

ONE HUNDRED FOURTEENTH CONGRESS  
**Congress of the United States**  
**House of Representatives**  
COMMITTEE ON ENERGY AND COMMERCE  
2125 RAYBURN HOUSE OFFICE BUILDING  
WASHINGTON, DC 20515-6115

Majority (202) 225-2927  
Minority (202) 225-3641

**MEMORANDUM**

**May 18, 2015**

**To: Subcommittee on Energy and Power Democratic Members and Staff**

**Fr: Committee on Energy and Commerce Democratic Staff**

**Re: Hearing on a “Discussion Draft Addressing Energy Reliability and Security”**

On Tuesday May 19, 2015, at 10:00 a.m. in room 2123 of the Rayburn House Office Building, the Subcommittee on Energy and Power will hold a hearing on a “Discussion Draft Addressing Energy Reliability and Security.” The purpose of the hearing is to examine a discussion draft relating to energy reliability and security, released by the majority on May 7, 2015.<sup>1</sup>

**I. BACKGROUND**

On March 3, 2015, the Subcommittee held a hearing on “The 21st Century Energy Markets: How the Changing Dynamics of World Energy Markets Impact our Economy and Energy Security.” For additional background information regarding the electricity sector, please see the democratic [memo](#) from that hearing.

The U.S. electric grid consists of interconnected transmission lines, local distribution systems to deliver electricity to end-users, generation facilities, and related communications systems. The components of the grid are highly interdependent making a line outage or system condition in one area problematic in other areas.

The grid’s increasing reliance on automation and two-way communications increases its vulnerability to cyber-attacks and remote strikes. Operations controls over the transmission grid and generators are increasingly managed by computer systems linked to the internet or other communications systems and to each other. These trends, in addition to the

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<sup>1</sup> House Committee on Energy and Commerce, *Committee Releases Plan to Keep the Lights On* (May 7, 2015) (online at [energycommerce.house.gov/press-release/committee-releases-plan-keep-lights-draft-ensure-energy-reliability-and-security-part](http://energycommerce.house.gov/press-release/committee-releases-plan-keep-lights-draft-ensure-energy-reliability-and-security-part)).

rise of advanced metering and other “smart grid” capabilities amplify reliability, cybersecurity and other security-related concerns.

According to the Energy Information Administration (EIA), investment by U.S. investor-owned utilities in the electricity distribution system has increased over the past two decades, peaking at \$20 billion in 2012.<sup>2</sup> Much of this spending has dealt with “hardening” the distribution system and making it more resilient to extreme weather events.<sup>3</sup> Between 2003 and 2012, it is estimated that weather-related outages cost the economy an average of \$18 to \$33 billion annually in the United States.<sup>4</sup> In 2013, the President’s Council of Economic Advisors advocated for additional spending in this area because “[g]rid resilience is increasingly important as climate change increases the frequency and intensity of severe weather.”<sup>5</sup>

Over the past decade, major spending areas have included the installation of smart grid technologies like automated circuit breakers and feeder switches and the installation of mapping systems that can stop problems from spreading and indicate where problems are located.<sup>6</sup> Transmission systems, which are needed to deliver electricity from power plants to substations located near demand centers, have also received heavy investments over the past two decades.

## II. ANALYSIS

A section-by-section summary and analysis of the discussion draft follows:

### A. Section 1201: Resolving Environmental and Grid Reliability Conflicts

Section 1201 contains text identical to H.R. 1558, the “Resolving Environmental and Grid Reliability Conflicts Act of 2015,” which was introduced on March 24, 2015, by Representatives Olson, Green and Doyle. The House passed, by voice vote an identical version of this legislation on May 22, 2013 – that bill, introduced in the 113th Congress by

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<sup>2</sup> U.S. Energy Information Administration, *Electricity distribution investments rose over the past two decades* (Oct. 24, 2014) (online at [www.eia.gov/todayinenergy/detail.cfm?id=18531](http://www.eia.gov/todayinenergy/detail.cfm?id=18531)).

<sup>3</sup> Edison Electric Institute, *Before and After the Storm, Update* (Mar. 2014) (online at [www.eei.org/issuesandpolicy/electricreliability/mutualassistance/Documents/Before%20and%20After%20the%20Storm.pdf](http://www.eei.org/issuesandpolicy/electricreliability/mutualassistance/Documents/Before%20and%20After%20the%20Storm.pdf)).

<sup>4</sup> Council of Economic Advisors, *Economic Benefits of Increasing Electric Grid Resilience to Weather Outages* (Aug. 2013) (online at [energy.gov/sites/prod/files/2013/08/f2/Grid%20Resiliency%20Report\\_FINAL.pdf](http://energy.gov/sites/prod/files/2013/08/f2/Grid%20Resiliency%20Report_FINAL.pdf)).

<sup>5</sup> *Id.*

<sup>6</sup> U.S. Energy Information Administration, *Electricity distribution investments rose over the past two decades* (Oct. 24, 2014) (online at [www.eia.gov/todayinenergy/detail.cfm?id=18531](http://www.eia.gov/todayinenergy/detail.cfm?id=18531)).

Representatives Olson, Green, Doyle and Kinzinger, was considered by, and reported out of the Committee on Energy and Commerce on May 15, 2013.<sup>7</sup>

Section 202(c) of the Federal Power Act provides the Secretary of Energy with the authority to require the generation, transmission, or delivery of electricity, or the temporary connection of facilities when there is a war or other emergency situation that creates a sudden increase in the demand for electricity, a shortage of electricity or facilities for the generation or transmission of electricity, or a shortage of fuel or water for generating facilities. This emergency order authority has only been used on six occasions, only two of which involved ordering generation facilities to run.<sup>8</sup>

Section 1201 amends section 202(c) of the Federal Power Act to direct the Department of Energy (DOE), in issuing an emergency order that may result in a conflict with a requirement of any federal, state, or local environmental law or regulation, to ensure that the order limits the generation, delivery, or transmission of electricity to only those hours necessary to meet the emergency and serve the public interest. DOE also must ensure the order, to the maximum extent practicable, is consistent with any applicable federal, state, or local laws or regulations and minimizes any adverse environmental impacts that may result from such order.

Under this section, if a party takes an action that is necessary to comply with an emergency order, and such action results in noncompliance with any federal, state, or local environmental law or regulation, then the action shall not be considered a violation of such environmental law. Nor would the action subject the party to any requirement, civil or criminal liability, or to a citizen suit under the environmental law.

Under this provision, the 202(c) order shall expire 90 days after issuance, however DOE may renew or reissue an order as it deems necessary to meet the emergency and serve the public interest. On renewing or reissuing the order, DOE is required to consult with the primary federal agency charged with protecting the environmental interest that is being protected by the conflicting environmental law. The primary federal agency may put conditions on the renewed or reissued order, to minimize any adverse environmental impacts.

**B. Section 1202: Reliability Analysis for Certain Rules that Affect Electric Generating Facilities**

**1. Summary**

Section 1202 requires FERC to conduct an “independent reliability analysis” of any proposed or final “major” rule that “may impact an electric utility generating unit or units.”

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<sup>7</sup> U.S. House of Representatives, Voice Vote on Agreeing to H.R. 271 (May 22, 2013); H.R. 271, the “Resolving Environmental and Grid Reliability Conflicts Act of 2013,” 113th Cong. (2013).

<sup>8</sup> All 202(c) emergency orders issued by the Secretary of Energy are available at <http://energy.gov/oe/does-use-federal-power-act-emergency-authority>.

Such an analysis shall be done in coordination with the “electric reliability organization” which the Commission has designated as the North American Electric Reliability Corporation (NERC).

A major rule is defined-for purposes of this legislation only-as any rule estimated by the agency issuing the rule (or the Office of Management and Budget) as costing more than \$1 billion. Under the section, FERC must issue the reliability analysis within 90 days of the proposed rule, and within 120 days after issuance of a final rule.

The agency issuing the rule is to provide FERC with “materials and information relevant to the FERC analysis, including data, modeling and resource adequacy and reliability analyses.”

Under this section, the analysis conducted by FERC is to address: (1) national, regional, or local electric reliability and resource adequacy; (2) fuel diversity; (3) the operation of wholesale electricity markets; and (4) energy delivery and infrastructure.

In any final rule, the agency must include a copy of the FERC reliability analysis of the proposed rule, and include a section that “addresses any concerns or issues raised in the analysis.”

## **2. Analysis**

The basis and the need for this section of the discussion draft is lacking and has not been established. FERC and DOE already coordinate routinely with other federal agencies whose proposed or final rules affect the electric power sector.

Section 1202 would involve FERC in the rulemakings of other agencies in an unprecedented and unnecessary manner. Furthermore, grid reliability issues do not appear to be the true targets of this this provision, since actual reliability issues cannot credibly be connected to the types of rulemakings that would be impacted.

Two recent EPA rules that appear to meet the requirements set forth in this provision would be the final Mercury Air Toxics Standard (MATS) and the proposed Clean Power Plan (CPP).<sup>9</sup> The MATS rule addresses toxic mercury emissions from the electric utility sector and was estimated by EPA to cost over \$1 billion.<sup>10</sup> The Clean Power Plan (CPP), issued

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<sup>9</sup> U.S. Environmental Protection Agency, *National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial- Commercial-Institutional Steam Generating Units*, 77 Fed. Reg. 9304 (Feb. 16, 2012); U.S. Environmental Protection Agency, *Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units*, 79 Fed. Reg. 34830 (Jun. 18, 2014).

<sup>10</sup> U.S. Environmental Protection Agency, *Mercury And Air Toxics Standards: Benefits And Costs Of Cleaning Up Toxic Air Pollution From Power Plants* (Dec. 16, 2011)

under section 111(d) of the Clean Air Act, would also affect the electric utility sector and was also estimated by EPA to cost over \$1 billion annually.<sup>11</sup>

For both the MATS and CPP rules, EPA engaged in extensive stakeholder outreach processes with the public and affected industry, and also engaged in an extensive interagency review process, which included consultations with FERC and DOE. Numerous parties including government entities such as DOE conducted resource adequacy analyses and reliability assessments, and these analyses are part of the final rulemaking records. Although the CPP rule has not yet been finalized, the MATS rule is currently under review by the Supreme Court.

For both rules, the ability of FERC to conduct a useful reliability analysis within 90 days of a proposal, and within 120 of a final rule, is not likely. First, it is unclear whether FERC would have either the resources or the ability to conduct an analysis within such short timeframes. Second, with regard to the CPP proposal, implementation occurs via state plans, so FERC would be hard pressed to develop an accurate reliability analysis prior to the submission of such state plans. Further, both MATS and CPP contain extended multi-year compliance timeframes that would limit the usefulness and accuracy of such predictions.

In the event that FERC fails to provide an agency with an analysis of a proposed rule within 90 days – or at all – the agency’s ability to finalize such a rule would be either delayed or called into question entirely. Since this provision makes the inclusion of, and response to, the reliability analysis mandatory for the agency issuing the rule, a failure or delay by FERC would appear to effectively preclude legal issuance of a final rule.

Failure by FERC to conduct such an analysis could be construed to prevent an agency from issuing a final rule, even if it is required to do so by some other law. Accordingly, the effect of this provision is that it could open additional grounds for legal challenges to underlying rules, even where the legal standards for judicial review are already well established in current law.

Moreover, section 1202 requires the agency issuing a final rule to include a section “addressing any concerns or issues raised in such an analysis or assessment.” The meaning of this phrase is unclear, and whether or not a failure to “address” such an issue would provide grounds for a legal challenge also remains to be seen. Because most rules are subject to either the requirements of the Administrative Procedures Act or specific statutory requirements for judicial review, the interaction of the section 1202 provisions with other judicial review requirement could be problematic.

### **C. Section 1203: Emergency Preparedness For Energy Supply Disruptions**

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(online at [www.epa.gov/airquality/powerplanttoxics/pdfs/20111221MATSimpactsfs.pdf](http://www.epa.gov/airquality/powerplanttoxics/pdfs/20111221MATSimpactsfs.pdf)).

<sup>11</sup> U.S. Environmental Protection Agency, *Clean Power Plan By The Numbers: Cutting Carbon Pollution From Power Plants* (Jun. 2, 2014) (online at [www2.epa.gov/sites/production/files/2014-06/documents/20140602fs-important-numbers-clean-power-plan.pdf](http://www2.epa.gov/sites/production/files/2014-06/documents/20140602fs-important-numbers-clean-power-plan.pdf)).

Section 1203 requires the Secretary of Energy to develop and implement procedures that would:

1. improve communication and coordination between the DOE's energy response team, federal partners, and industry;
2. leverage EIA's subject matter expertise within the DOE's energy response team to improve supply chain situation assessments;
3. establish company liaisons and direct communication with DOE's energy response team to improve situation assessments;
4. streamline and enhance processes for obtaining temporary regulatory relief to speed up emergency response and recovery;
5. facilitate and increase engagement among states, the oil and natural gas industry, and DOE in developing state and local energy assurance plans;
6. establish routine education and training programs for key government emergency response positions with DOE and the states; and
7. involve states and the oil and natural gas industry in comprehensive drill and exercise programs.

Additionally, section 1203 requires DOE to collaborate with state and local governments, as well as the private sector. This section also requires DOE to send a report to Congress describing the effectiveness of its activities not later than 180 days after the date that the bill is enacted.

#### **D. Section 1204: Critical Energy Infrastructure Security**

##### **1. Summary**

Section 1204 amends the Federal Power Act (FPA) to add a new section 215A, granting new federal authorities intended to protect the reliability of the grid or defense critical electric infrastructure, against grid security emergencies.

Subsection (b) of the new section 215A gives the Secretary of Energy authority to issue emergency orders to protect against a "grid security emergency," with or without notice, if the President notifies the Secretary that such an emergency exists. A grid security emergency is defined under the FPA, as an imminent danger of one of the following acts or events, provided the act or event would have a significant adverse effect on the reliability of the bulk-power system or of defense critical electric infrastructure:

- a malicious act using electronic communication (i.e., a cyber attack), an electromagnetic pulse (i.e., one or more pulses of electromagnetic energy, such as radio frequency or microwave, emitted by a device capable of disabling, disrupting, or destroying electronic equipment by means of such a pulse);
- a geomagnetic storm (i.e., a solar storm); or
- a direct physical attack on the bulk power infrastructure or on defense critical electric infrastructure.

This new subsection requires the President to promptly notify the relevant Congressional committees whenever the President provides a written directive or determination of a grid security emergency to DOE under the subsection. This subsection also requires the Secretary, before issuing an emergency order, to the extent practicable in light of the nature of the grid security emergency, to consult with appropriate governmental authorities in Canada and Mexico, FERC, and other appropriate Federal agencies.

An emergency order may apply to NERC, a regional entity, or any owner, user, or operator of the bulk-power system or of defense critical electric infrastructure within the United States. An emergency order expires after 30 days. However, the Secretary may reissue an emergency order for a period of 30 days if the President provides a written directive or determination that the emergency measure continues to be required.

Subsection (b) of the new section 215A also provides FERC with authority to establish a mechanism for owners, operators, or users of the bulk-power system to recover prudently incurred costs of complying with an order under subsection (b) if FERC determines that such entities cannot otherwise recover such costs through market prices or rates. The owners or operators of defense critical electric infrastructure shall bear the full incremental costs of complying with an order.

The Secretary, and other appropriate federal agencies, are also required, to the extent practicable and consistent with their obligations to protect classified information, to provide temporary access to classified information related to a grid security emergency. The key personnel of any entity subject to emergency measures would be granted temporary access to the information, in order to enable optimum communication between the entity and the Secretary and other appropriate federal agencies regarding the grid security emergency.

Subsection (c) of the new section 215A directs the Secretary-in consultation with appropriate federal agencies, and appropriate owners, users, or operators-to designate facilities located in the United States that are critical to the defense of the United States and vulnerable to interruption of an external supply of electricity to the facility. The draft classifies electric infrastructure that is not part of the bulk-power system, that serves such a facility, and that is not owned or operated by the owner or operator of the designated facility, as “defense critical electric infrastructure.” The Secretary may, in consultation with appropriate federal agencies, owners, users, or operators of defense critical electric infrastructure, periodically revise the list of designated facilities as necessary.

In promulgating regulations and issuing orders FERC is required to consider the role of state commissions in reviewing the prudence and cost of investments, determining the rates and terms of conditions for electric services, and ensuring the safety and reliability of the bulk-power system and distribution facilities within their respective jurisdictions.

Subsection (d) of the new section 215A addresses the treatment of “critical electric infrastructure information,” defined as information designated as such by FERC that is not classified national security information and that is related to current or future critical electric infrastructure, and generated by or provided to FERC in connection with the implementation of this section. The draft exempts such information from disclosure under the Freedom of Information Act (FOIA) or under state, local, or tribal disclosure laws.

The draft also requires FERC to promulgate regulations and issue orders necessary to designate critical electric infrastructure information, prohibit unauthorized disclosure of such information, ensure appropriate sanction are in place for those who do disclose such information, and facilitate appropriate voluntary sharing of such information with, between, and by governmental authorities, NERC, the regional reliability councils, and owners, operators, and users of the bulk-power system, or any other entities deemed appropriate by FERC. FERC is further required to consult with Mexico and Canada to develop protocols for voluntary sharing of critical electric infrastructure information. However, no person or entity in possession of critical electric infrastructure information is required to share such information with federal, state, local, or tribal authorities, or any other person or entity.

Subsection (e) of the new section 215A directs the Secretary of Energy to facilitate and, to the extent practicable, expedite acquisition of security clearances by key industry personnel to facilitate communication regarding grid security emergencies. In addition, the Secretary, FERC, and other federal authorities are directed, to the extent practicable, to share timely and actionable information regarding grid security with appropriate key personnel of owners, operators, and users of the critical electric infrastructure.

Subsection (f) of the new section 215A makes clarifications of liability, with regard to compliance with the requirements of this provision.

Section 1204(b) of the draft makes conforming amendments to section 201 of the Federal Power Act.

## **2. Analysis**

Section 1204 of the discussion draft is the first attempt by the majority to develop grid security legislation since passage of the original GRID Act.

Section 1204 is similar to a bipartisan bill that the committee considered and the House of Representatives passed in the 111th Congress.<sup>12</sup> When the Senate failed to consider

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<sup>12</sup> U.S. House of Representatives, Voice Vote on Agreeing to H.R. 5026 (Jun. 9,

that bill, Rep. Waxman and Sen. Markey reintroduced the GRID Act in 2014.<sup>13</sup> Despite previous Republican support, the 2014 version of the bill was not co-sponsored by Rep. Upton, and was not considered by the committee.

The current proposal lacks a number of provisions that could undermine its effectiveness in ensuring grid security. Importantly, Section 1204 does not grant DOE or FERC the authority to address vulnerabilities or threats to the grid, just emergencies. The narrower scope of authority in section 1204 could lead to a failure to address regulatory gaps and deficiencies.

Under the GRID Act, a “grid security threat” was defined as a substantial likelihood of a malicious act using electronic communication, an electromagnetic pulse; a geomagnetic storm; or a direct physical attack on the bulk power infrastructure or on defense critical electric infrastructure. A “grid security vulnerability” was defined as a weakness that, in the event of a malicious act using electronic communication (i.e., cyber-attack) or an electromagnetic pulse, would pose a substantial risk of disruption to the operation of those electronic devices or communication networks that are essential to the reliability of the bulk-power system.

In light of the foregoing, acts or events that were previously considered to be threats or vulnerabilities, and thus covered by the regulatory authorities in the legislation, may no longer be addressed by the provisions of section 1204. Under the discussion draft, acts or events must pose an imminent danger to the grid in order to be considered, setting a much higher bar for regulatory action.

## **E. Section 1205: Strategic Transformer Reserve**

### **1. Summary**

Section 1205 requires the Secretary of Energy, in consultation with the Electric Reliability Organization, to prepare and submit to Congress a plan to establish a Strategic Transformer Reserve (STR). Under the STR plan, which is to be established within one year of the bill’s enactment, a sufficient number of spare large power transformers (LPTs) are to be stored at strategically-located facilities to temporarily replace critically damaged LPTs and restore megawatt capacity in cases of physical attack, cyber-attack, electromagnetic pulse attack, geomagnetic disturbances, severe weather; or seismic events.

The proposed locations must take into account issues such as physical security, confidentiality of the locations, and proximity to sites of potentially critically damaged LPTs.

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2010). The “Grid Reliability and Infrastructure Defense (GRID) Act,” was originally introduced by Reps. Markey and Upton.

<sup>13</sup> House Committee on Energy and Commerce, *Rep. Waxman and Sen. Markey Introduce GRID Act to Protect Electrical Grid from Physical, Cyberattack* (Mar. 26, 2014) (online at [democrats.energycommerce.house.gov/index.php?q=news/rep-waxman-and-sen-markey-introduce-grid-act-to-protect-electrical-grid-from-physical-cyberatta](https://democrats.energycommerce.house.gov/index.php?q=news/rep-waxman-and-sen-markey-introduce-grid-act-to-protect-electrical-grid-from-physical-cyberatta)).

Other considerations in the plan must include power and voltage rating and overload requirements. The plan must also include an estimate of the cost for the STR, including costs associated with storage, management, maintenance, and operation costs, as well as funding options to establish, stock, manage, and maintain the STR, including consideration of public-private cost-sharing options.

Section 1205 requires the DOE plans to consider the speed of transporting, installing, and energizing the spare LPTs by studying factors such as weight and size. The plans must also study existing industry programs and the processes by which owners of damaged LPTs may withdraw and return them to the STR. Cost-sharing and rental fees for restocking the STR must also be examined. Congress must approve DOE's plan before the STR can be established. Funding for the program will come from DOE's Office of Energy Efficiency and Renewable Energy.

## **2. Analysis**

Many of the requirements contained in this section are consistent with the recommendations for a STR put forth in the Administration's Quadrennial Energy Review (QER). The QER recommends that:

as part of the Administration's ongoing efforts to develop a formal national strategy for strengthening the security and resilience of the entire electric grid for threats and hazard...DOE should coordinate with the Department of Homeland Security and other federal agencies, states, and industry [on] an initiative to mitigate the risks associated with the loss of transformers. Approaches for mitigating this risk should include the development of one or more transformer reserves through a staged process.<sup>14</sup>

While both the QER and the discussion draft discuss the importance of establishing a STR, the draft bill avoids any mention of direct cost. Instead, the discussion draft only requires DOE to study how much a program would cost and the means through which it should be funded. In order to seriously address this issue Congress must provide some leadership to the agencies and to industry by resolving funding issues and matters for a program that all sides believe is critical for mitigating serious risks to, and attacks on our grid system and its reliability.

### **F. Section 1206: Cyber Sense**

Section 1206 requires the Secretary of Energy to establish, in consultation with FERC and the National Institute of Standards and Technology (NIST), a voluntary Cyber Sense program to identify and promote cyber-secure products and technologies intended for use in the bulk-power system. The Cyber Sense certification process must identify and certify

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<sup>14</sup> U.S. Department of Energy, *Quadrennial Energy Review, Chapter 2: Increasing the Resilience, Reliability, Safety, and Asset Security of TS&D Infrastructure*, at 42 (Apr. 2015) (online at [energy.gov/sites/prod/files/2015/04/f22/QER\\_Ch2.pdf](http://energy.gov/sites/prod/files/2015/04/f22/QER_Ch2.pdf)).

cyber-secure products and technologies intended for use on the grid, including products relating to industrial control systems, such as supervisory control and data acquisition systems.

The Cyber Sense program must establish performance and technological cybersecurity criteria by which a product or component may be certified. The Cyber Sense criteria must be reviewed and updated annually when appropriate. The Secretary must determine the applicable effective date for a new or significant revision to Cyber Sense criteria, taking into account the timing requirements of the manufacturing, training, distribution, and implementation process.

Additionally, the Secretary is required to provide “reasonable” notice to the public, and to solicit comments prior to establishing or revising Cyber Sense criteria. The Secretary must supervise all third-party Cyber Sense certifications and conduct reviews of Cyber Sense-certified products in-use already, in the grid to ensure they meet the Cyber Sense criteria. The Secretary is required to take corrective action if a product fails to meet the criteria and he or she must also consider incentives to encourage the use of Cyber Sense-certified products in the bulk-power system.

**G. Section 1207: State Consideration of Resiliency and Advanced Energy Analytics Technologies and Baseload Generation**

Section 1207 would require each state regulatory authority to consider requiring electric utilities to develop plans for resiliency-related technologies that would improve resilience and maintain the flow of power to facilities critical to public health safety and welfare. Each state regulatory agency would be required to commence such consideration within one year of enactment and to complete the consideration within two years. State regulatory authorities are directed to consider allowing rate recovery for procurement and deployment of resiliency related technologies

Section 1207 would also require each state regulatory agency to consider allowing rate recovery for procurement and deployment of advanced energy analytics technology, to be used by the utility for realizing operation efficiencies, cost saving, enhanced energy management, customer engagement and other benefits to ratepayers. State regulatory authorities shall commence such consideration within six months of enactment and complete the consideration within one year.

Under section 1207 state regulatory agencies are also directed to consider adoption or modification of policies to assure sufficient baseload generation in integrated resources plans of utilities. The term “baseload generation” is defined as “large output electric generation facilities” that “enable the generation of electric energy on a continuous basis for an extended period of time per day for a period of not less than 30 days.” Other characteristics include “possession of adequate fuel onsite, the operational ability to generate electric energy from more than one fuel source or fuel certainty that ensures adequate fuel supply at stable pricing without risk of interruption.” State regulatory agencies shall commence the consideration within one year of enactment and complete consideration within two years.

Presumably the types of generation that would meet the requirements set forth in this section would include coal, nuclear, gas and hydroelectric, but not renewable technologies such as wind and solar.

**H. Section 1208: Reliability and Performance Assurance in Regional Transmission Organizations**

Under section 1208, FERC is to direct Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs) that operate capacity markets to demonstrate that the structure of such market is based on integrated system planning practices that meet a number of prescriptive criteria. Under this provision, the RTOs and ISOs must show that their capacity markets are based on integrated system planning practices that include a diverse and flexible generation portfolio, long term reliability and stable pricing for customer, price adequacy and certainty for power generators over a long term planning horizon and enhanced operation performance assurance during peak demand periods.

The structure of the capacity market shall also have reliability attributes that include operational characteristics to enable generation of electricity on a continuous basis for an extended period for each day over a period of not less than 30 days. Other characteristics include “possession of adequate fuel onsite, the operational ability to generate electric energy from more than one fuel source or fuel certainty that ensures adequate fuel supply at stable pricing without risk of interruption.” As in section 1207, the types of generation that would meet the requirements set forth above would include coal, nuclear, gas and hydroelectric, but not renewable technologies such as wind and solar.

**III. WITNESSES**

The following witnesses have been invited to testify:

**Panel One:**

**Michael Bardee**  
Director of the Office of Electric Reliability  
Federal Energy Regulatory Commission

**Gerry W. Cauley**  
President and Chief Executive Officer  
North American Electric Reliability Corporation

**Panel Two:**

**Thomas Fanning**  
Chairman, President and Chief Executive Officer  
Southern Company

**John Di Stasio**

President  
Large Public Power Council

**Joseph Dominguez**

Executive Vice President  
Governmental and Regulatory Affairs and Public Policy  
Exelon Corporation

**Emily Heitman**

Vice President and General Manager  
Demand Side Organization Power Transformers  
ABB, Inc.  
*On behalf of the National Electric Manufacturers Association*

**Elinor Haider**

Vice President, Market Development  
Veolia Energy North America  
*On behalf of the Alliance for Industrial Efficiency*

**Elgie Holstein**

Senior Director for Strategic Planning  
Environmental Defense Fund

**John Moore**

Senior Attorney  
Sustainable FERC Project  
Natural Resources Defense Council

**Mike Bergey**

President and Chief Executive Officer, Bergey Wind Power  
Board President, Distributed Wind Energy Association  
*On Behalf of the Distributed Wind Energy Association*