U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON ENERGY AND COMMERCE

May 15, 2015

TO: Members, Subcommittee on Energy and Power

FROM: Committee Majority Staff

RE: Hearing entitled "Discussion Draft Addressing Energy Reliability and Security"

## I. INTRODUCTION

On Tuesday, May 19, 2015, at 10:00 a.m. in 2123 Rayburn House Office Building, the Subcommittee on Energy and Power will hold a hearing entitled "Discussion Draft Addressing Energy Reliability and Security."

## II. WITNESSES

Panel I

- Michael Bardee, Director, Office of Electric Reliability, Federal Energy Regulatory Commission; and
- Gerry W. Cauley, President and CEO, North American Electric Reliability Corporation.

Panel II

- Thomas Fanning, Chairman, President and CEO, Southern Company;
- Elinor Haider, Vice President, Market Development, Veolia North America, on behalf of the Alliance for Industrial Efficiency;
- Joseph Dominguez, Executive Vice President, Governmental and Regulatory Affairs and Public Policy, Exelon Corporation;
- Mike Bergey, President and CEO, Bergey Wind Power, Board President, Distributed Wind Energy Association, on behalf of the Distributed Wind Energy Association;
- John Moore, Senior Attorney, Sustainable FERC Project, Natural Resources Defense Council;
- John Di Stasio, President, Large Public Power Council;
- Emily Heitman, Vice President and General Manager, Demand Side Organization Power Transformers, ABB, Inc., on behalf of the National Electrical Manufacturers Association (NEMA); and
- Elgie Holstein, Senior Director for Strategic Planning, Environmental Defense Fund.

## III. BACKGROUND

Energy reliability and security is of utmost importance to U.S. national security, national economic interests and basic health and welfare. Electricity in particular is an essential part of modern life,[1] the disruption of which would impact not only homes but also virtually every sector of the economy. The bulk-power system in the United States and Canada has more than 200,000 miles of transmission lines, is valued at over $1 trillion, and is capable of annually delivering over 3,800 terawatt hours of electricity to more than 300 million people.

The nation's electricity system is experiencing a dramatic shift away from coal-fired generation and increasingly towards use of natural gas and renewable energy sources, spurred by low natural gas prices and a suite of new environmental regulations. There are other challenges as well: aging infrastructure; declining reserve margins and reduced fuel diversity; the integration of intermittent resources; siting and permitting red-tape; and physical and cyber threats. But there are opportunities too. Utilities plan to invest more than $60 billion in transmission infrastructure through 2024 to modernize the nation's electric grid, while abundant fuel resources, advanced grid technologies, distribution management technologies, and improved domestic manufacturing of large power transformers and other critical grid components can help modernize, diversify, and strengthen the nation's power grid.[2]

A more modern and resilient grid will be better positioned to withstand and minimize any impacts resulting from severe weather, cyber-attacks or any other threats to the grid. However, as the grid becomes increasingly reliant on information technology and digital communications devices, thousands of potential new grid access points are being created. While encouraging technology and innovation in the electricity sector should be a priority, policies must ensure that new grid-related products do not leave the grid more exposed or compromise customer information and privacy.

Given the shift taking place in the electricity sector, it is paramount that policymakers and regulators at the Federal, State, and local level carefully weigh policies that can adapt to these new challenges and opportunities to build a market-driven, modern and flexible system while ensuring the continued safe, reliable, and affordable delivery of electricity to consumers.

## IV. SECTION-BY-SECTION

### ENERGY RELIABILITY AND SECURITY

Sec. 1201. Resolving environmental and grid reliability conflicts: Resolves a conflict between the Federal Power Act and environmental laws and regulations in order to avoid forcing electric generators from choosing between whether to comply with an emergency order from the Department of Energy or violate environmental obligations.

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[1] In 2000, the National Academy of Engineering cited electrification, and the vast networks of electricity that power the developed world, as the greatest achievement affecting quality of life in the 20th Century.
[2] Edison Electric Institute, "Transmission Projects: At a Glance: (updated March 2014), available at http://www.eei.org/issuesandpolicy/transmission/Documents/Trans_Project_lowres_bookmarked.pdf.

Sec. 1202. Reliability analysis for certain rules that affect electric generating facilities: Requires the Federal Energy Regulatory Commission (FERC), in coordination with the Electric Reliability Organization, to complete an independent reliability analysis of any proposed or final major Federal rule that affects electric generating units. The reliability analysis must evaluate the potential impacts of the rule on: 1) national, regional, or local electric reliability and resource adequacy; 2) the fuel diversity of the electricity generation portfolio of the United States; 3) the operation of wholesale electricity markets; and 4) energy delivery and infrastructure, including electric transmission facilities and natural gas pipelines.

Sec. 1203. Emergency preparedness for energy supply disruptions: Finds that recent natural disasters have underscored the importance of having resilient oil and natural gas infrastructure and effective ways for industry and government to communicate to address energy supply disruptions. This section directs the Secretary of Energy to develop and adopt procedures to enhance communication and coordination between the Department of Energy (DOE), Federal partners, State and local government, and the private sector to improve emergency response and recovery.

Sec. 1204. Critical electric infrastructure security: Establishes a new section 215A of the Federal Power Act that:

- Provides the Secretary of Energy the authority to address grid security emergencies if the President provides a written directive or determination identifying a grid security emergency. The Secretary is authorized to take emergency measures to protect the bulk power system or defense critical electric infrastructure, including ordering critical electric infrastructure owners and operators to take appropriate actions, with such measures to expire no later than 30 days from issuance.

- Facilitates the protection and voluntary sharing of critical electric infrastructure information between private sector asset owners and the Federal government by: (1) exempting designated Critical Electric Infrastructure Information from certain Federal and State disclosure laws; 2) requiring FERC to develop standards for voluntary information sharing between Federal, State, local and tribal authorities, the Electric Reliability Organization, regional entities, and owners, operators and users of the bulk-power system in the U.S.; and 3) establishing sanctions for the unauthorized disclosure of shared information.

Sec. 1205. Strategic Transformer Reserve: Requires DOE to submit a plan to Congress evaluating the feasibility of establishing a Strategic Transformer Reserve for the storage, in strategically-located facilities, of spare large power transformers in sufficient numbers to temporarily replace critically damaged large power transformers. Strategically-located spare large power transformers will diminish the vulnerability of the United States to multiple risks facing electric grid reliability, including physical attack, cyber-attack, electromagnetic pulse, geomagnetic disturbances, severe weather, and seismic events.

Sec. 1206. Cyber Sense: Directs DOE to establish, in consultation with the FERC and the National Institute of Standards and Technology, a voluntary Cyber Sense program to identify and

promote cyber-secure products and technologies intended for use in the bulk-power system, including products relating to industrial control systems, such as supervisory control and data acquisition systems.

Sec. 1207. State consideration of resiliency and advanced energy analytics technologies and baseload generation: Directs electric utilities and State public utility commissions to consider:

- Increasing the utilization of, and cost recovery for, resiliency-related technologies designed to improve the resilience of electric infrastructure, mitigate power outages, continue delivery of vital services and maintain the flow of power to facilities critical to public health, safety, and welfare.

- Promoting investments in advanced energy analytics technology for purposes of realizing operational efficiencies, cost savings, enhanced energy management and customer engagement, improvements in system reliability, safety, and cybersecurity, or other benefits to ratepayers.

- Adopting or modifying policies to ensure the incorporation of sufficient baseload generation into integrated resource plans to assure the reliable availability of electric energy over a 10-year planning period.

Sec. 1208. Reliability and Performance Assurance in Regional Transmission Organizations: Amends the Federal Power Act to require FERC to direct each regional transmission organization with an existing capacity market, or comparable market, to demonstrate how such market: 1) is based on planning practices that encourage a diverse generation portfolio, long-term-reliability and price certainty for customers, and enhanced performance assurance during peak periods; and 2) provides for a sufficient supply of reliable electric energy to load-serving entities from physical generation facilities that have certain reliability attributes, such as fuel on-site, dual fuel capability, contractual obligations that ensure adequate fuel supply, and can provide essential reliability services.

## V. ISSUES

The following issues may be examined at the hearing:

- Potential impacts on grid reliability resulting from conflicting Federal laws;
- Threats facing the bulk power system, including physical attacks, cyber attacks, and electromagnetic pulse and geomagnetic storms;
- Current efforts to address threats to the bulk power system;
- Improving information sharing between government agencies, owners and operators of the bulk power system, and other stakeholders;
- Role of reliable generation resources in regulated and restructured electricity markets; and
- Emerging advanced grid technologies, such as combined heat and power, energy storage, microgrids, and energy analytics.

## VI. STAFF CONTACTS

If you have any questions regarding this hearing, please contact Patrick Currier or Tom Hassenboehler of the Committee staff at (202) 225-2927.