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Discussion Draft Addressing Energy Reliability and Security
May 19, 2015

Thank you for the invitation to appear before the Committee to discuss important energy reliability and security legislation. Several provisions in the discussion draft (including Sections 1203, 1204, and 1205) have the potential to enhance grid security, resiliency, and reliability while preserving the flexibility of the system to adapt and innovate to changing circumstances.

However, other provisions could impede innovation and hamstring our ability to solve evolving grid challenges:

Section 1201 provides broad amnesty for power plant owners from liability under environmental and health laws and citizens suits. It fails to acknowledge carefully designed environmental standards that prevent reliability/compliance conflicts from arising, and is otherwise exceptionally overbroad.

Section 1202 requires FERC to assess various grid impacts of any proposed and final federal agency rules that could affect power plants. This provision is unnecessary because FERC-jurisdictional grid regions already are required to assess the impacts of environmental standards on grid operations. FERC, these grid regions, and other reliability authorities also provide detailed review and analysis to agencies on rulemakings potentially affecting power plants.

Sections 1207 and 1208 are problematic because, by preferencing baseload generation over other resources, they could significantly disrupt markets, planning, and the ability of states, FERC, and grid operators to respond dynamically to changing system conditions over time and integrate more clean energy resources into the grid. These sections also would shoulder consumers with the burden of paying for a rigid, one-size fits-all system.

Testimony of

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U. S. House of Representatives
Committee on Energy and Commerce
Subcommittee on Energy and Power Hearing on
"Discussion Draft Addressing Energy Reliability and Security"

May 19, 2015

Chairman Whitfield, Ranking Member Rush, and members of the Subcommittee, thank you for the opportunity to share the views of the Natural Resources Defense Council (NRDC) on policies and programs that can protect and enhance electric grid reliability while reducing pollution and saving consumers money. My name is John Moore, and I am a Senior Attorney at NRDC.

NRDC is a national, non-profit environmental organization with more than 1.4 million members and activists. Since 1970, our lawyers, scientists, and other environmental specialists have worked to protect the world's natural resources, public health, and the environment. NRDC's top institutional priorities include curbing global warming and creating a clean energy future.

Introduction

NRDC supports a resilient, reliable, and clean power grid. Since 2005 our nation has added 201 gigawatts (GW) of new power plants while retiring 90 GW of older, dirtier, and more expensive power plants,[1] all while not only maintaining but enhancing reliability. During this

[1] SNL Energy, www.snl.com (accessed May 5, 2015).

same period we also have added thousands of megawatts of highly reliable and affordable energy efficiency resources.

In considering the discussion draft, I want to emphasize that fuel prices, technology shifts, the economy, increasing use of demand-side management, and other changes have shaped the power sector far more significantly than have environmental standards. The grid does, however, face reliability challenges due to aging infrastructure, lack of investment, and more frequent weather extremes (attributable in part to carbon emissions from fossil-fuel power plants).

Transitioning to a lower-carbon electric system is an opportunity to reduce air pollution and build a more reliable, modern energy system based on flexible generating technologies, renewable energy resources, smart grid technologies, and more efficient energy use.

Several provisions in the discussion draft have the potential to protect grid security, resiliency, and reliability while preserving the flexibility of the system to adapt and innovate to changing circumstances, including emergency preparedness for supply disruptions (Section 1203), protecting critical energy infrastructure (Section 1204), and a plan to develop a strategic transformer reserve (Section 1205). Although we have not considered all of their implications, including whether they are duplicative of other programs or are appropriately funded, we certainly support them conceptually.[2]

However, as explained below, other provisions could impede innovation, hamstring our ability to solve evolving grid challenges, and frustrate our nation's continuing progress toward a cleaner and more affordable energy future.

[2] For example, given FERC's current rules on protecting critical energy infrastructure (18 C.F.R. Part 388), what additional protections does Section 1204 provide and how does it balance security needs with access to information? Also, while the Strategic Transformer Reserve plan appears worthwhile, we disagree with funding it from the Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy appropriations.

We have a more than forty year track record showing that environmental progress and electric reliability are compatible. FERC, NERC, regional grid entities, and states have kept the lights on through every pollution-cutting program. They have done so through an increasingly coordinated system of state, regional, and interregional planning processes.

To continue advancing a more flexible, resilient, and reliable grid, we must:

- ✓ **Support policies like the Clean Power Plan that target a truly serious danger to grid reliability: the damaging effects of unmitigated climate change;**
- ✓ **Support complementary FERC and FERC-jurisdictional entity actions that remove barriers to the access and use of new, reliable clean energy technologies;**
- ✓ **Avoid actions that both constrain state and federal energy policy choices while also potentially undermining reliability.**

Again, I appreciate the opportunity to provide information to the Committee on these important issues and look forward to today's discussion.

The Energy Security and Reliability Discussion Draft

I would first like to thank the Committee for its leadership and interest in supporting legislative enhancements to protect grid reliability and resiliency. Terrorism, natural disasters, human error, and climate change-induced extreme weather events all rate as significant threats to the bulk power system. Some of the provisions in the discussion draft provide useful solutions to combat these threats. Others, however, would impede innovation, hamstring our ability to solve evolving grid challenges, and frustrate our nation's rapidly accelerating clean energy economy. The provisions of concern include:

Section 1201. This provision broadly exempts power plant owners and operators from civil and criminal liability under federal, state, and local environmental and health laws, and citizen suits, when ordered to comply with an order under Section 202(c) of the Federal Power Act (FPA) ("Section 202(c) orders") by producing power or continuing to produce power when the plant would not otherwise operate.

This misguided provision is based on a fundamental misunderstanding of the Clean Power Plan, which provides the flexibility for reliability-critical plants to operate while achieving compliance with the Plan's emission reduction targets.

The foundation of the Clean Power Plan is its compliance flexibility. It allows states and generators to meet the targets using a wide range of resource choices, including state clean energy and energy efficiency standards, shared regional compliance strategies, multi-year averaging, and other options. Under state compliance plans, any individual plant would be able to run whenever needed and make up for its carbon emissions without risking violation by using the Plan's many flexible mechanisms:

- Flexibility over more than a decade (2020 to 2029 interim target) to trade, bank, and borrow allowances or use other approaches to avoid mandating reductions at any individual plant or at any specific period of time;
- Flexibility to use an array of system resources for compliance, including other generation, energy efficiency, demand response, price responsive demand, and energy storage; and
- Flexibility to use multi-state options to meet all or part of the Plan reductions.

These flexibilities allow plants to run for reliability purposes while meeting the Plan's requirements. A plant that needs to run for reliability purposes – including those subject to FPA Section 202(c) orders – can comply with the standards by averaging emissions over time (inherent in annual and multi-year compliance periods), averaging among generation sources, and taking advantage of emissions credits from zero-carbon and efficiency resources.

More generally, recent experience with the Mercury and Air Toxics (MATS) rule demonstrates (again), the continuing compatibility between environmental compliance and grid reliability. The compliance deadline for MATS passed on April 16, 2015, without any problems. No blackouts occurred and nothing else remarkable happened.[3] The lights stayed on because

[3] Susan Tierney, "Déjà vu: Pushback to U.S. Clean Power Plan Reminiscent of 2011 Mercury Rule," World Resources Institute, May 14, 2015,

power companies, grid operators, states, FERC, and other stakeholders did their jobs and planned ahead.[4]

EPA, with FERC's support, did develop a process for plant owners to seek up to an additional year to comply with MATS through an administrative enforcement agreement with EPA.[5] To date, only two plants have sought and obtained this relief, demonstrating that virtually all power plant owners and operators were able to comply with MATS' requirements on time.

We also are concerned about the broad grant of amnesty from all federal, state, and local environmental (and related health) laws, including civil, criminal, and administrative laws. Before even considering adoption of such sweeping amnesty from federal, state, and local laws, we urge the Committee to consult with federal, state, and local officials to catalogue the sheer number of laws for which the bill would grant amnesty; the potential health and safety consequences of total amnesty from these civil, criminal, and administrative laws; and the unintended consequences of such amnesty.

Further compounding the broad liability exemption is the fact that the bill fails to provide any enforceable role for the EPA or any other federal, state, or local environmental agency in determining whether the public is protected against pollution or whether mitigation measures should be required. The owner subject to the Section 202(c) order is not required to comply with

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http://www.wri.org/blog/2015/05/d%C3%A9j%C3%A0-vu-pushback-us-clean-power-plan-reminiscent-2011-mercury-rule (accessed May 18, 2015).

[4] We also note that the Clean Power Plan's design is fundamentally different from MATS. Because MATS addresses pollutants with local toxicity concerns, it set specific limits for each plant with no opportunity for averaging, trading, or banking. In contrast, carbon pollution is of national concern and, in the Clean Power Plan, EPA contemplates that states will adopt plans that include the flexible compliance methods described above.

[5] U.S. Environmental Protection Agency, Office of Enforcement and Compliance Assurance, *The Environmental Protection Agency's Enforcement Response Policy For Use Of Clean Air Act Section 113(a) Administrative Orders In Relation To Electric Reliability And The Mercury and Air Toxics Standard*, December 16, 2011, http://www2.epa.gov/sites/production/files/documents/mats-erp.pdf (accessed May 18, 2015).

environmental laws and regulations to the fullest extent possible while subject to the order – instead, Section 1201 would absolve the owner of responsibility for any environmental violations that stem from the operation of the facility pursuant to the Section 202(c) order.

Finally, Section 1201 fails to appreciate the value of ongoing FERC-jurisdictional and state planning processes. Through these planning processes, a power producer can notify the FERC-jurisdictional planning entity and affected states of its intention to retire or curtail a plant's operations well in advance of potential non-compliance with environmental standards. The planning entity and states can then take steps to develop transmission, demand-side, and other solutions to address any potential reliability issues.

Section 1202. This provision requires FERC to assess the grid impacts of any proposed and final federal agency rules that could affect power plants, including by closing or interrupting their operation. FERC's broad analysis must address all reliability, resource adequacy, fuel diversity, wholesale markets, and infrastructure issues.

This provision fails to recognize the **required** analysis and planning that FERC, FERC-regulated regions, and state authorities already perform in connection with new environmental and energy standards. After promulgation of a final rule, FERC and regional entities are required to assess under FERC Order 1000 the potential grid impacts through local utility, regional planning, and interregional grid assessments.[6] Through ongoing, cyclical planning processes and other grid tools, they can address and solve new system needs that could occur.

Critically, these processes occur in tandem with ongoing state resource planning and RTO capacity market developments, which are among the primary drivers of any new resource additions necessary to maintain resource adequacy and reliability. State utility commissions with

[6] Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities, Order No. 1000, 136 FERC ¶ 61,051 at P 203 (2011).

resource adequacy authority also are required to address the impacts, if any, of environmental standards and other factors on state resource adequacy needs.

Also, as shown with the proposed Clean Power Plan, FERC, NERC, and regional planning entities are fully capable of commenting on proposed environmental standards that they believe could affect their grid reliability statutory responsibilities and obligations. Through direct comments to EPA and through four FERC technical conferences in February and March 2015, many of them opined on the potential reliability impacts of the Clean Power Plan.

NERC and regional planning entities also have conducted at least eight national and regional assessments of the proposed Clean Power Plan. Additionally, EPA has discussed the Clean Power Plan with FERC commissioners and FERC staff throughout the proposed rule stage.

A similar process occurred during the MATS rulemaking in 2011. FERC conducted a technical conference on MATS and related issues.[7] EPA then addressed reliability considerations in the MATS final rule[8] and through the MATS enforcement response policy discussed above.

We do want to point out that some recent studies by regional grid operators and NERC use outdated assumptions and unrealistically narrow compliance scenarios, which in turn lead to concerns about the credibility of modeling results and higher than necessary estimates of the costs needed to maintain grid reliability. Thus, Section 1202 also is problematic because it could hardwire inaccurate and unrealistic analyses into the regulatory process.

Section 1204. This provision is intended to develop new strategies to prevent terrorist and other attacks on the grid, and minimize the impacts of geomagnetic storms, which collectively

[7] Federal Energy Regulatory Commission, Reliability Technical Conference, Dkt. No. AD12-1, November 29-30, 2011.

[8] Mercury and Air Toxics Standard, 77 Fed. Reg. 9304, 9406 (February 16, 2012).

are defined as "grid security emergencies." While the intent is sound, we are concerned with the narrow definition of "grid security emergency," which focuses on imminent threats.

We know that the grid has ongoing vulnerabilities beyond imminent dangers, and we should not limit the authority to address those issues solely to "emergencies." We encourage the Committee to expand the scope of this provision to include other threats, vulnerabilities, and weaknesses that could disrupt the grid – and identify solutions to those threats.

Section 1207. This provision amends the Public Utility Regulatory Policies Act (PURPA) to require state utility commissions to consider adopting new state requirements and programs for "resiliency-related technologies"[9] and "advanced energy analytics technology."[10] Section 1207 also requires states to consider ensuring that utility resource plans include sufficient baseload generation to assure reliability over at least a 10-year period.

"Baseload generation" is defined as generation capable of operating continuously for an extended period of time every day over at least 30 days (with on-site fuel, dual fuel, fuel contract certainty, during emergency/severe weather, and capable of providing frequency and voltage support).

We support the on-going development and deployment of resiliency-related technologies and analytics. However, PURPA may not be the right vehicle to accomplish Section 1207's goals because of the overlapping jurisdictional responsibilities of states and FERC, coupled with geographical differences.

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[9] Section 1207 defines "resiliency-related technologies" to include advanced grid technology, backup generation, microgrids, CHP, waste heat, storage, and other current and future technologies.

[10] Section 1207 defines "advanced energy analytics technology" as "internet-based and cloud based computing solutions and subscription and licensing models, including software as a service, platform as a service, and infrastructure as a service."

More fundamentally, we are concerned that the focus on baseload generation in both Sections 1207 and 1208 could increase costs and limit development of cleaner energy resources without commensurate reliability benefits. By promoting baseload power as the primary source of reliable power, these provisions essentially freeze the grid, which has continuously evolved since the days of Edison, in its present configuration.

Sections 1207 and 1208 would:

- severely limit state and federal regulatory authorities' ability to respond to changing needs while preserving reliability;
- shoulder consumers with the burden of paying for costly and unnecessary baseload plants; and
- create new roadblocks to zero-carbon, zero-fuel cost, cleaner energy resources.

We do not believe that the Committee intended these consequences and encourage it to rethink its approach to both these sections.

As the proposed definition makes clear, baseload generation historically consists of power plants available to run most of the time and, for technical and/or economic reasons, needing to run at or near full load most of the time (e.g., large coal and nuclear power plants). As the grid continues to evolve with more renewable energy resources, less costly mid-merit generation will become more valuable for integrating renewable energy resources. Mid-merit generation can be dispatched more quickly, accurately, and affordably to changes in electricity demand than baseload, and it need not run near full time. (These are known as "flexibility" attributes.)

Section 1207, however, would limit the development of these more flexible, affordable, and reliable resources, and also create new barriers to other clean energy resources like wind and solar power, which also have capacity value because their output is certain enough to be assigned some value.

Over time, the cost savings of these resources in a system with growing renewable energy levels are considerable. **A more flexible, less baseload-heavy resource mix requires as much as 40% less capital investment to deliver exactly the same level of reliability, with exactly the same level of demand, with exactly the same levels of wind, solar, and other variable renewable energy resources on the system.**[11] A more flexible resource mix also will have far higher use rates and require less redundancy (and therefore less investment).

The Committee also should be aware that large baseload power plants actually require more backup power than wind and solar energy facilities. Why? Wind output changes tend to be gradual and predictable, especially when wind turbines are spread over larger areas.[12] In addition, the fact that a wind farm is a collection of many smaller turbines means that the failure of one turbine will have little impact on the farm's total output. In contrast, the electricity output changes from coal and nuclear power plants, though less frequent, are larger, abrupt, and sometimes unpredictable. For these reasons, the nation's major grid operators have found that wind and solar energy can be added to the grid with very little additional backup power:

- The Midcontinent Independent System Operator (MISO), the grid operator for the middle part of the country, needs almost no additional fast-acting power reserves to back up its 10,000-plus MW of wind power on the system.[13]
- ERCOT, the grid operator for most of Texas, needs only about 50 MW on average of fast-acting stand-by reserves to reliably integrate 10,000 MW of wind into the grid.[14]

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[11] M. Hogan, F. Weston, and M. Gottstein, "Power Market Operations and System Reliability in the Transition to a Low-Carbon Power System: A Contribution to the Market Design Debate," The Regulatory Assistance Project, May 2015, at 10, http://www.raponline.org/document/download/id/7600 (accessed May 18, 2015).

[12] Michael Milligan and Brendan Kirby, "Impact of Balancing Areas Size, Obligation Sharing, and Ramping Capability on Wind Integration, Preprint" (paper, WindPower 2007 Conference & Exhibition, Los Angeles, CA, June 3-6, 2007), www.nrel.gov/docs/fy07osti/41809.pdf (accessed May 18, 2015).

[13] Nivad Navid, "Reserve Requirement Identification with the Presence of Variable Generation" (presentation, UVIG Spring Technical Meeting, San Diego, CA, April 24-26, 2012), at 2, 4, www.variablegen.org/wp-content/uploads/2012/12/Navid-Reserve_Calculation.pdf (accessed May 18, 2015).

- A study for PJM, the grid operator for the mid-Atlantic and part of the Midwest, found that increasing renewable energy output sevenfold in PJM by adding nearly 114,000 MW of renewable energy would increase the need for fast-acting reserves by only 340 MW.[15] (For comparison, PJM currently holds 3,350 MW of expensive, fast-acting reserves on a continuous basis to ensure that it can keep the lights on in case a large fossil-fuel or nuclear power plant unexpectedly breaks down.)

Ongoing wholesale market design and state resource planning decisions should determine how to maintain grid reliability in the face of many different drivers. Interfering with that process will limit flexibility and needlessly raise the costs of obtaining the same level of reliability that can be achieved with more affordable and dispatchable resources. It also will frustrate the development of wind, solar, and other zero-carbon, zero-fuel cost renewable energy resources.

Section 1208. This provision requires every regional transmission organization (RTO) with a capacity market (or equivalent) to ensure that the market includes specific reliability and performance assurance mechanisms, including mechanisms supporting baseload generation.

Like Section 1207, Section 1208 would significantly disrupt ongoing RTO and FERC actions to respond dynamically to changing system conditions over time, shoulder consumers with the burden of paying for a rigid, one-size fits-all system, and likely undermine grid reliability efforts.

Two unintended consequences of this section could reduce grid reliability. First, by hardwiring specific capacity market design requirements into the Federal Power Act, Section

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[14] David Maggio, "Methodology for Calculating Reserves in the ERCOT Market" (presentation, UVIG Spring Technical Conference, San Diego, CA, April 24-26, 2012), at 6, www.variablegen.org/wp-content/uploads/2012/12/Maggio-Reserve_Calculation_Methodology_Discussion.pdf (accessed May 18, 2015). Charts show the average difference between wind and no-wind reserve requirements.

[15] GE Energy Management, "PJM Renewable Integration Study: Final Project Review Revision 07" (presentation, Stakeholder Meeting, March 3, 2014), at 50, 111, http://www.pjm.com/~/media/committees-groups/committees/mic/20140303/20140303-pjm-pris-final-project-review.ashx (accessed May 18, 2015). Charts show installed capacity and a comparison of 2% "business as usual" with the Low Offshore Best Onshore reserve requirements.

1208 will severely constrain RTO flexibility to address changes in system needs over time, including transitioning capacity markets to another market construct.

Section 1208 also could cause capacity markets to constrain local, state, and national energy policy and market choices intended to promote or level the playing field for renewable energy resources. If comparatively inflexible baseload generation remains the foundation of the grid resource mix, renewable energy resources could face increasing difficulty integrating into the system.

Each RTO's capacity market also reflects its region's unique needs and attributes. FERC explained this well in 2013 when it examined RTO capacity market trends and challenges, noting the region-specific needs and the diverse issues addressed in market design:

> The particular market design choices of each region have been different, with each market arriving at its specific approach through stakeholder processes and settlement agreements, evolving over time to address emerging issues. In recent years, refinements have been pursued or discussed to address the impact that broader industry changes have had on the markets, including an evolution in the mix of available resources driven by low natural gas prices, state and federal policies encouraging the entry of renewable resources and other technologies, state policies supporting the development of resources in particular areas or with particular characteristics, the retirement of aging generation resources, and the need to retain certain resources.[16]

Section 1208 fails to appreciate the reasons for and value of each region's market designs. For example:

California ISO and the New York ISO's market designs reflect the fact that as system operators in single states, their resource adequacy needs are closely tied to state legislative and regulatory actions. California is committed to a low-carbon, high renewable energy future with a

[16] Federal Energy Regulatory Commission, "Centralized Capacity Market Design Elements: Commission Staff Report," August 23, 2013, at 2, http://www.ferc.gov/CalendarFiles/20130826142258-Staff%20Paper.pdf (accessed May 18, 2015) (emphasis added).

complementary need for flexible capacity resources (including the mid-merit resources discussed above, together with energy efficiency, demand response, and storage).

The California ISO does not operate a full capacity market; it recently determined that a full capacity market with the attributes in Section 1208 was unnecessary for reliability, costly for consumers, and could undercut the state's clean energy future.[17] The ISO is instead implementing a flexible resource adequacy market to meet reliability needs while supporting renewable energy integration.

The New York ISO runs a one year forward capacity market, and it also has modified the market design in the last two years to respond to a changing fuel mix, performance issues, and other circumstances. New York state currently is charting a new energy supply course through its "Reforming the Energy Vision" proceedings that likely will affect the future of New York ISO capacity market design.[18]

ISO New England[19] and PJM[20] operate markets in regions without state integrated resource planning requirements (because most states in those RTOs are restructured/deregulated). Both of these RTOs operate three year-forward capacity markets to ensure resource adequacy, and both

[17] See FERC, Order conditionally accepting California ISO's flexible resource adequacy capacity requirements proposal, 149 FERC ¶ 61,042 (2014), http://www.caiso.com/Documents/Oct16_2014_OrderConditionallyAcceptingTariffRevisions-FRAC-MOO_ER14-2574.pdf (accessed May 18, 2015).

[18] Order Adopting Regulatory Policy Framework and Implementation Plan, Proceeding on Motion of the Commission in Regard to Reforming the Energy Vision, State of New York Public Service Commission, Case 14-M-0101, February 26, 2015, http://documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7b0B599D87-445B-4197-9815-24C27623A6A0%7d (accessed May 18, 2015).

[19] Connecticut, Massachusetts, Maine, New Hampshire, Rhode Island, and Vermont. See "Key Grid and Market Stats," ISO New England, http://www.iso-ne.com/about/what-we-do/key-stats (accessed May 18, 2015).

[20] PJM Interconnection coordinates the movement of wholesale electricity in all or parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia and the District of Columbia. See "Who We Are," PJM Interconnection, http://pjm.com/about-pjm/who-we-are.aspx (accessed May 18, 2015).

RTOs already are ahead of Section 1208 in addressing capacity performance needs driven by changing circumstances.

Most recently, both regions faced capacity performance challenges during the 2014 Polar Vortex period, in part because of dysfunctional gas markets[21] and other cold weather performance issues that hindered mostly natural gas and coal plants. Notably, wind and demand response resources performed well during this period and did not experience any major issues.[22] Both of these RTOs have taken steps to reduce unplanned outages from capacity resources, and FERC either has approved or is reviewing these actions.[23]

Also, ISO New England is reliant on natural gas as the primary fuel for its capacity supply resources. To respond to that concern, ISO New England proposed, and FERC approved, changes to the ISO's markets to enhance the value of dual fuel resources.[24]

Imposing Section 1208's requirements on PJM and ISO New England would be counterproductive because each region already has demonstrated its competence to modify capacity markets to address the circumstances that appear to partially motivate Section 1208.

MISO is differently situated than ISO New England and PJM. All of the states in MISO, except Illinois and to some extent Michigan, are regulated states where utilities follow state

[21] Comments of the Environmental Defense Fund, Conservation Law Foundation, the Sustainable FERC Project, and the Clean Energy Group, Coordination of the Scheduling Processes of Interstate Natural Gas Pipelines and Public Utilities, Dkt. No. RM14-2-000, November 28, 2014, at 1-2.

[22] For example, PJM was able to avoid involuntary load curtailments during the Polar Vortex by deploying demand response. About 25% of PJM's registered DR responded voluntarily during the worst of the January 2014 polar vortex, delivering maximum hourly load reductions of 2,379 MW and 1,179 MW on January 7th and 8th respectively. See "PJM Demand Response Activity January 7-8, 2014," March 26, 2014, at 2, 3, http://www.pjm.com/Media/markets-ops/demand-response/pjm-cold-days-report-for-january-7-8-2014.pdf (accessed May 18, 2015).

[23] PJM Interconnection, L.L.C., Reforms to the Reliability Pricing and Related Rules in the PJM Open Access Transmission Tariff and Reliability Assurance Agreement Among Load Serving Entities, Dkt. No. ER15-623-000, December 12, 2014; ISO New England, Inc., 147 FERC ¶ 61,172 (2014).

[24] ISO New England, Inc., 147 FERC ¶ 61,172 (2014).

commission-approved integrated resource planning or equivalent approaches. For that reason MISO operates a "residual" capacity market to maintain reliability and serve wholesale customers not under retail/state supply agreements. Section 1208 is not necessary in this market, and would drastically increase consumer costs without providing any meaningful reliability benefits.

The Southwest Power Pool (SPP) has no capacity market, since nearly all of the generation resources in SPP either are regulated by state utility commissions or are public power or electric cooperatives. We do not read Section 1208 to apply to SPP.

In short, Section 1208 will, in those areas in which it applies, be disruptive to existing processes, unnecessarily costly, create new barriers to wind and solar energy resources, and quite possibly intrude on state jurisdictional prerogatives for determining state energy needs. As with Section 1207, it would create a one-size-fits-all approach that would limit market design evolution to meet new needs.

Conclusion

I want to again thank the Committee for inviting me to testify today on these important grid reliability and security issues. I encourage the Committee to avoid taking actions that could disrupt the progress underway to maintain and strengthen reliability in many regions, hamstring grid authorities and states, and increase consumer costs without corresponding reliability benefits. We already are well on the course to achieving a more diverse, affordable, and cleaner energy future while maintaining a robust and more reliable grid. Continued progress is imperative so that we can continue to combat climate change.