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Electric Reliability Actions at FERC (Federal Energy Regulatory Commission) Open Meeting

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During the March 20, 2014 Open Meeting, the **Federal Energy Regulatory Commission** (FERC) took several actions regarding electric reliability requirements. It:

- Approved five Generator Verification Reliability Standards submitted by the North American Electric Reliability Corporation (NERC);
- Granted in part the requests for clarification of Order No. 791, its order on the Version 5 Critical Infrastructure Protection Reliability Standards, and denied requests for rehearing of that order;
- Proposed a new Generator Relay Loadability Reliability Standard and revisions to the existing Transmission Relay Loadability Reliability Standard; and
- Approved the revised definition of Bulk Electric System.

Generator Verification Reliability Standards (Order No. 796)

This final rule approves five modeling Reliability Standards: MOD-025-2 (Verification and Data Reporting of Generator Real and Reactive Power Capability and Synchronous Condenser Reactive Power Capability), MOD-026-1 (Verification of Models and Data for Generator Excitation Control System or Plant Volt/Var Control Functions), MOD-027-1 (Verification of Models and Data for Turbine/Governor and Load Control or Active Power/Frequency Control Functions), PRC-019-1 (Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection), and PRC-024-1 (Generator Frequency and Voltage Protective Relay Settings) as well as the associated implementation plans, violation risk factors and violation severity levels. FERC also approved the retirement of Reliability Standards MOD-024-1 and MOD-025-1 immediately prior to the effective date of MOD-025-2. According to FERC, these Reliability Standards “help ensure that generators remain in operation during specified voltage and frequency excursions; properly coordinate protective relays and generator voltage regulator controls; and enhance the ability of generator models to accurately reflect the generator’s capabilities and equipment performance.” Order at P 3. They also “improve the accuracy of model verifications needed to support reliability and

enhance the coordination of generator protection systems and voltage regulating system controls," which, in turn, "should help reduce the risk of generator trips and provide more accurate models for transmission planners and planning coordinators to develop system models and simulations." *Id.* at P 4.

In the Notice of Proposed Rulemaking (NOPR) that preceded the order, FERC sought comment on three issues: (1) whether the higher applicability thresholds for MOD-026-1 and MOD-027-1 could limit their effectiveness, especially in areas with a high concentration of generators falling below the thresholds, or impede transmission planners' ability to address reliability risk; (2) whether the provision in Reliability Standard MOD-026-1 allowing transmission planners to compel a generator owner below the applicability threshold with a "technically justified" unit to comply with the Reliability Standard's requirements is "sufficiently clear and workable"; and (3) whether the "technical justification" provision should be included in Reliability Standard MOD-027-1. FERC also expressed concern in the NOPR regarding the violation severity levels (VSLs) associated with MOD-026-1 Requirement R6 and MOD-027-1 Requirement R5 because the proposed VSLs did not address all of the obligations of the requirements. NERC addressed this concern by agreeing to expand the VSLs to address the full requirements and no other commenters touched on this issue. Commenters did, however, respond to the first three questions posed by FERC and also expressed concern regarding a lack of flexibility in the reactive power verification requirements in Reliability Standard MOD-025-2.

FERC responded to these comments in the Order, finding many of them persuasive and dismissing others. FERC agreed with NERC and others' responses to its first question, finding that "the higher applicability thresholds of Reliability Standards MOD-026-1 and MOD-027-1 are appropriate for a continent-wide standard," and noting that "the higher applicability threshold does not excuse generator owners with small units from the expectation that estimated model data they provide to transmission planners for use in simulations will be accurate." Order at P 37. FERC also found the responses to its second question persuasive, concluding that "the basis and associated process for a transmission planner to demonstrate that it is 'technically justified' for a generator owner below the applicability threshold to comply with Requirement R5 of Reliability Standard MOD-026-1 under Section 4.2.4 is sufficiently clear and workable." *Id.* at P 44. FERC agreed with EEI that "a more prescriptive, 'one size fits all' approach could 'unintentionally limit or otherwise undermine the regional knowledge and judgment of transmission planners.'" *Id.* With respect to its third query, FERC concluded that "the technical justification provision is not workable in MOD-027-1 because there is more subjectivity involved in verifying the data pertaining to turbine/governors, the equipment subject to the modeling verification requirements of MOD-027-1." *Id.* at P 51. Finally, FERC dismissed commenters' suggestions that MOD-025-2 should include more flexibility to verify unit reactive power capability, but suggested that "NERC, in consultation with EEI and other industry representatives, should consider potential modifications to MOD-025-2 "that would better reflect rapidly evolving modeling technology, as well as successful methods and processes already in use by some companies." *Id.* at PP 55-56.

Version 5 Critical Infrastructure Protection Reliability Standards

In an Order on Clarification and Rehearing, FERC grants in part the requests for clarification and denies the requests for rehearing of Order No. 791, which approved the Critical Infrastructure Protection Version 5 Reliability Standards. The requests were filed by the American Public Power Association (APPA) and National Rural Electric Cooperative Association (NRECA); Utility Services, Inc.; and Edison Electric Institute (EEI) and Electric Power Supply Association (EPSA). In the Order, FERC reiterated that the 24- and 36-month implementation periods proposed by NERC commence from the effective date of the Final Rule and declined to extend the implementation period for Low

Impact assets and for responsible entities that are currently not subject to the CIP Reliability Standards as requested by Utility Services. Order at PP 10-11. FERC also clarified that the implementation plan submitted by NERC and approved in Order No. 791 requires responsible entities to comply with the High and Medium Impact asset requirements by April 1, 2016. *Id.* at P 12.

FERC denied APPA-NRECA's request for clarification concerning how responsible entities should address the "identify, assess, and correct" language pending NERC's Order No. 791 compliance filing, stating that it "expect[s] responsible entities to move forward with implementation of the substantive, technical controls approved in Order No. 791 while NERC addresses the Commission's directive regarding the 'identify, assess, and correct' compliance language." *Id.* at P 16. It explained that in the Final Rule, FERC had "highlighted its support for a move away from a 'zero tolerance' approach to compliance; the development and adoption of strong internal controls by responsible entities; and the development of Reliability Standards that focus on those activities with the greatest impact on Bulk-Power System reliability." *Id.*

With respect to EEI-EPSA's request for rehearing or, in the alternative, clarification of the directive in Order No. 791 requiring NERC to conduct a survey and submit an informational filing regarding the "15-minute parameter" in the definition of BES Cyber Asset, FERC denied rehearing but clarified that "Order No. 791 did not direct NERC to conduct an inventory-type survey of all Cyber Assets impacted by the 15-minute parameter. Instead, the scope of the survey was left for NERC to determine." *Id.* at P 21. FERC also clarified that while "Order No. 791 did not require the development of controls for third-party communications networks," it anticipates that it will address the need for such controls during the April 29, 2014 staff-led technical conference. *Id.* at P 22.

Finally, FERC denied APPA-NRECA's request for clarification regarding the Order No. 791 Regulatory Flexibility Act certification that the CIP version 5 Standards will not have a significant economic impact on a substantial number of small entities.

Generator Relay Loadability and Revised Transmission Relay Loadability Reliability Standards

In this NOPR, FERC proposes to approve a new Reliability Standard, PRC-025-1 (Generator Relay Loadability) and revisions to a currently-effective Reliability Standard, PRC-023-3 (Transmission Relay Loadability), the prior version of which was approved under Order No. 733 on March 10, 2010. According to NERC, proposed Reliability Standard PRC-025-1 addresses the second part of the Order No. 733 directives and "is designed to prevent generator tripping when conditions do not pose a direct risk to the generator and associated equipment and will reduce the risk of unnecessary generator tripping – events that increase the severity of the disturbance." NOPR at P 7. FERC believes that proposed Reliability Standard PRC-025-1 "adequately" addresses the directive in Order No. 733 "that NERC develop a separate Reliability Standard that addresses generator step-up and auxiliary transformer loadability, and do so 'in a way that is coordinated with the Requirements and expected outcomes of PRC-023-1.'" *Id.* at P 17. FERC also "believe[s] that PRC-025-1 will enhance reliability by imposing mandatory requirements governing generator relay loadability settings, thereby reducing the likelihood of premature or unnecessary tripping of generators during system disturbances." Id. As a result, FERC proposes to approve Reliability Standard PRC-025-1, including its associated violation risk factors and violation severity levels, Reliability Standard PRC-023-3, and NERC's proposed implementation plans for the new and revised standards. FERC explains that it agrees that "the clarifying modifications reflected in Reliability Standard PRC-023-3. . . serve to clarify the applicability of the two standards governing relay loadability and prevent potential compliance overlap due to inconsistencies." *Id.* at P 18.

Comments in response to this NOPR are due 30 days after its publication in the Federal Register.

Order Approving Revised Definition of "Bulk Electric System"

In this Order, FERC approves changes filed by NERC on December 13, 2013, in response to FERC's directives in Order Nos. 773 and 773-A and industry concerns raised during the initial development of the revisions to the definition (Phase 1). The revised definition will supersede in its entirety the version approved in Order Nos. 773 and 773-A and will go into effect on July 1, 2014. The changes include refinements to the exclusions for radial facilities and local networks as well as revisions clarifying that all forms of generation, including variable generation resources, are included in the bulk electric system and that certain generator interconnection facilities also are included in the bulk electric system. Specifically, Order approves:

- The modification of exclusion E1 to include a 50 kV threshold for excluding certain radial loops. FERC justified its determination that the modification was reasonable on the basis that "NERC's technical analysis demonstrates that 50 kV is an appropriate level for determining whether a portion of the system is considered radial and is therefore a candidate for exclusion from the bulk electric system by application of exclusion E1 or is considered a networked system and therefore a candidate for exclusion by application of exclusion E3." Order at P 43. FERC explained that the "technical justification resulted from NERC's extensive simulations which demonstrate that power flow reversal into the bulk electric system is unlikely when circuit loop operating voltages are below 50 kV."*Id.*

- Revisions to (1) exclusions E1 and E3 to ensure that generator interconnection facilities at or above 100 kV connected to bulk electric system generators identified in inclusion I2 are not excluded from the bulk electric system and (2) exclusion E3 to remove the phrase "or above 100 kV but." FERC explained that the removal of the 100 kV floor in exclusion E3 would "decrease the burden for some entities that would have otherwise been included in the bulk electric system because these entities may now apply exclusion E3." *Id.* at P 45.

- A revision to inclusion I4 to include collector systems from the point where the gross nameplate capacity aggregates to greater than 75 MVA to a common point of connection at a voltage of 100 kV or above because "the inclusion of the collector system is appropriate and consistent with the overall concept of applying the definition to identify elements that provide a reliability benefit to the interconnected transmission network."*Id.* at P 46.

- A clarification to inclusion I4 that all forms of generation resources, including variable generation resources, are included in the bulk electric system. *Id.* at P 47. FERC explains that it "agree[s] with NERC that, given the increasing presence of wind, solar, and other non-traditional forms of generation, continuing the inclusion of individual variable generation units within the scope of the definition is appropriate to ensure that, where necessary to support reliability, these units may be subject to Reliability Standards. Moreover, inclusion I4 is limited to individual resources that aggregate to a total capacity greater than 75 MVA, the same threshold applicable to other types of generating resources." *Id.*

In addition, FERC encouraged the American Wind Energy Association and FirstWind to participate in the NERC standards development process given their concerns regarding the potential costs of dispersed generation facilities having to comply with a full array of NERC Reliability Standards that apply to generator owners and operators. *Id.* at P 49.

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