Summary of Testimony of Michael Bardee
Director, Office of Electric Reliability
Federal Energy Regulatory Commission
Before the Committee on Energy and Commerce
Subcommittee on Energy and Power
United States House of Representatives
May 19, 2015

Summary

Chairman Whitfield, Ranking Member Rush, and Members of the Committee:

Thank you for this opportunity to appear before you today. My testimony will focus primarily on those parts of the Discussion Draft that relate to the Commission's authorities.

I support the concept underlying section 1201 of the Discussion Draft, that operating a power plant in compliance with an order under Federal Power Act section 202(c) should not result in a violation of an environmental law.

The Commission generally has not maintained the tools and data to perform the analyses required under section 1202, particularly not on the proposed timelines. If Congress decides to give the Commission this responsibility, section 1202 should be expanded to clarify that NERC, its regional entities and other planning authorities must timely conduct and provide to the Commission analyses and information as may be requested by the Commission. With that clarification, section 1202 would rely primarily on their existing processes for identifying and addressing reliability issues, adjusted as appropriate for the circumstances. In this way, the Commission could rely on the resources and capabilities of these entities while ensuring consistent, objective analyses of major rules affecting generating units.

With respect to cyber and physical security, section 1204 of the Discussion Draft would address concerns that the current processes are too slow, too open and too unpredictable to ensure responsiveness in emergencies. However, while it authorizes emergency requirements to protect against imminent danger, it is not clear that it authorizes requirements for restoration of grid reliability after an unforeseen attack or event.

Finally, the Commission prefers to rely on competitive forces when reasonable, but recognizes that traditional regulatory approaches are sometimes necessary in wholesale electricity markets. Section 1208 takes a different approach, and would impose on RTO and ISO capacity markets a broad overlay of traditional regulatory requirements. This approach may reduce the potential for these markets to provide consumers with the benefits achievable through competitive forces and may cause unnecessary conflicts between federal and state regulatory efforts. It would be preferable to not mandate such an approach legislatively, and instead to allow the Commission to adapt market rules over time with the goal of maximizing competitive forces, while using other approaches when competitive forces are insufficient.

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Introduction

Thank you for this opportunity to appear before you to discuss energy reliability and security. My name is Michael Bardee. I am the Director of the Office of Electric Reliability of the Federal Energy Regulatory Commission (FERC or Commission). I am here today as a Commission staff witness, and my remarks do not necessarily represent the views of the Commission or any individual Commissioner.

My testimony will focus primarily on those parts of the draft legislation that resolve conflicts between environmental regulations and Department of Energy emergency reliability orders (section 1201), require analysis of the reliability impacts of major federal regulations affecting electricity generation (section 1202), address grid security emergencies resulting from cyber or physical attacks or geomagnetic storms (section 1204), and require consideration of performance assurance in regional transmission organizations (section 1208).

Background

Before turning to the provisions of the Discussion Draft, it is important to note that the Commission's role on reliability is defined by Congress, and generally consists of approving proposed reliability standards for the Bulk-Power System, if they meet the statutory criteria, and then enforcing or overseeing enforcement of those standards. This authority is in section 215 of the Federal Power Act. Section 215 requires the Commission to select an Electric Reliability Organization (ERO) responsible for proposing, for Commission review and approval, new reliability standards or modifications to existing reliability standards. The Commission has

certified the North American Electric Reliability Corporation (NERC) as the ERO. The ERO may delegate certain responsibilities to "Regional Entities," subject to Commission approval.

The reliability standards apply to the users, owners and operators of the bulk power system and become mandatory in the continental United States only after Commission approval. If the Commission disapproves a proposed standard or modification, the Commission must remand it to the ERO for further consideration. The Commission, upon its own motion or upon complaint, may direct the ERO to submit a proposed standard or modification on a specific matter but the Commission does not have the authority to modify or author a standard itself. The ERO is authorized to impose, after notice and opportunity for a hearing, penalties for violations of the reliability standards, subject to Commission review and approval. The Commission also can enforce the reliability standards directly.

Resolving Environmental and Grid Reliability Conflicts

Section 1201 of the Discussion Draft seeks to avoid conflicts between requirements imposed under environmental laws and by the Department of Energy under Federal Power Act section 202(c). Essentially, section 1201 says that compliance with the latter will not be considered a violation of the former. I support the concept underlying section 1201.

To help ensure that the electric grid remains reliable, Federal Power Act section 202(c) allows the Department of Energy to require a power plant to run in certain emergency circumstances. Ideally, FPA section 202(c) will not need to be invoked, but experience demonstrates that orders under section 202(c) are sometimes necessary. However, in certain circumstances, operating a power plant in compliance with FPA section 202(c) order can result in a violation of the Clean Air Act (or other environmental laws). In this sense, federal law could

require a power plant owner to choose between violating either the environmental law(s) or the Federal Power Act. The law should not require such a choice.

Reliability Analysis for Certain Rules Affecting Electric Generating Facilities

Section 1202 of the Discussion Draft would require the Commission, in coordination with the ERO, to perform and issue reliability analyses of major rules proposed or issued by other federal agencies, if they may impact an electric generating unit(s) and have an annual effect on the economy of $1 billion or more. The analyses would have to consider effects on reliability and resource adequacy; fuel diversity; wholesale power markets; and energy delivery and infrastructure.

The number and type of rulemakings that might be subject to this section is unclear. Thus, it is difficult for me to foresee and understand the ramifications of this proposal from the perspective of Commission workload or otherwise.

As I stated before, the Commission's role on reliability generally consists of approving proposed reliability standards for the Bulk-Power System, if they meet the statutory criteria, and then enforcing or overseeing enforcement of those standards. The Commission's exercise of its rate jurisdiction also, at times, has effects on reliability issues. As part of these responsibilities, the Commission has developed the expertise to review and evaluate the type of extensive analyses described in section 1202, but the Commission generally has not maintained the tools and data to perform such analyses itself, particularly not on the proposed timelines.

If Congress decides to give the Commission this responsibility, certain modifications of section 1202 would be appropriate. First, section 1202(b)(2) requires the initiating agency to provide the Commission relevant data, modeling and assessments, and this should be expanded to clarify that the ERO, regional entities and others also must "timely conduct and provide

analyses and information as may be requested by the Commission." This should include entities such as regional transmission organizations (RTOs) and independent system operators (ISOs), the ERO, regional entities and reliability coordinators that collectively perform the functions needed to plan, operate and assess the reliability of the bulk power system. With the clarification I am suggesting, section 1202 would allow the Commission to rely primarily on these existing processes for identifying and addressing reliability issues, adjusted as appropriate for the circumstances. Under such a process, the Commission could rely on the resources and capabilities of these entities while ensuring consistent, objective analyses of major rules affecting generating units. Even so, the future workload from this section may require additional resources at the Commission, beyond its current levels in this area.

Section 1202 also should be modified so that our work is done "in consultation with" the ERO, instead of "in coordination with" the ERO, to recognize our statutory role in overseeing the ERO. This also would be consistent with other provisions in the Discussion Draft, such as section 1205's requirement that the Department of Energy develop a Strategic Transformer Reserve Plan, "in consultation with" the ERO.

Section 1202 also should require the initiating agency to notify the Commission when it issues a covered proposed or final rule, since the Commission otherwise might not know of a covered rule issued by another agency. Also, section 1202's reference to considering "local electric reliability and resource adequacy" (emphasis added) could be construed as broadening the Commission's role beyond the bulk power system, and the reference to fuel diversity could be construed as conflicting with the Commission's traditional role of preventing undue discrimination instead of favoring particular fuels or technologies; both of these references may warrant further consideration. Finally, the deadlines for the Commission to issue its analyses (90

days after a proposed rule and 120 days after a final rule) are not reasonably achievable and should be extended.

Critical Infrastructure Security

Section 1204 would allow the Secretary of Energy to address grid security emergencies if the President provides a written directive or determination identifying a grid security emergency. Section 1204 also would exempt certain Critical Electric Infrastructure Information from disclosure, and require the Commission to establish standards for and authorize the voluntary sharing of such information among various entities.

As I will explain, the Commission's current authority is not adequate to address cyber or other national security emergencies on the electric grid. These types of emergencies pose a serious risk to our Nation's electric grid, which undergirds our government and economy and helps ensure the health and welfare of our citizens.

An important part of the Commission's responsibility to oversee the development of standards for the bulk power system involves security-related standards. For example, standards for cyber-security have been mandatory since July 2010. In 2013, the Commission approved a new version of the cyber-security standards, which broadened the scope of the covered systems and included a tiered approach for applying different requirements to high-, medium- and low-impact cyber assets. The Commission also directed the ERO to develop certain modifications for, e.g., transient devices such as laptops, and the Commission is now reviewing the ERO's recently-proposed modifications.

The Commission also has directed the ERO to develop, in two stages, standards to address the impact of geomagnetic disturbances on the electric grid. The first stage required real-time operational practices for addressing a geomagnetic disturbance. The Commission

approved the ERO's proposal for this stage. Earlier this year, the ERO submitted a proposal for the second stage, which would require owners and operators of the Bulk-Power System to conduct initial and subsequent assessments of the potential impact of benchmark GMD events and to mitigate those impacts through equipment modifications or other means. Last week, the Commission proposed to approve the ERO's second stage standard and also proposed to direct certain modifications to that standard. The Commission is seeking comments on its proposal and, after receiving the comments, will decide on further actions.

Finally, in March 2014, the Commission directed the ERO to propose standards on physical security that require owners and operators of the Bulk-Power System to perform a risk assessment to identify their critical facilities; evaluate potential threats to, and vulnerabilities of, those facilities; and develop and implement a security plan to protect against attacks on those facilities. In November 2014, the Commission approved NERC's proposed physical security reliability standard, and directed NERC to make one modification.

It is important to recognize that reliability standards must be developed by the ERO through an open, inclusive, and public process. NERC's procedures for developing standards allow extensive opportunity for stakeholder comments. The process is intended to develop consensus on both the need for, and the substance of, the proposed standard. Although inclusive, the process is relatively slow, open and unpredictable in its responsiveness to the Commission's directives. (The ERO was able to submit a physical security standard within the 90 day deadline imposed by the Commission, but this process still may not work quickly enough to avoid imminent danger.)

In my view, FPA section 215 is inadequate for emergency action. This is true of both cyber and physical emergencies. The procedures used under section 215 for the development

and approval of reliability standards do not provide an effective and timely means of addressing urgent cyber or other national security risks to the bulk power system. Certain circumstances, such as those involving national security, may require immediate action. Also, the open and inclusive process required for standards development is not consistent with the need to protect security-sensitive information.

Section 1204 of the Discussion Draft would address these issues. Section 1204 would allow the Secretary of Energy to issue orders for emergency measures whenever the President issues a written directive or determination identifying a grid security emergency. The emergency could involve cyber or physical attack (including an EMP attack) or a geomagnetic storm. Also, section 1204 provides an exemption from disclosure for Critical Electric Infrastructure Information. Without this, the grid may be more vulnerable to attack. Section 1204 also provides for cost recovery, since it is important that utilities be able to recover costs they incur to mitigate emergencies.

Section 1204 may warrant modification or clarification in limited respects. First, while it authorizes emergency requirements to protect against imminent danger, it is not clear that it authorizes requirements for restoration of grid reliability after an unforeseen attack or event. One way to clarify this point would be to revise section 1204 (on page 11, line 2) to address "the occurrence or imminent danger" of an emergency and (on page 12, line 9) to allow the Secretary to "protect or restore" the reliability of the electric grid. Second, while section 1204 requires the Commission to establish a cost recovery mechanism in certain circumstances, it does not make clear whether this mechanism should be developed under our existing rate authority for public utilities or through a more comprehensive mechanism beyond our existing rate authority, e.g., including non-public utility "users."

Reliability and Performance Assurance in Regional Transmission Organizations

Section 1208 would require the Commission to direct each regional transmission organization (RTO) and independent system operator (ISO) with an existing capacity market or comparable market to demonstrate how it meets certain requirements. The requirements include certain integrated system planning practices such as having a diverse generation portfolio and stable pricing for customers, as well as a sufficient supply of physical generation facilities with reliability attributes such as being able to operate each day for not less than 30 days.

The Commission has sought for many years to foster the development of competitive markets for wholesale electricity. As stated in our current Strategic Plan (page 7):

> When competitive markets exist and there are assurances against the exercise of market power, FERC leverages competitive market forces to promote efficiency for consumers while taking measures to make those markets more efficient. When competitive market conditions do not exist and competitive forces are inadequate to protect consumers, FERC relies on traditional rate-setting authority and tools such as cost-of-service ratemaking.

The Commission also has stated that marketplace competition benefits energy consumers by encouraging diverse resources, spurring innovation and deployment of new technologies, improving operating performance, and exerting downward pressure on costs. In short, the Commission prefers to rely on competitive forces when reasonable, but recognizes that traditional regulatory requirements are sometimes necessary in wholesale electricity markets.

Section 1208 takes a different approach, and would impose on RTO and ISO capacity markets a broad overlay of traditional regulatory requirements. This approach may reduce the potential for these markets to provide consumers with the benefits achievable through competitive forces. While the Commission recognizes the need to approve or require rules for capacity markets to encourage an adequate supply of resources at reasonable prices, the breadth of requirements in section 1208 may unduly impair the competitive aspects of these markets, to

the ultimate detriment of consumers. It would be preferable to not mandate such an approach legislatively, and instead to allow the Commission to adapt market rules over time with the goal of maximizing competitive forces to benefit consumers, while using other approaches when competitive forces are insufficient to result in adequate resources at a reasonable cost.

Section 1208 also may cause unnecessary conflicts between federal and state regulatory efforts. For example, section 1208 would require RTO and ISO capacity markets to have a "diverse and flexible generation portfolio," but the Commission and states may differ on the proper components of (and their percentages in) such a portfolio. If so, section 1208 is unclear on how such differences should be addressed. Similarly, regulators may differ on which facilities can generate "during emergency and severe weather conditions," since this phrase may or may not include drought-prone hydropower facilities; coal facilities dependent on winter-impaired deliveries of coal by rail or barge; or natural gas facilities affected by wellhead freeze-offs.

Finally, Section 1208 requires the RTOs and ISOs and the Commission to evaluate contractual terms for both fuel certainty and stable pricing. This requirement places the RTOs, ISOs and the Commission in the position to second guess the business decisions that market participants have made. The Commission prefers to allow market rules to create an incentive for a market participant to take actions that best manage its risks while meeting system needs.

Strategic Transformer Reserve

As noted above, section 1205 would require the Secretary of Energy to develop a strategic transformer reserve plan, in consultation with the ERO. This section should be modified to also require consultation with the Commission.

Conclusion

The reliability and security of the electric grid is of primary importance to the Commission. Thank you for inviting me to testify today on the Discussion Draft. I look forward to working with you in the future on these issues and would be happy to answer any questions you may have.