also proposes to approve the proposed definition of the term "Ride-through."[2]

The Commission is seeking comments on all aspects of its proposals to approve the proposed Reliability Standards PRC-024-4 and PRC-029-1 and the proposed definition of the term "Ride-through."[3] Additionally, FERC proposes to direct NERC to develop and submit two informational filings, 12 months and 24 months, after the conclusion of NERC's proposed 12-month exemption request period in PRC-029-1 for existing Inverter-Based Resources ("IBRs").[4]

As discussed herein, the proposed Reliability Standards would advance the reliability of the Bulk-Power System ("BPS") by establishing voltage and frequency ride-through criteria for

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1 *Reliability Standards for Frequency and Voltage Protection Settings and Ride-Through for Inverter-Based Resources*, Notice of Proposed Rulemaking, 189 FERC ¶ 61,212 (2024) [hereinafter NOPR].
2 *Id.*
3 *Id*. at P 3.
4 *Id.* at P 5.

Generator Owners of IBRs to continue to inject current and perform voltage support during a BPS disturbance and prohibiting momentary cessation in the no-trip zone during disturbances. The proposed Reliability Standards are an integral part of NERC's proposed framework to address IBR performance issues in a comprehensive and holistic manner, and are responsive to the Commission's directives in Order No. 901, which directed NERC to submit new or revised standards addressing IBR ride-through performance requirements.

NERC appreciates FERC's continued efforts to address IBR Ride-through and looks forward to stakeholder comments on the NOPR. NERC provides limited comments in support of the Commission's proposal to approve the proposed Reliability Standards and definition and recommending that the Commission revise its proposal to require one informational filing at 18 months after the conclusion of the 12-month exemption request period, rather than two informational filings 12 months and 24 months after the conclusion of the 12-month exemption request period. NERC respectfully requests that the Commission consider these comments in future issuances in this proceeding.

I. COMMENTS

A. NERC supports FERC's proposal to approve proposed Reliability Standards PRC-024-4 and PRC-029-1 and the proposed definition of the term "Ride-through" to address generator ride-through directives in Order No. 901.

NERC strongly encourages the Commission to move forward with its proposal to approve proposed Reliability Standards PRC-024-4 and PRC-029-1 and the proposed definition of the term "Ride-through" as they benefit reliability by addressing abnormal tripping, interruption of current injection, and reduced power output, which lead to the unexpected loss of widespread generating resources. Additionally, the proposed Reliability Standards and Ride-through definition are

responsive to and address the Commission's generator ride-through directives in Order No. 901.[5] The proposed Reliability Standards and definition are just, reasonable, and not unduly discriminatory and would ensure that applicable BPS connected resources would ride-through system disturbances and mitigate adverse BPS impacts associated with unnecessary tripping and momentary cessation.

As NERC explains in detail in its petition,[6] proposed Reliability Standard PRC-029-1 and the proposed term "Ride-through" would advance the reliability of the BPS by (1) establishing a clear understanding of what it means for a generator to Ride-through a disturbance; (2) establishing voltage and frequency Ride-through criteria for IBRs to prevent the unnecessary tripping and momentary cessation of current resulting from unintended performance, such as with phase lock loop loss of synchronism; and (3) ensuring that post-disturbance ramp rates return to pre-disturbance levels.[7] Additionally, as described in NERC's Ride-through Petition, the applicable facility types in proposed Reliability Standard PRC-024-4 have been revised to exclude IBRs and to include type 1 and type 2 wind resources and synchronous condensers. NERC determined there is no reliability need to impose actual disturbance Ride-through requirements on these resources, and that restrictions for frequency and voltage protection setting ranges would continue to be appropriate.[8]

Reliability Standard PRC-029-1 would establish three requirements for registered IBRs to: 1) Ride-through frequency and voltage system disturbances, 2) continue to inject current and perform frequency support during a BPS disturbance, and 3) prohibit momentary cessation in the

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5 *Reliability Standards to Address Inverter-Based Resources*, Order No. 901, 185 FERC ¶ 61,042 (2023).

6 *Petition of the N. Am. Elec. Reliability Corp. for Approval of Proposed Reliability Standards PRC-029-1 and PRC-024-4*, Docket No. RM25-3-000 (Nov. 4, 2024) [hereinafter Ride-through Petition].

7 *Id*. at p. 4.

8 *Id.* at p. 4-5.

no-trip zone during disturbances, and establish IBR performance requirements that address frequency and voltage Ride-through, post-disturbance ramp rates, phase lock loop synchronization, and other known causes of IBR tripping or momentary cessation.[9]

As noted by FERC in its proposal to approve PRC-029-1 in the NOPR, proposed Reliability Standard PRC-029-1 responds to the relevant Order No. 901 Ride-through performance requirement directives.[10] The Ride-through requirements of proposed Requirements R1 through R3 would strengthen the reliability of the BPS by ensuring that IBRs are designed and operated to remain connected to the BPS and continue to inject real and/or reactive current during system disturbances.[11] Accordingly, proposed Reliability Standards PRC-024-4 and PRC-029-1 and the proposed definition of the term "Ride-through" should be approved by the Commission without delay so that their reliability benefits may be realized as soon as possible.

B. NERC strongly urges the Commission to limit any supplemental filing to a single informational filing 18 months after the conclusion of the exemption request period.

NERC strongly urges the Commission to consider revising its proposal to require two informational filings 12 and 24 months after the conclusion of the exemption request period, to instead require a single informational filing 18 months after the conclusion of the 12-month exemption request period. This would result in FERC more quickly receiving a single filing providing data and analysis that would comprehensively discuss the number of requested exemptions, the number of granted exemptions, and the amount of aggregated megawatt ("MW") capacity subject to an exemption. It would further avoid the Commission being provided with duplicative and piecemeal information.

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9 *Id*. at p. 25.
10 NOPR at P 32.
11 *See id.*

In the NOPR, the Commission proposes "to direct NERC to develop and submit two informational filings pertaining to requests for exemption by generator owners of legacy IBRs from frequency and/or voltage Ride-through requirements."[12] FERC explains that it appreciates the appropriateness of a limited exemption for certain legacy equipment that may otherwise not be able to comply with the proposed Ride-through requirements, but is concerned about the practical implications of the exemptions as proposed. Specifically, if too many generators are exempt from the frequency or voltage Ride-through requirements, proposed Reliability Standard PRC-029-1 may fail to address the reliability gaps associated with IBRs tripping or entering momentary cessation in aggregate, which Reliability Standard PRC-029-1 is intended to address.[13] Thus, the Commission proposes to direct NERC to submit data, 12 months and 24 months after the conclusion of the 12-month exemption request period, regarding the number, size, type, and aggregate MW capacity of IBRs that request exemptions and IBRs that are granted exemptions.[14]

NERC recognizes the Commission's concerns with the potential impact of having too many generators exempt from the frequency or voltage Ride-through requirements on the reliability of the BPS. However, FERC's proposal to require an informational filing 12 months after the exemption period closes may be too soon for NERC to review all exemption requests and determine which requests qualify for the exemption and the amount of aggregated MW capacity subject to and exempted from PRC-029-1. Likewise, FERC's proposal to require a second informational filing 24 months after the exemption period closes would result in FERC not receiving a comprehensive understanding of the exemptions' impact on reliability as quickly and result in redundant information being provided. An 18-month informational filing would allow

12 *Id*. at P 35.
13 *Id.*
14 *Id.*

NERC an adequate amount of time to review, process, and grant exemptions that meet the criteria and determine what impact the exemptions have on the reliability of the BPS in a single comprehensive filing. It would enable NERC to efficiently provide detailed information and reporting six months faster than the 24-month proposal and in a more usable comprehensive format than would be available at 12 months. Additionally, NERC staff would be willing to work with Commission staff through regular touchpoints and updates to ensure that the Commission is aware of NERC's progress throughout the exemption requests and granting period.

For these reasons, NERC respectfully requests the Commission revise its proposal to direct NERC to develop and submit two informational filings at 12 and 24 months after the conclusion of the 12-month exemption request period to instead require a single informational filing 18 months after the conclusion of the 12-month exemption request period.

II. CONCLUSION

NERC appreciates the opportunity to comment on this matter. As discussed above, NERC fully supports the Commission's proposal to approve proposed Reliability Standards PRC-024-4 and PRC-029-1 and the proposed definition of the term "Ride-through." As discussed above, NERC respectfully requests that FERC revise its proposal for NERC to develop and submit a single informational filing 18 months after the conclusion of the 12-month exemption request period.

Respectfully submitted,

/s/ Alain Rigaud

Lauren Perotti
Assistant General Counsel
Sarah P. Crawford
Senior Counsel
Alain Rigaud
Associate Counsel
North American Electric Reliability Corporation
1401 H Street NW, Suite 410
Washington, DC 20005
(202) 400-3000
Lauren.perotti@nerc.net
Sarah.crawford@nerc.net
Alain.rigaud@nerc.net

Counsel for the North American Electric Reliability Corporation

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CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in this proceeding. Dated at Washington, D.C. this 24th day of March, 2025.

/s/ Alain Rigaud

Alain Rigaud
Counsel for the North American Electric Reliability Corporation