
NERC'S DEFINITION OF THE BULK ELECTRIC SYSTEM

WHY THE DEFINITION MATTERS, WHY IT'S CHANGING,
AND WHERE WE STAND AT NERC AND FERC

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NERC'S BULK ELECTRIC SYSTEM DEFINITION AND ASSOCIATED PROCEDURES

WHY THE DEFINITION MATTERS, WHY IT'S CHANGING, AND WHERE WE STAND AT NERC AND FERC

On June 22, 2012, FERC issued a Notice of Proposed Rulemaking (NOPR)¹ proposing to approve NERC's revised definition of the term "Bulk Electric System" (BES) used in the NERC Glossary of Terms. The NOPR is significant not just because the definition of the BES largely defines the scope and effectiveness of NERC's Reliability Standards, but also because the NOPR is the latest chapter in the story of the evolving FERC-NERC relationship. This paper discusses the significance of the BES definition, why it is changing, what NERC has proposed, and where things stand at FERC.

The Significance of the BES Definition

The Energy Policy Act of 2005 (EPAAct) added Section 215 to the Federal Power Act (FPA), which gives FERC and NERC (as the Commission-approved Electric Reliability Organization) authority to establish and enforce reliability standards on "all users, owners and operators of the bulk-power system" including public power entities. FPA § 215(b)(1), 16 U.S.C. § 824o(b)(1). The term "bulk-power system" is statutorily defined as "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof)" and "electric energy from generation facilities needed to maintain transmission system reliability" but "does not include facilities used in the local distribution of electric energy." FPA § 215(a)(1), 16 U.S.C. § 824o(a)(1). Although the bulk-power system defines the outer limit of FERC and NERC's reliability authority, FERC has not further defined the term "bulk-power system."

¹ *Revisions to Elec. Reliability Org. Definition of Bulk Elec. Sys. & Rules of Procedure*, 139 FERC ¶ 61,247 (2012).

NERC's reliability standards, however, do not generally use the term "bulk-power system." The current standards were adapted from NERC's pre-EPAAct operating policies and planning standards, which used the term "Bulk Electric System" or "BES" to identify their scope. So today, NERC's definition of the Bulk Electric System, rather than the statutory "bulk-power system," is used to define the scope of the reliability standards and the entities subject to NERC compliance. The current definition of the BES, as stated in NERC's Glossary of Terms, is:²

As defined by the Regional Reliability Organization, the electrical generation resources, transmission lines, interconnections with neighboring systems, and associated equipment, generally operated at voltages of 100 kV or higher. Radial transmission facilities serving only load with one transmission source are generally not included in this definition.

This definition is used in NERC's Statement of Compliance Registry Criteria (Registry Criteria),³ which is used to determine which entities must be registered in the NERC Compliance Registry and subjected to reliability compliance obligations. The Registry Criteria states that entities that "use, own or operate Elements of the Bulk Electric System as established by NERC's approved definition of Bulk Electric System" are candidates for registration. Registry Criteria at 5. The BES definition is further used in the Registry Criteria to determine the functional category for which an entity should be registered. For example, an entity will be registered as a Transmission Owner (TO) if it "owns and maintains transmission Facilities," which are further defined in the NERC Glossary as "equipment that operates as a single Bulk Electric System Element." Registry Criteria at 7, NERC Glossary at 20. So if an entity owns a transmission line that is part of the BES, that entity will be registered as a Transmission Owner and subject to compliance with the full range of reliability standards applicable to TOs. Similarly, the BES definition impacts whether an entity will be registered as a Distribution Provider (DP) or Load-Serving Entity (LSE). One of the criteria for identifying LSEs is whether the entity serves greater than 25 MW of peak load and "is directly connected to the Bulk Power (> 100 kV) System . . ." Registry Criteria at 8. Despite the Bulk Power System reference, in practice this criterion (and the parallel criterion for DPs) is applied to entities that are directly connected to the BES.

Not only does the BES definition limit the scope of NERC registration, but it also limits the scope of the NERC reliability standards, defined as "a requirement . . . to provide for reliable operation of the bulk-power system." FPA § 215(a)(3), 16 U.S.C. § 824o(a)(3). Many standards are affected by the BES definition either because they refer directly to the BES or because they refer to a term, like Facilities, that is defined in the NERC Glossary with reference to the BES.

² *Glossary of Terms Used in NERC Reliability Standards*, NERC (May 25, 2012) (NERC Glossary), available at http://www.nerc.com/files/Glossary_of_Terms.pdf.

³ *Statement of Compliance Registry Criteria*, NERC (Rev. 5.1, App. 5B Jan. 31, 2012), available at http://www.nerc.com/files/Appendix_5B_RegistrationCriteria_20120131.pdf.

For example, PRC-005 requires Distribution Providers to have a maintenance and testing program for all protection systems that “affect the reliability of the BES.”⁴ So the BES definition matters a lot to an entity (and a NERC auditor) trying to determine which protection systems must be included in its maintenance and testing program.

Because the BES definition plays an important role in determining which facilities are within the scope of NERC’s mandatory reliability standards and what entities are subject to registration in NERC’s Compliance Registry (and hence subject to compliance obligations and penalties for violations), FERC cares very much about the definition. If the definition is over-inclusive, it creates unnecessary compliance costs that are ultimately borne by consumers; but if it is under-inclusive, there is a risk that non-BES equipment can cause or contribute to large-scale outages. FERC has been acutely aware of this risk since the 2011 Southwest Blackout, which left 2.7 million customers without power. In their joint report, FERC and NERC concluded that one of the blackout’s causes was the failure to adequately consider the reliability impact of the Imperial Irrigation District’s (IID) 92-kV system.⁵ Those sub-100 kV facilities were not considered part of the BES, and hence not subject to NERC standards. The report concluded that if the BES definition had included some of IID’s facilities, “cascading outages may have been avoided on the day of the event.” *Id.* at 96.

Why the BES Definition is Changing

In 2006, following its certification as the Commission-approved Electric Reliability Organization, NERC submitted to FERC an initial set of 107 reliability standards, the Registry Criteria, and the Glossary of Terms, which included NERC’s existing definition of the Bulk Electric System (quoted above). FERC considered whether to approve these standards and definitions during the Order No. 693 Rulemaking and, unsurprisingly, the definition that got the most attention was that of the BES. In the Order No. 693 NOPR,⁶ FERC proposed to “interpret the term ‘bulk electric system’ to apply to all of the ≥ 100 kV transmission systems and any underlying transmission system (< 100 kV) that could limit or supplement the operation of the higher voltage transmission systems. It would also include transmission to all significant local distribution systems (but not the distribution system itself), load centers, and transmission connecting generation that supplies electric energy to the system.” *Id.* P 68. FERC was concerned that significant “load centers” were not included in NERC’s BES definition. *Id.* P 69. In comments, however, APPA and others pointed out that FERC’s proposed “interpretation” of

⁴ *Standard PRC-005-1-Transmission and Generation Protection System Maintenance and Testing*, NERC (Feb. 7, 2006), available at <http://www.nerc.com/files/PRC-005-1.pdf>.

⁵ *Arizona-Southern California Outages on September 8, 2011, Causes and Recommendations*, FERC & NERC (Apr. 2012), available at <http://www.ferc.gov/legal/staff-reports/04-27-2012-ferc-nerc-report.pdf>.

⁶ *Mandatory Reliability Standards for the Bulk Power System*, 71 Fed. Reg. 64,770 (proposed Nov. 3, 2006), FERC Stats. & Regs. ¶ 32,608 (2006), *comment period extended*, 71 Fed. Reg. 70,695 (Dec. 6, 2006).

the BES definition would alter and expand the applicability of the reliability standards, potentially sweeping in large numbers of small entities that are immaterial to the reliable operation of the grid.

In the Order No. 693 Final Rule,⁷ FERC provisionally approved NERC's BES definition, stating that "at least [for] an initial period, the Commission will rely on the NERC definition of 'bulk electric system' and NERC's registration process to provide as much certainty as possible regarding the applicability to and the responsibility of specific entities to comply with the Reliability Standards . . ." *Id.* P 75 (citation omitted). Order No. 693 also approved use of the Registry Criteria to identify entities that would be subject to NERC standards. *Id.* P 95. But FERC was clear that it was "concerned about the need to address the potential for gaps in coverage of facilities" and it would "address this matter in a future proceeding." *Id.* P 77. Of special concern to FERC was the fact that some of the regional definitions "exclude facilities below 230 kV and transmission lines that serve major load centers such as Washington, D.C. and New York City." *Id.*

FERC's concern at the level of inconsistency in the BES definition from one NERC region to another led it to direct NERC to submit "an informational filing that includes a complete set of regional definitions of bulk electric system and any regional documents that identify critical facilities to which the Reliability Standards apply." *Id.* On June 14, 2007, NERC made this filing.⁸ NERC stated that "[e]ach Regional Entity utilizes the definition of bulk electric system in the NERC *Glossary*" but that several Regional Entities "define specific characteristics or criteria that the Regional Entity uses to identify the bulk electric system for its members." *Id.* at 7. The Northeast Power Coordinating Council (NPCC), in particular, used its regional discretion to define the BES somewhat differently from the other regions. Instead of using the voltage-based methodology to identify elements of the BES, NPCC continued to use the impact-based methodology that it had been using for 30 years. Under NPCC's impact-based methodology, "elements on which faults or disturbances can have a significant adverse impact outside of the local area" are part of the BES. *Id.* at 9.

FERC was concerned about NPCC's different approach to defining the BES. On December 18, 2008, FERC directed NERC and NPCC to submit a list of BES facilities within the United States portion of the NPCC region, and to answer some specific questions about the list.⁹ FERC also indicated that it would take future action if the list of BES facilities was not "consistent with both the NPCC impact-based methodology and with the interpretations of bulk electric system

⁷ Mandatory Reliability Standards for the Bulk Power System, Order No. 693, 72 Fed. Reg. 16,416 (Apr. 4, 2007) FERC Stats. & Regs. ¶ 31,242, P 222 (2007), *effective date stayed*, 72 Fed. Reg. 31,452 (June 7, 2007), *aff'd*, Order No. 693-A, 72 Fed. Reg. 40,717 (July 25, 2007), 120 FERC ¶ 61,053 (2007).

⁸ Informational Compliance Filing of the North American Electric Reliability Corporation in Response to Paragraph 77 of Order No. 693, Docket No. RM06-16-000, eLibrary No. 20070614-5056.

⁹ N. Am. Elec. Reliability Corp., 125 FERC ¶ 61,295 (2008).

elements in other regional entities.” *Id.* P 13. NERC and NPCC submitted a compliance filing in February 2009, supplemented in April 2009, that (according to FERC’s analysis) excluded most of the 115 kV and 138 kV transmission facilities in the New York Independent System Operator (NYISO) balancing area and even excluded some higher voltage facilities connected to nuclear plants.

The situation came to a head on March 18, 2010, when FERC issued eight heavy-handed, controversial orders in NERC-related matters, all of which exhibited an apparent desire by FERC to expand its control over NERC and its standards. In one of its March 18 rulings, FERC initiated the Order No. 743 Rulemaking with a NOPR that proposed to direct NERC to revise the BES definition.¹⁰ The Order No. 743 NOPR proposed keeping the 100 kV threshold and the exception for radial facilities to load, but proposed to direct NERC to include all transmission rated at 100 kV or above, and “eliminate[] the currently-allowed discretion of a Regional Entity to define bulk electric system within its system without ERO or Commission oversight.” *Id.* P 28 (citation omitted). FERC recognized that “there may be limited circumstances when a variation from the proposed uniform 100 kV threshold is appropriate” so it allowed for an exemption process, but all such exemptions would have to be approved by FERC. *Id.* P 18. Under FERC’s proposal, Regional Entities would seek approval from NERC to exempt a facility rated at 100 kV or above, and NERC would then seek approval from FERC on a “facility-by-facility basis.” *Id.* The proposed exclusion would take effect “[o]nly after Commission approval,” a regimen that would subject the affected entity to compliance with applicable standards (and exposure to penalties) while the exemption request was pending before FERC. *Id.* Sub-100 kV facilities identified by a Regional Entity as “critical” would be included in the BES without need for FERC approval. *Id.* P 19.

Many entities filed comments opposing the Order No. 743 NOPR’s proposals and urging FERC instead to direct NERC to address FERC’s concern without directing a particular outcome, and to allow NERC to grant exemptions. Of special concern to commenters, including APPA, was that FERC was proposing to substitute its technical judgment for that of NERC and the Regional Entities. This concern was reinforced by the tone and approach of the other reliability related orders FERC issued on March 18, 2010, which “together appear to constitute a consistent effort on the part of the Commission to substitute its judgment for that of NERC and the Regional Entities, to dictate the specific content of mandatory Reliability Standards, and to ratchet up by orders of magnitude the potential penalties applicable to violations of Reliability Standards.”¹¹

¹⁰ Revision to Electric Reliability Organization Definition of Bulk Electric System, 75 Fed. Reg. 14,097 (proposed Mar. 24, 2012), FERC Stats. & Regs. ¶ 32,654, P 12 (2010).

¹¹ Comments of the American Public Power Association and the National Rural Electric Cooperative Association 11, May 10, 2010, Docket No. RM09-18-000, eLibrary No. 20100510-5195.

In the Final Rule and Order on Rehearing in the Order No. 743 Rulemaking,¹² FERC made substantial revisions to its proposal for the definition of the BES: the Commission directed NERC to address its concerns, but did not direct a specific outcome; and it permitted NERC to develop an exemption process under which NERC or the Regions could grant exemptions, without first obtaining FERC approval.

Order No. 743 directed NERC to revise the BES definition to “ensure that the definition encompasses all facilities necessary for operating an interconnected electric transmission network.” *Id.* P 1. As some commenters remarked, that language is very similar to the definition of “bulk-power system” in Section 215 of the Federal Power Act: “facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof).” FPA § 215(a)(1), 16 U.S.C. § 824o(a)(1). While FERC made clear, in response to APPA’s rehearing request, that it was not deciding that the bulk-power system encompasses more than the BES, it did not state that the bulk-power system and BES are coextensive, in spite of the similarity between Order No. 743’s directive and the FPA Section 215 definition of the bulk-power system. Order No. 743-A, P 63.

Because FPA Section 215 explicitly excludes “facilities used in the local distribution” from the bulk-power system, FERC stated that the BES definition must exclude local distribution. FERC did, however, give NERC the discretion to develop the criteria to identify local distribution.

Order No. 743 gave NERC one year to develop the new BES definition, setting the stage for a very intense standards development process.

NERC’s Proposal

Following FERC’s Order Nos. 743 and 743-A, NERC established a standard drafting team to redefine the BES and simultaneously began the process to amend its Rules of Procedure to create an exemption process. When the standard drafting team began its work, it identified several issues with the BES definition that were beyond NERC’s Order Nos. 743 and 743-A compliance obligations and were controversial or would require more detailed technical studies. In order to meet FERC’s one-year deadline, NERC decided that the project should proceed in two phases: Phase 1 to directly address FERC’s directives within the one-year timeline, and Phase 2 to address additional industry concerns in a non-deadline environment. NERC submitted the Phase 1 BES definition to FERC on January 25, 2012 and simultaneously filed its proposed BES Exception Procedure.¹³ The Phase 2 process is currently underway at NERC.¹⁴

¹² Revision to Electric Reliability Organization Definition of Bulk Electric System, Order No. 743, 75 Fed. Reg. 72,910 (Nov. 26, 2010), 133 FERC ¶ 61,150 (2010), *on reh’g*, Order No. 743-A, 76 Fed. Reg. 16,263 (Mar. 23, 2011), 134 FERC ¶ 61,210 (2011), *appeal docketed*, *Pub. Util. Dist. No. 1 v. FERC*, No. 11-71366 (9th Cir. May 13, 2011).

¹³ Petition of the North American Electric Reliability Corporation for Approval of a Revised Definition of “Bulk Electric System” in the NERC Glossary of Terms Used in Reliability Standards, Jan. 25, 2012,

The Phase 1 definition consists of a “core” definition, five “Inclusions” describing specific types of elements or configurations that are included in the BES, and four “Exclusions” describing configurations that are not part of the BES.¹⁵ The core definition along with the Inclusions and Exclusions are intended to be unambiguous, objective criteria that can be applied consistently across the continent. NERC also developed a BES Exception Procedure by which facilities that are included in the BES definition could be removed from the BES if they are not necessary for the reliable operation of the grid, or facilities that are excluded from the BES definition could be added to the BES if they are found to be necessary for the reliable operation of the grid.

The core definition of the BES is:

Unless modified by the [Inclusion and Exclusion] lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

Phase 1 BES Definition at 13. The Inclusion list identifies facilities that are not captured by the core definition, but are nonetheless part of the BES. The Inclusions also add clarity or resolve ambiguities about whether a facility is within the BES definition. For example, Inclusion *11* includes transformers with a primary terminal and at least one secondary terminal operated at or above 100 kV. This means that many step-down transformers, such as a 115 kV to 69 kV transformer, will not be part of the BES, thereby eliminating any ambiguity present under the current BES definition as to whether such a transformer is part of the BES because it has a terminal above 100 kV.

Inclusions *12*, *13*, and *14* include individual generators rated at or above 20 MVA, groups of generators rated in aggregate at or above 75 MVA, and certain blackstart resources. These Inclusions mirror the language of the current Registry Criteria, which use the 20 MVA and 75 MVA thresholds to identify entities that should be registered as generator owners or generator operators. The last Inclusion, *15*, includes certain reactive power resources.

Docket No. RM12-6-000, eLibrary No. 20120125-5142 (Phase 1 BES Definition); Petition of the North American Electric Corporation for Approval of Revisions to its Rules of Procedure to Adopt a Bulk Electric System Exception Procedure, Jan. 25, 2012, Docket No. RM12-7-000, eLibrary No. 20120125-5248 (BES Exception Procedure).

¹⁴ The final Standards Authorization Request for the Phase 2 definition was posted on the NERC website on July 10, 2012, *available at* http://www.nerc.com/docs/standards/sar/SAR_BES_Definition_Phase_2_final_071012_clean.pdf.

¹⁵ The full text of NERC’s proposed definition is attached to this paper. The proposed exception process is available at http://www.nerc.com/docs/standards/sar/Proposed_Appendix_5C-BES_Exception_Procedure-1-9-2012.pdf.

In contrast to the Inclusions, the Exclusions identify common configurations that would otherwise be included in the BES because they satisfy the 100 kV threshold in core definition, but are nonetheless excluded from the BES definition. Exclusion E1 excludes radial systems that serve only load or that include non-blackstart generation with an aggregate capacity of less than 75 MW. Exclusion E1 specifically states that a “normally open switching device between radial systems . . . does not affect this exclusion.” *Id.* at 14. This Exclusion preserves the exclusion in the current definition for radial-to-load transmission lines, but clarifies that two common configurations (i.e. the presence of non-BES generation or a normally open switch) do not invalidate the Exclusion. These clarifications are important because radial systems often have small generators or normally open switches that *improve* reliability, but under the current BES definition utilities may have a perverse incentive to remove those reliability enhancing features to avoid having their radial transmission line designated as BES.

Exclusion E3 excludes certain local networks that distribute power to load rather than transfer bulk power across the grid. Unlike a radial system, a local network has multiple points of connection at 100 kV or higher, but the purpose of the multiple connections is to improve service to retail load rather than to accommodate bulk power transfers across the grid. A local network is only excluded from the BES definition if: (1) it operates below 300 kV, (2) it does not contain more than 75 MVA of aggregate non-retail generation, (3) it is not part of a flowgate or transfer path, and (4) power only flows into the local network and not through it.

NERC’s proposed BES definition includes two other Exclusions: Exclusion E2 excludes certain generators on the customer’s side of the retail meter and Exclusion E4 excludes reactive power devices owned and operated by a retail customer solely for its own use.

Like the current BES definition, NERC’s proposed definition is to be applied in the first instance by Registered Entities (or potential Registered Entities) to determine if their facilities are part of the BES. A Registered Entity’s determination is subject to review by its Regional Entity and by NERC, but given the specificity of the core definition, Inclusions, and Exclusions, there should be less room for disagreement than there is today.

The core definition, Inclusions, and Exclusions are based on expert assessments of the most common electrical configurations, with the intent of generally identifying what should and shouldn’t be included in the BES. NERC and the industry recognized, however, that a bright-line definition cannot take into account all the possible configurations and their impact on the grid. For this reason, NERC has proposed an exception process for elements to be included or excluded from the BES, notwithstanding the definition:

An Element is considered to be (or not be) part of the Bulk Electric System by applying the BES Definition to the Element (including the inclusions and exclusions set forth therein). Appendix 5C sets forth the procedures by which (i) an entity may request a determination that an Element that falls within the definition of

Bulk Electric System should be exempted from being considered a part of the Bulk Electric System, or (ii) an entity may request that an Element that falls outside the definition of the Bulk Electric System should be considered a part of the Bulk Electric System.

BES Exception Procedure at 10. The exception process begins with an entity making a request to include or exclude an element from the BES. An exception request to exclude equipment from the BES will usually come from the owner of that equipment, while it is more likely that other entities will make exception requests to include equipment. NERC's proposed exception procedure permits a Regional Entity, Planning Authority (PA), Reliability Coordinator (RC), Transmission Operator (TOP), Transmission Planner (TP) or Balancing Authority (BA) to make exception requests. NERC has prepared a common set of data that a requesting entity must submit with its exception request, so that there is a consistent baseline of technical information that can be used to evaluate the request.

The appropriate Regional Entity will be the first to review exception requests. The Regional Entity will do an initial screen to ensure the exception request came from an eligible entity and that the required data was submitted. The Regional Entity will then do a substantive evaluation of the request, and make a recommendation to NERC as to whether the request should be approved or denied. If the Regional Entity intends to recommend denying an exception request, it must submit the request to a three-person technical panel, appointed by the Regional Entity's senior executive, which will review the request and provide an opinion. The Regional Entity is not bound by the opinion of the technical panel, but the panel's opinion will become part of the record that is submitted to NERC.

Once the Regional Entity submits its recommendation, the entity that requested the exception and the owner of the facility (if different) may submit comments in support of or opposition to the recommendation. A NERC Review Panel, appointed by the NERC President, will review the entire record, including the Regional Entity's recommendation, the opinion of the Regional Entity's technical panel (if one exists), and any comments submitted by the requesting entity or owner. The Review Panel may also ask the Regional Entity, requesting entity, or owner to appear at NERC offices to answer questions about the exception request. After completing its review, the NERC Review Panel will submit a proposed decision to the NERC President, who will then issue a final opinion on the exception request. The NERC President's decision to approve or disapprove an exception request can be appealed to the NERC Board of Trustees Compliance Committee. That determination may be appealed to FERC.

FERC's BES NOPR

In response to NERC's January 25 filing, FERC issued a new NOPR on June 22, 2012, proposing to accept NERC's proposed BES definition and exception procedure filing without

directing any modifications.¹⁶ The NOPR, however, requests comments on several issues and, depending on the responses, FERC has indicated that the final rule may include directives for further modification of the definition. *Id.* P 101. FERC's questions are extensive, occasionally hostile, and consistently probe whether the BES definition should be expanded to include more facilities. For example, FERC asks with respect to Inclusion I1, "whether [those] transformers . . . that have a terminal operated at 100 kV or above on the high side and below 100 kV on the low side should be designated as part of the bulk electric system. If answered in the affirmative, the Commission seeks further comment whether the case-by-case exception process suffices, or a generic inclusion is appropriate to address the concerns identified in Order No. 743." *Id.* P 63.

The 2011 Southwest Blackout, in which IID's sub-100 kV facilities played a significant role, is clearly weighing on the minds of FERC Commissioners and Staff.¹⁷ Some of the questions FERC poses in the NOPR refer to configurations that appear similar to those of IID's facilities, and FERC asks whether and how NERC's proposed BES definition will account for those configurations. The implication is clear - FERC is concerned that the definition may exclude some facilities that are critical to grid reliability, and wants to be convinced that the new definition will not result in any reliability gap.

Conclusion

Comments on the NOPR were submitted to FERC on September 4, 2012, and (at the time this paper was submitted) FERC is still deliberating. The outcome of this rulemaking will undoubtedly shape the scope of NERC's Reliability Standards and the effectiveness of NERC's compliance efforts. It will also mark a new chapter in the continually evolving FERC-NERC relationship. A big question is whether FERC will issue any directives to require changes in NERC's proposed BES definition or exception procedures.

The stakes are high. The BES definition that emerges from this rulemaking process will affect whether entities have to register in NERC's Compliance Registry, and which functions they will have to register for. It will affect the scope of many reliability standards. The compliance obligations of many Registered Entities is likely to be affected. Given its importance, this unfolding story of the BES definition is one to watch closely.

¹⁶ *Revisions to Elec. Reliability Org. Definition of Bulk Elec. Sys. & Rules of Procedure*, 139 FERC ¶ 61,247 (2012).

¹⁷ *See Id.* P 63; *see also* Statement of Commissioner John R. Norris on NERC's Revised Definition for Bulk Electric System, June 21, 2012, Docket No. RM12-6-000, eLibrary No. 20120622-3001.

Proposed Definition of “Bulk Electric System”

Bulk Electric System: Unless modified by the lists shown below, all Transmission Elements operated at 100 kV or higher and Real Power and Reactive Power resources connected at 100 kV or higher. This does not include facilities used in the local distribution of electric energy.

Inclusions:

- **I1** - Transformers with the primary terminal and at least one secondary terminal operated at 100 kV or higher unless excluded under Exclusion E1 or E3.
- **I2** - Generating resource(s) with gross individual nameplate rating greater than 20 MVA or gross plant/facility aggregate nameplate rating greater than 75 MVA including the generator terminals through the high-side of the step-up transformer(s) connected at a voltage of 100 kV or above.
- **I3** - Blackstart Resources identified in the Transmission Operator’s restoration plan.
- **I4** - Dispersed power producing resources with aggregate capacity greater than 75 MVA (gross aggregate nameplate rating) utilizing a system designed primarily for aggregating capacity, connected at a common point at a voltage of 100 kV or above.
- **I5** –Static or dynamic devices (excluding generators) dedicated to supplying or absorbing Reactive Power that are connected at 100 kV or higher, or through a dedicated transformer with a high-side voltage of 100 kV or higher, or through a transformer that is designated in Inclusion I1.

Exclusions:

- **E1** - Radial systems: A group of contiguous transmission Elements that emanates from a single point of connection of 100 kV or higher and:
 - a) Only serves Load. Or,
 - b) Only includes generation resources, not identified in Inclusion I3, with an aggregate capacity less than or equal to 75 MVA (gross nameplate rating). Or,
 - c) Where the radial system serves Load and includes generation resources, not identified in Inclusion I3, with an aggregate capacity of non-retail generation less than or equal to 75 MVA (gross nameplate rating).

Note – A normally open switching device between radial systems, as depicted on prints or one-line diagrams for example, does not affect this exclusion.

- **E2** - A generating unit or multiple generating units on the customer's side of the retail meter that serve all or part of the retail Load with electric energy if: (i) the net capacity provided to the BES does not exceed 75 MVA, and (ii) standby, back-up, and maintenance power services are provided to the generating unit or multiple generating units or to the retail Load by a Balancing Authority, or provided pursuant to a binding obligation with a Generator Owner or Generator Operator, or under terms approved by the applicable regulatory authority.
- **E3** - Local networks (LN): A group of contiguous transmission Elements operated at or above 100 kV but less than 300 kV that distribute power to Load rather than transfer bulk power across the interconnected system. LN's emanate from multiple points of connection at 100 kV or higher to improve the level of service to retail customer Load and not to accommodate bulk power transfer across the interconnected system. The LN is characterized by all of the following:
 - a) Limits on connected generation: The LN and its underlying Elements do not include generation resources identified in Inclusion I3 and do not have an aggregate capacity of non-retail generation greater than 75 MVA (gross nameplate rating);
 - b) Power flows only into the LN and the LN does not transfer energy originating outside the LN for delivery through the LN; and
 - c) Not part of a Flowgate or transfer path: The LN does not contain a monitored Facility of a permanent Flowgate in the Eastern Interconnection, a major transfer path within the Western Interconnection, or a comparable monitored Facility in the ERCOT or Quebec Interconnections, and is not a monitored Facility included in an Interconnection Reliability Operating Limit (IROL).
- **E4** – Reactive Power devices owned and operated by the retail customer solely for its own use.

Note - Elements may be included or excluded on a case-by-case basis through the Rules of Procedure exception process.