UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Smart Grid Policy	**) Docket No. PL09-4-000**

Comments of the Demand Response and Smart Grid Coalition on the Proposed Smart Grid Policy Statement and Action Plan

May 11, 2009

Summary

The Commission's Draft Smart Grid Policy Statement is an ambitious effort to encourage, support and harness the emerging capabilities of Smart Grid technologies and systems to meet the Commission's goal of ensuring the development of a reliable national electric grid that optimizes the inclusion of all energy resources. The Demand Response and Smart Grid Coalition (DRSG) views the Commission as a key participant in the development of the Smart Grid and see its involvement as something that will help ensure that there is a national perspective guiding such an effort. The Commission's Draft Policy Statement is an indication of this.

DRSG agrees with the Commission's comments that there is a sense of urgency in the industry, regulatory community and government agencies regarding the establishment of the necessary smart grid context that will allow rapid forward movement. DRSG cautions, however, that assumptions are being made and, in some cases, taken as fact in this accelerated effort. A key example lies in the Commission's own opening assessment of the draft smart grid policy where it states "This proposed policy statement and action plan provides guidance to inform the development of a smarter grid for the Nation's electric transmission system focusing on the development of key

standards to achieve interoperability of smart grid devices and systems." While obviously important, DRSG does not believe that standards development is the primary, overarching key to facilitating development of the Smart Grid.

Comments on specific aspects of the Draft Policy Statement

1. DRSG agrees with the statement made on page 1 that "Ultimately, the smart grid will facilitate consumer transactions and allow consumers to better manage their electric energy costs." DRSG believes that key components of the smart grid is the distribution utility and its electricity customers. It is important to have these two components considered to be part of the larger context that is necessary for appropriate policy development. The smart grid is not simply a matter of installing technology. It is important for all parties to understand and agree that the grid, at least from an operational sense, no longer ends at the customer's meter. The engagement of the customer through options such as demand response and distributed storage will be one of the key ways that the Smart Grid is put into action. Customer actions and the application of smart grid technologies on the customer side of the meter must be seen as part of the Smart Grid.

2. The Draft Statement states on page 2 that "The Commission intends to use its authority, in coordination and cooperation with other governmental entities, to help achieve interoperability in a timely manner." DRSG members encompass all aspects of the smart grid, smart metering, energy storage and demand response marketplace, and as such we design, support, manufacture or employ technology solutions. We agree with the premise of interoperability but caution that there seems to be a tendency to treat *interoperable* and *standards-based* as interchangeable terms---which they are not. We provide further comments on the topic of standards below.

3. DRSG applauds the Commission's "common sense" understanding of the situation that utilities find themselves in when investing in new technologies. Its proposal to create "rate treatments to encourage investment in Smart Grid technologies that advance efficiency, security, reliability and interoperability in order to address potential challenges to the bulk-power system" is important. The issues of rate treatment, stranded cost, and uncertain recovery mechanisms can all be ones that prevent or hamper utilities from investing in smart grid solutions.

4. The Draft Statement states on page 8 that "The Commission will continue to take an active role in helping to ensure that the participants in the Institute's process effectively prioritize and sequence future standards development efforts. We invite comments on what factors the Commission should consider in determining when the Institute's work has led to 'sufficient consensus' on interoperability standards to warrant instituting a rulemaking proceeding. We also seek comment and ideas on how to identify and stage the adoption of successive waves of interoperability standards. Finally, we seek comment as to whether there should be some formal process for parties to seek Commission guidance if negotiations on certain interoperability standards reach an impasse."

DRSG believes that the term *interoperability standards* implies that with the creation of some number of consensus standards, the various solutions and systems that would be deployed as smart grid investments would be completely interoperable. That is not supported by previous examples of large interconnected systems such as telephony infrastructure. While interface specifications and standards exist to ensure that systems are interoperable, they do not ensure that there is a plug-and-play capability to the level suggested in the Commission's Draft Statement.

A Commission rulemaking process to determine when sufficient consensus is achieved is fraught with difficulty. As the document notes, how is a level of sufficient consensus determined? Rather than be a milestone or fixed point in time, DRSG believes that this is and will be a continual process and various iterations will be experienced. In saying this, DRSG recognizes the conceptual desire of policymakers for standards. Standards can provide "check-box" assurance that something is "OK" to proceed on, i.e. it either meets the standard or does not. Based on the experience of its members, however, DRSG believes that this is a very difficult goal to achieve in the near term.

The utility industry, as with all industries that rely on standards, is always faced with evolving standards, including new standards, updated versions, expanded focus and the continual adoption of these standards. While this requires some effort to manage, it is something that the industry---utilities, suppliers, and other organizations---continually accomplishes. Additional regulatory involvement in managing the evolution, release and adoption of these standards is not necessary. DRSG is somewhat concerned that the use of the term "successive waves" of standards implies that systems deployed initially will be deemed obsolete by newer versions of standards and will have to be replaced---which DRSG does not believe to necessarily be the case.

DRSG finds examples of this issue arising in the current Order Investigating Rulemaking (OIR) on Smart Grid underway at the California Public Utilities Commission and in the associated efforts of the California Energy Commission. Related to those efforts, Enernex Corporation on March 1, 2009 published a draft report for the California Energy Commission entitled "Smart Grid Standards Assessment and Recommendations for Adoption and Development." One of the company's four key recommendations was that "Regulations should avoid mandating specific standards or technologies where possible in favor of specifying desired outcomes and important characteristics of the standards to be

employed." Consistent with that recommendation, DRSG would much prefer that the FERC policy guidance focus on specifying the desired outcomes.

As for Commission involvement in the standards-creation process, DRSG believes that this process is well-formed and being adequately supported by NIST and existing standards bodies. DRSG does not see the need for the Commission to become involved beyond its statutory duties as prescribed in EISA.

5. DRSG agrees with the Commission's premise that the far-reaching extent of smart grid solutions requires that these systems and projects adhere to the proper security frameworks, standards, and guidelines. The document states that the "Commission proposes to make consistency with cybersecurity and reliability standards a precondition to its adoption of Smart Grid standards." DRSG would again caution that relying only on the use of standards to assess security robustness and adequacy is not sufficient. Security encompasses a wide range of requirements and issues and must be treated as a core feature of smart grid systems and not as a isolated item that can be checked off if adherence to standards is demonstrated.

6. The Commission seeks comment on its proposal, stated on page 12, "...to identify standards for common information models for inter-system interfaces as a high priority for accelerated development." DRSG believes that the interface between systems is a key area that does indeed benefit from the establishment of standards that support a commonality of terms, functions and methods to provide for system interoperability. The CIM work and similar Multi-Speak activity in the public power sector have been driving towards an expanded support for different system interactions and data exchanges, and the industry would benefit from having a single common model that vendors, utilities and service companies could work towards.

7. DRSG strongly agrees with the Commission's statement on page 17 that there is an "…urgency to develop and implement those aspects of a smarter grid that can enable such demand response capability…." The focus of smart grid development must not simply be on deployment of technologies, but in how those technologies and the practices and options they will allow are *used* to increase reliability, increase resiliency, decrease costs, decrease emissions, and increase customer control over energy use. In this vein, the Draft Smart Grid Policy document and other Commission efforts to support demand response are to be commended, and we encourage the Commission to continue its efforts.

8. DRSG agrees with the Commission's comment on page 21, "Leveraging existing standards to the greatest extent practical should shorten the time required to finalize needed interoperability standards." Notwithstanding the other standards-related comments presented herein, we believe it wise to move forward with smart grid solutions based on the current state of industry standards, guidelines, policies, and common practices.

9. DRSG has some concern over the comment on page 22 that "many Smart Grid installations will need to be included on a responsible entity's list of critical assets to be protected under the Commission-approved NERC Critical Infrastructure Protection Reliability Standards." While smart grid projects or resources that have the capacity to have a significant impact on the grid should be included in these standards, we are concerned that there will be a tendency to push this requirement down to levels that are unnecessary and result in additional burden and cost for distribution utilities, thus creating a disincentive to invest in smart grid solutions, specifically demand response programs.

Comments Regarding the Priority Functionalities that the Commission has Identified

10. DRSG supports the concept of having Wide-Area Situational Awareness be a core functionality of smart grid systems. As further defined in the document, the Commission states that "Advanced software and systems will be needed to manage, process, and render this data [as collected from smart grid systems] into a form suitable for human operators and automated control systems." The significant increase in data handling, processing requirements and information management requires new approaches in order to ensure the benefits of these systems are achieved.

11. DRSG believes a top priority for smart grid development should be defining a demand response measurement standard that uses appropriate statistically-based measurement and verification (M&V) and timing (notice) to verify demand response availability and performance for grid operators, including RTOs/ISOs. On going M & V is needed to show availability of demand response for capacity markets, operating reserves, emergency use, and energy avoidance. The timing requirement is to show grid operators how much demand response is available if called on (e.g. to satisfy capacity availability and operating reserve performance availability requirements). The notice requirement is to create certainty that within a specific time period the demand response resource will respond.

This effort aimed at M&V and timing could occur via a continuation of the NAESB Phase II effort. But it is also the case that a Notice of Proposed Rulemaking initiated by the Commission would be appropriate. Whatever the case, the effort must focus on better unification of standards for different demand response products across RTOs/ISOs and it must be completed in a timely manner. This will leverage and enable demand response integration to address variable generation (ramping) needs. Specific requirements are needed for capacity markets, operating reserves (spinning and non-spinning reserves), emergency operations, and energy and (where applicable) ramping capacity.

RTOs/ISOs are concerned that they each must respectively address their stakeholders to revise or create new demand response M&V and notice provisions. It is obvious that a common set of standards are needed across ISOs/RTOs to optimize demand response contribution and smart grid performance.

12. DRSG agrees with the statement on page 27 that "Smart Grid-enabled demand response is a priority because of its potential to help address several of the bulk-power system challenges identified above." The Draft Statement also states that "the Commission seeks comment from States and other parties on the optimal approach to develop standards in this area [between the utility and consumer]." DRSG believes that this area also will benefit from industry consensus standards development and does not require the Commission's involvement or mandates.

13. DRSG agrees with the inclusion of storage as a core aspect of functionality. DRSG notes, however, that the Commission must move from its focus on "electricity" storage to one of "energy" storage. Also, and in particular, it must include "distributed" energy storage in any such focus. Distributed thermal storage systems are an example of such technologies that are available and deployable now in demand response and smart grid applications. The Commission is correct in its assertion that if the "technologies could be more widely deployed, they would present another important means of addressing some of the difficult issues facing the electric industry." Barriers to the use of storage technologies should continue to be addressed to encourage the deployment of these resources.

14. DRSG agrees with the Commission on the importance of electric transportation as a core functionality. DRSG agrees that the implementation of vehicle-to-grid functionality could be as simple as having the vehicles charged off-peak or as

advanced as scheduling these resources to complement and balance other renewable energy resources.

Additional Responses to the Commission's Requested Comments

15. The use of resources from other organizations such as NAESB to develop standards focused on business practices would be preferable to developing a new standards-creation process. As the definition of smart grid and the solutions that comprise this industry and market are still evolving, it is necessary to allow the time to develop the requirements and use cases on which business processes ride, while attempting at the same time to move forward with all deliberate speed.

16. In response to the Commission's request for comment on whether the appropriate priorities and principles related to reliability are articulated in the document, DRSG believes that in general the Commission has stayed true to its charge of ensuring a reliable national electric grid, and as such the context is appropriate, with the exceptions as noted in our comments.

17. Regarding the rate recovery of smart grid investments, DRSG believes that these should be treated similarly to other utility investments, taking into account the concern over stranded assets that the emerging smart grid solutions potentially create. We agree with the Commission's statement on page 33 "to consider Smart Grid devices and equipment, including those used in a Smart Grid pilot program or demonstration project, to be used and useful for purposes of cost recovery…." We do have concerns, however, over some of the stipulations regarding this cost recovery, especially as it pertains to Commission-defined standards. The Commission lists specific security requirements (e.g. data, access, and physical) that it identifies as ones that must be met to qualify for recovery. The DRSG agrees that appropriate and

adequate security is a necessity to ensure a reliable electricity grid, but at the same time the implication is that security is being held as a higher priority than all of the other core functional capabilities of a system for which investment is being considered.

Wherefore DRSG submits these comments for the Commission's consideration in this docket.

Respectively Submitted,

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