

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Reliability Technical Conference

| Docket No. AD17-8-000

**WRITTEN STATEMENT OF JOHN TWITTY
ON BEHALF OF TAPS
FOR THE JUNE 22 TECHNICAL CONFERENCE**

Thank you for the invitation to participate in today's technical conference. This conference, and particularly this panel, addresses important questions as to how, given the unique FERC-NERC-industry relationship established through Federal Power Act ("FPA" or "the Act") Section 215, to identify, prioritize, and achieve the objectives everyone shares of cost-effectively maintaining and enhancing reliability and security.

I am the 2017-18 Chairman of the NERC Members Representatives Committee, a role that has given me direct exposure to the challenges of managing competing and ever-evolving priorities, with the benefit of a deepened appreciation of emerging issues as a result of my previous service on NERC's Reliability Issues Steering Committee. As Executive Director of TAPS—the Transmission Access Policy Study Group, an association of transmission dependent utilities in more than thirty-five states—I am acutely aware of both the importance of a reliable and secure bulk-power system ("BPS"), as well as the heavy compliance cost burden borne by registered entities, even if they are small systems with limited impact on BPS reliability. As retired General Manager and CEO of City Utilities of Springfield, Missouri, I have experienced firsthand the full responsibility to keep the lights on in a local utility, and recognize the value to our citizens and our economy of affordable, reliable electric service, as an enabler of social and economic vitality. From these vantage points, and recognizing the BPS

reliability role assigned to this Commission and NERC by Congress, I provide my views on the questions posed.

I. HOW WE MEASURE RELIABILITY

Several questions presented for this panel ask how we measure reliability and what actions should be taken to “continuously improve reliability.” In considering these questions, it is important to consider how Congress defined “reliability” for purposes of establishing this Commission’s responsibility to approve Reliability Standards developed by its Electric Reliability Organization—NERC— “to provide for reliable operation of the bulk-power system.”¹ FPA Section 215 defines “reliable operation” as “operating the elements of the [BPS] within equipment and electric system thermal, voltage, and stability limits so that the instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including cybersecurity incident, or unanticipated failure of system elements.”² Rightly recognizing that failure of BPS system elements will occur, the Act focuses the mission of NERC and FERC on preventing such failures from triggering instability, uncontrolled separation, or cascading outages. This focus is reflected in NERC’s definition of “Adequate Level of Reliability” for the bulk electric system, which addresses avoiding (or maintaining within defined parameters) instability, uncontrolled separation, cascading, or voltage collapse when subjected to predefined disturbances.³ The question is how the BPS performs when faced with inevitable failures, not eliminating equipment failures.

¹ FPA § 215(a)(3), 16 U.S.C. § 824o(a)(3). See also FPA § 215(b), 16 U.S.C. § 824o(b).

² FPA § 215(a)(4), 16 U.S.C. § 824o(a)(4).

³ N. Am. Elec. Reliability Corp., Informational Filing on the Definition of “Adequate Level of Reliability” (May 10, 2013), eLibrary No. 20130510-5126.

NERC's 2017 State of Reliability Report includes various statistical analyses illustrating the continuing solid performance of the BPS. While the report includes metrics on equipment failures and loss of load, I caution this Commission and NERC against treating any failure of equipment or loss of load as measuring "reliable operation" in Section 215 terms. Rather, the Act's reliable operation definition should guide the Commission and NERC in measuring reliability, evaluating trends, and setting priorities for actions to improve reliability.

II. ACTIONS THE COMMISSION SHOULD ENCOURAGE OR TAKE TO COST-EFFECTIVELY MAINTAIN AND ENHANCE RELIABILITY

As highlighted in the State of Reliability Report, we face many evolving challenges to our ability to maintain and enhance reliability. To a large extent, Reliability Standards have been the tool of choice for addressing reliability risks. But as the questions posed to the panel suggest, we should assess whether our current standards-focused approach is best suited to this task, in light of the full range of tools available. Is the entire body of existing standards, with attendant compliance costs, justified based on the benefits? In the face of evolving risks, can other, non-standard, approaches be both more effective and more cost-effective in achieving our shared goals? I offer suggestions on how we can meet our reliability challenges while maintaining the affordability of electric service that is so crucial to the prosperity of our nation and its citizens.

A. *Better Assure Cost-Effective, Risk-Based Standards Through Renewed P 81 Efforts*

In March 2012, this Commission initiated its P 81 initiative to eliminate unnecessary or redundant standards.⁴ This yielded significant early successes. In 2013, the Commission approved NERC's proposal to retire thirty-four Requirements that were redundant or provided little protection for reliability; those were the "low hanging fruit."⁵ However, NERC and an Independent Expert Review Panel identified an additional 269 Requirements for potential retirement; as of August 2016, ninety-eight of those had been retired; 103 were modified, and sixty-eight were still unchanged.

The benefit of the initial P 81 efforts has been offset by the overall growth in total Requirements. NERC currently has ninety-eight Reliability Standards subject to enforcement, including regional standards, consisting of nearly 1600 individual Requirements. That is more than double the number of Requirements that were effective a decade ago, when the Reliability Standards first became enforceable.

After the initial P 81 efforts, it was anticipated that P 81 considerations were to be factored into the standards development and review processes, but that seems to have petered out. In fact, after August 2016, the quarterly reports on standards development that are submitted to the NERC board no longer report on the progress of the P 81 effort. But that doesn't mean the P 81 task has been completed or is unnecessary.

⁴ N. Am. Elec. Reliability Corp., 138 FERC ¶ 61,193, P 81 (2012), *clarified in non-pertinent part*, 139 FERC ¶ 61,168 (2012).

⁵ In approving these retirements, the Commission also withdrew forty-one directives. Electric Reliability Organization Proposal to Retire Requirements in Reliability Standards, Order No. 788, 145 FERC ¶ 61,147 (2013).

The cost impact of compliance obligations on small entities can be disproportionate to the BPS benefits. NERC's Risk-Based Registration initiative (which TAPS strongly supports), approved by the Commission, provided welcome registration relief for some small entities with trivial, if any, BPS impact. However, the burden on small systems that remain registered remains heavy, especially considering their limited BPS impacts.

TAPS also strongly supports NERC's Risk-Based Compliance program, which is intended to better align compliance enforcement efforts with BPS risk. We have seen from that program that NERC treats nearly half of noncompliances as compliance exceptions (rather than violations triggering enforcement actions) due to the low risk posed by those noncompliances.⁶ While NERC's treatment of these low-risk noncompliances is appropriate, the high percentage highlights the potential that more can be done as part of a reinvigorated P 81 effort to reduce unnecessary compliance burdens.

It's time to take another look at whether each and every existing Requirement is necessary and whether applicability can be more narrowly tailored to better match BPS benefits with cost burdens. I urge the Commission to support a renewed P 81 effort, to minimize redundancy, inefficiency, and burden on our communities and businesses.

B. Include Cost-Effectiveness As an Essential Part of Reviewing Existing As Well As New Standards

Neither this Commission nor NERC should assume that any standard that potentially contributes to reliability should be adopted or retained without regard to their

⁶ N. Am. Elec. Reliability Corp., 2016 ERO Enterprise CMEP Annual Report at 4, Attachment (Feb. 21, 2017), eLibrary No. 20170221-5264 (showing that 47% of the 1019 non-compliances filed or posted in 2016 were compliance exceptions).

potential benefits and risks as compared with the cost of compliance. FPA Section 215's Requirement that Reliability Standards be just, reasonable, and in the public interest⁷ necessarily includes consideration of cost. As the Commission recognized a decade ago, "[a] Reliability Standard may take into account the size of the entity that must comply and the costs of implementation."⁸ Requirements that impose high costs should be carefully weighed against their potential benefits, especially as applied to smaller registered entities that pose limited risk to BPS reliability.

Unfortunately, NERC's efforts to incorporate cost-effectiveness assessments into its standards development and review process remain in their infancy. While NERC has initiated cost-effectiveness pilot programs, more must be done to realize this important objective. In particular, cost-effectiveness analysis should consider the disproportionate cost impacts, relative to BPS reliability benefits, of compliance by small registered entities with a proposed or existing standard.

The Commission should encourage NERC to prioritize cost-effectiveness as a formal initiative, thereby facilitating a more refined approach to making cost/benefit assessments (including as applied to smaller registered entities) in developing new standards and reviewing existing standards. That's the only way to ensure we get our money's worth from the many dollars spent on reliability.

⁷ FPA § 215(d)(2), 16 U.S.C. § 824o(d)(2).

⁸ Mandatory Reliability Standards for the Bulk-Power System, Order No. 693, FERC Stats. & Regs. ¶ 31,242, P 6 (2007), *aff'd*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

C. Recognize the Value of and Encourage Non-Standard Approaches

Standards are neither a cure-all nor the sole answer to reliability concerns.

Standards, which necessarily take time to develop, approve, and implement, are unlikely to be the most effective tool for dynamically and innovatively addressing rapidly evolving cyber security threats, taking full advantage of quickly changing technology, or promptly responding to lessons learned and other issues identified through event analyses. The last thing we want to do is dictate expensive and obsolete solutions to threats that have morphed. Alternative approaches could be more effective, more flexible, and less costly, and should therefore be encouraged.

NERC has a range of non-standard tools at its disposal that it can employ to advance reliability and security. These include NERC advisories and alerts, which can be developed collaboratively with the NERC technical committees and issued relatively quickly. Workshops held by NERC and Regional Entities, as well as compliance guidance, can spread the word about effective approaches to enhance reliability and security objectives. Event analysis, and continued efforts to identify and disseminate “lessons learned” can be extremely effective. And NERC task force reports can shine a light on emerging issues and pave the way for proactive actions by industry, as well as potential actions by NERC, this Commission, or other regulators and standard setting bodies.

The Commission should also encourage efforts to develop and publicize “best practices.” For example, as a result of the active participation of many industry subject matter experts, the North American Generator Forum and Transmission Forum are well-positioned to aid in this effort. Because not all registered entities qualify for participation

in the Transmission Forum, its recent initiative to share the results of its robust efforts with non-members is particularly important and valuable. NERC and its Regional Entities can also provide platforms to work together with industry to identify and disseminate ways to enhance reliability beyond compliance with standards.

In addition, the Commission should support the expansion and upgrade of E-ISAC as a focus of cyber information sharing and analysis. The speed at which cyber threats and defenses evolve heightens the importance of E-ISAC's role in gathering, analyzing, and disseminating information so that the industry can promptly take the targeted steps to protect the BPS. E-ISAC also provides a vehicle for small entities to engage and receive updates on cyber developments. But NERC should not be handed a blank check for E-ISAC; when reviewing NERC budgets, the Commission should ensure that E-ISAC costs remain reasonable, both in terms of total dollars and their allocation.

The Commission can also advance reliability objectives by leveraging other resources. For example, the expertise of EPRI and the national labs can be tapped, as evidenced by recent GMD research efforts. Coordination and harmonization with state regulation and IEEE standards development is a good way to promote reliability while respecting jurisdictional boundaries, as I will discuss in more detail.

As these examples illustrate, we will be better positioned to cost-effectively achieve our reliability and security goals if the Commission and NERC use their full toolbox, and the bully pulpit, to advance the cause.

III. WHEN ADDRESSING THE IMPLICATIONS OF DISTRIBUTED ENERGY RESOURCES, JURISDICTIONAL LIMITS SHOULD BE RESPECTED

Distributed energy resources (“DER”) are expanding; their impacts on the industry and reliability must be understood. TAPS has therefore been supportive of the NERC DER Task Force’s efforts. Now that the Task Force has made its recommendations, TAPS has supported an ongoing role for this group to continue providing policy and technical assistance in NERC’s response to those recommendations.

However, responses to the DER Task Force’s recommendations must be consistent with and not exceed FPA Section 215, which focuses on the BPS and excludes local distribution facilities. In fulfilling that mandate, the Commission and NERC exercise jurisdiction over BES Generation, defined as generation interconnected at 100 kV or above and has either an individual nameplate rating greater than 20 MVA or a facility aggregate nameplate rating greater than 75 MVA.⁹ Most DERs do not meet that definition and, appropriately, are not subject to NERC’s standards.

The Commission has also exercised Section 205 and 206 jurisdiction over generation interconnections that interconnect to jurisdictional facilities for the purpose of wholesale sales.¹⁰ TAPS has been supportive of the Commission’s exercise of this authority to require generation that is interconnecting to jurisdictional facilities for the

⁹ N. Am. Elec. Reliability Corp., *Project 2010-17 Definition of Bulk Electric System (Phase 2)*, at 1, <http://www.nerc.com/pa/RAPA/BES%20DL/BES%20Definition%20Approved%20by%20FERC%203-20-14.pdf>.

¹⁰ Standardization of Generator Interconnection Agreements and Procedures, Order No. 2003, FERC Stats. & Regs. ¶ 31,146, P 804 (2003), *order on reh’g*, Order No. 2003-A, FERC Stats. & Regs. ¶ 31,160, P 730 (2004), *order on reh’g*, Order No. 2003-C, FERC Stats. & Regs. ¶ 31,190, P 53 (2005), *aff’d sub nom. NARUC v. FERC*, 475 F.3d 1277, 1282 (D.C. Cir. 2007) (irrelevant subsequent history omitted). The Commission has not claimed jurisdiction over net metered generators, unless the generation makes net sales of energy to a utility over the applicable billing period. Order No. 2003, P 747.

purpose of wholesale sales to facilitate reliability. For example, TAPS supports requiring new asynchronous resources interconnecting pursuant to a Small Generator Interconnection Agreement (“SGIA”) to install governors, or equivalent control devices capable of providing primary frequency response.¹¹

The Commission and NERC should continue respecting these jurisdictional boundaries. But that doesn’t leave the Commission and NERC without tools to identify and mitigate potential BPS reliability impacts of DERs, as the non-standard approaches discussed previously illustrate.

For example, generation not subject to Commission jurisdiction is subject to state regulation, and most distributed generation must comply with IEEE standards. The Commission and NERC can play a leadership role with respect to such generation by working collaboratively with state regulators and standard-setting bodies like IEEE to coordinate Requirements. The Commission adopted such a collaborative approach in requiring frequency and voltage ride-through capability for small generating facilities interconnecting through SGIA’s. The Commission made clear that its rule is not intended to interfere with state interconnection procedures, but expressed hope that its changes would be helpful to states when updating their own interconnection rules.¹² In addition, rather than impose specific technical standards in the SGIA, the Commission established basic performance expectations and noted that IEEE Standard 1547 may be used as a

¹¹ See Joint Commenters, Comments of the American Public Power Association, Large Public power Council, and Transmission Access Policy Study Group (Jan. 24, 2017), eLibrary No. 20170124-5139.

¹² Requirements for Frequency and Voltage Ride Through Capability of Small Generating Facilities, Order No. 828, 156 FERC ¶ 61,062, P 12 (2016).

technical guide to meet those requirements.¹³ This approach—being a model for state regulators and coordinating with standard setting bodies—could provide a blueprint for mitigating DER reliability concerns while respecting jurisdictional limits.

Once again, I would like to thank the Commission for this opportunity and look forward to your questions and the panel's discussion of these important issues.

June 9, 2017

¹³ *Id.* P 34.