

## **1. Background**

My name is David Mohre. I am the Executive Director of the Energy Power Division of National Rural Electric Cooperative Association (NRECA). I appreciate this opportunity to share with you NRECA's perspective on the possible elements of the National Action Plan as outlined in the *Discussion Draft on Possible Elements of a National Action Plan on Demand Response* (Discussion Draft), released by FERC last month in this docket. We believe that NRECA's perspective is particularly relevant insofar as cooperatives have been recognized by FERC and others as leaders in both demand response and smart grid.

NRECA is the not-for-profit national service organization representing approximately 930 not-for-profit, member-owned rural electric cooperatives. The great majority of these cooperatives are distribution cooperatives that provide retail electric service to over 42 million consumer-owners in 47 states. Kilowatt-hour sales by rural electric cooperatives account for approximately 10 percent of total retail electricity sales in the United States. In addition, NRECA members include approximately 65 generation and transmission ("G&T") cooperatives that supply wholesale power to their distribution cooperative owner-members. Both distribution and G&T cooperatives were formed to provide electric service to their owner-members at the lowest reasonable cost consistent with adequate and reliable service. While some electric cooperatives generate their own power and sell limited power in excess of their members' needs to third parties in wholesale markets, most cooperatives are net buyers of power. Overall, cooperatives purchase nearly half of their energy requirements from other wholesale suppliers.

## **2. Cooperatives Are Industry Leaders in Demand Response.**

The cooperative record in demand response is impressive. On a nationwide basis, cooperatives can control approximately six percent of their peak demand through demand

response programs, including approximately 1,440 MW of residential load control. Although cooperatives provide only about ten percent of the country's total retail energy sales, their combined demand response resources equal almost 20% of the demand response capacity of the electric sector. Those cooperatives that are most actively using demand response can control 15%, 25%, and even up to nearly 50% of their peak demand across all customer classes.

Cooperative demand response programs include: direct control of large appliances with inherent storage capabilities such as water heaters, air conditioning, and electric and dual-fuel heating systems; interruptible contracts; voluntary "share the savings" interruption programs; time-of-use rates- and, control of customer-owned generation. A large number of cooperatives have also implemented very cost-effective programs that shift load off peak, such as heat storage and high-efficiency/large capacity water heaters with very simple, low-cost timers.

These results are the product of many years of concentrated effort to make demand response a critical cost-cutting and risk management tool in the conduct of electric cooperatives' basic business: supplying their consumer-members' electricity needs. Cooperatives are first and foremost load-serving entities ("LSEs") and take very seriously their obligation to provide their consumers with reliable power at the lowest reasonable cost over the long term. To accomplish that, cooperatives engage in both risk and portfolio management on behalf of their members. Each cooperative directly or through a G&T or other power supplier assembles a portfolio of owned and contractual energy and capacity resources. Cooperatives treat demand response as an important part of their power supply portfolios. Cooperatives recognize that demand response is a flexible hedge that helps them to shape their load, reduce contractual demand costs, reduce both capacity and energy costs, and reduce their costs and risks in wholesale markets.

As the Commission is aware, cooperatives are also committed to advanced metering as another method of implementing demand response programs. The December 2008 FERC Staff Report, *Assessment of Demand Response and Advanced Metering*, reported that the results of the 2008 FERC Demand Response and Advanced Metering Survey indicate advanced metering penetration (*i.e.*, the ratio of advanced meters to all installed meters) had reached about 4.7 percent for the United States. According to the report:

Market penetration differs by type of organization. While cooperatives, municipal utilities, investor-owned utilities, public utility districts, and federal utilities all show increases since 2006, the high penetration levels achieved by cooperatives in the past two years is particularly impressive. Cooperatives' advanced metering penetration increased from 3.8 percent in 2006 to 16.4 percent in 2008.<sup>1</sup>

This is not a surprising result given the low consumer density of most Cooperatives. With an average of 6-7 consumers per mile of line (compared to 40-70 for other segments of the industry), the substitution of electrons or photons for trucks and crews for such things as meter reading, outage management, voltage and VAR control, switching, etc. can be very cost effective. It is also why cooperatives, through NRECA's research program, have invested millions of dollars developing the MultiSpeak Interoperability Data Standard that is a fundamental part of the NIST Smart Grid Roadmap, and why some eighty cooperatives are receiving both ARRA smart grid investment and demonstration grants (see attached).

According to research conducted by NRECA, approximately half of cooperatives have installed at least some advanced metering infrastructure on their systems, and some 30 percent of cooperatives have begun to integrate their advanced metering infrastructure with other systems on their grid such as their outage management systems and their geographic information systems.

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<sup>1</sup> Executive summary, p. i.

In a survey of its members, NRECA found that more than 40% of respondents had some kind of demand response program in place. Of those:

- 77% had programs in place for direct control of water heaters, pool heaters, air conditioners, and storage and dual-fuel heating systems.
- 44% had interruptible contracts with some of their consumers.
- 30% had time-of-use or other forms of dynamic pricing.
- 16% had arrangements for voluntary “share-the-savings” interruptions.
- 11% had other demand response programs in place. Most of these involve control of irrigation loads – a significant load in some cooperative service areas – or the ability to dispatch customer-owned generation.

Some of NRECA’s members have particularly innovative demand response programs.

Cooperatives have been among the first to experiment with market-based demand response programs and are actively dispatching customer-owned generation. In Florida, for example, many distribution cooperatives provide back-up diesel generators to larger members at a reduced cost. The consumers may use those generators to serve their own loads when the system is down and Seminole Electric Cooperative, the largest generation and transmission cooperative in Florida, can dispatch those generators when it needs to reduce loads for reliability or economic purposes.

In 2009, the Peak Load Management Association bestowed its “Innovative Application of Technology Award” on Cass County Electric Cooperative, based in Fargo, North Dakota.

Stung by high prices resulting from deregulation, Cass County developed an innovative pricing system with their G&T Minnkota Power, that has successfully reduced power usage during peak periods. Under their “Incremental Pricing Plan,” consumer members participating in the program are notified by an LED “traffic light” when power prices change. In response to the signal, members can reduce their usage, initiate backup power systems or pay a higher price.

The cooperative began its load management program in 1976 and is now able to control nearly fifty percent of its total system load in the winter by controlling heating systems, water heaters, grain conditioning, irrigation, cycled air conditioning, and diesel generators at commercial and industrial facilities.

### **3. Demand Response Is a Critical Risk and Cost Management Tool for Cooperatives.**

Cooperatives operate demand response programs because they permit cooperatives to keep power costs lower for their member owners and help maintain reliable operation. As member-owned and member-governed private companies, cooperatives' primary goal is to provide reliable energy at the lowest possible costs – not to maximize revenues or profits. Any margin that cooperatives earn must be used to improve service or is returned to consumers as capital credits. Simply put, if something clearly benefits our consumer-owners, cooperatives typically do it.

Demand response is critical to many cooperatives' cost-cutting efforts. First, demand response permits those cooperatives with undesirable load profiles to shape their load and to smooth their peaks. That may allow them to delay construction of new peaking resources or to limit the operation of expensive peaking resources.

Second, demand response may reduce the cost of power under power purchase agreements. Nationally, cooperatives generate about 50% of the power they need to serve their members. Most of the remaining 50% is purchased via long-term bilateral contracts in order to limit risk and price volatility. Many of those contracts, however, include substantial demand charges. Demand response permits cooperatives to reduce load on high-demand days, lowering contractual demand charges.

Third, cooperatives are subject to the substantial risks and costs of purchases in wholesale short-term and spot markets. Even those cooperatives that can satisfy most of their requirements

through their own generation or through long-term bilateral contracts may find themselves in the market if they lose a generator or a counter-party defaults. Demand response permits cooperatives to mitigate that market risk by allowing cooperatives to reduce load when market prices are highest or resources limited.

#### **4. Comments on Discussion Draft**

NRECA commends the Commission for continuing its commitment to furthering its understanding and evaluation of demand response and on the thorough examination undertaken in the Staff Discussion Draft.

The Discussion Draft, we believe, importantly and appropriately defines demand response as something more than just dynamic pricing. Dynamic pricing programs that charge higher prices during high-demand hours and lower prices at other times are one type of program, but certainly not the only type of demand response program, that has been successfully implemented – as the decades-old cooperative programs demonstrate. Direct load control, time-of-use and interruptible tariffs, control of customer generation, etc., are also types of very successful, long-term demand response programs. In fashioning any “national message” about demand response, it is wise not to oversimplify and in essence “lobby” state and local decision-makers on their local choices before providing important tools, options, data and analyses to them. To NRECA, that’s job one.

Of the three sets of strategies and activities outlined on page 6 of the Discussion Draft, NRECA strongly supports item (3), “Development or identification of analytical tools, information, etc., for utilities, States, DR providers, consumers” and item (1) , “Identification of requirements for technical assistance to States to allow them to maximize the amount of demand response resources that can be developed and deployed” if, as the law requires, the words “if

they so choose” are added at the end. This important phrase is mentioned within the Plan, but perhaps not often enough.

NRECA has the most concerns about the National Communications Program. The potential National Communications Program as outlined in the Discussion Draft appears to be overly ambitious in some respects, and could disrupt or confuse existing, effective local communications programs that have succeeded in developing robust locally-focused demand response programs for consumers. Also, before determining which elements ought to be implemented in the Communications part of the Plan, the Commission needs to have a better understanding of how such a program would be staffed and what its budget would be. A major part of the difficulty in developing such a plan is that, unlike the Air Bag and Seat Belt Safety Campaign discussed in the Draft (p. 27), there is not one standardized message regarding demand response that is appropriate to be disseminated indiscriminately to anyone and everyone within earshot. The Draft appropriately acknowledges that “because demand response will be implemented differently depending on the location and circumstances, it may be difficult to develop one single message;” (p. 22). However, the Draft does not go far enough in attempting to consider how to integrate the fact that many utilities (and as noted earlier, many cooperatives) already have developed not just successful demand response programs, but successful means of communicating with their customers about these programs. NRECA urges the Commission to build upon existing local demand response programs, including their consumer education programs, rather than spending significant resources in trying to reinvent the wheel or change something that already is in place, and is working.

Although the Discussion Draft does include a proposed element (Element 8, p. 35) to distribute toolkit materials for use by those utilities, LSEs or other demand response providers

who do not wish direct assistance from the national campaign, the Plan suggests a top-down, standardized message to be the outcome: “Greater adoption of campaign principles and messages across the country.” Before investing resources in developing such standardized toolkits, NRECA would urge the Commission, in fashioning its recommendations for a National Action Plan, to systematically obtain input from cooperatives and other utilities with successful programs on whether such an effort would even be useful or productive in the first instance. The way the communications plan is described in the Draft gives rise to concern that there would, in fact, be a standardized message attempted to be grafted onto existing communication programs. More than just simply inapplicable, this could in some circumstances be potentially confusing for those customers of cooperatives and other utilities with ongoing, successful demand response programs. For these reasons, NRECA urges the Commission to keep its communications focused on providing State and local decision-makers with a wide array of tools, options, data and analysis that could be appropriately used in varying local circumstances. First, do no harm.

Another concern NRECA has is with the role of the Coalition in carrying out the communications plan. Depending on the make-up and funding of the Coalition, it could end up becoming a means of mass-marketing for vendors wishing to sell certain technologies to consumers. Even if the make-up of the Coalition is appropriately balanced—vendors, utilities, consumers, regulators, etc. --- processes of the kind contemplated by the Discussion Draft would require participants to invest substantial resources in meetings, reviews, drafting, communications and similar tasks. Many—consumer groups, regulators, academics, etc.— may find it difficult to participate fully. For the most part, utilities themselves will have to divert resources from other activities to meet these needs. For vendors, on the other hand, this would amount to a core marketing activity. Without careful oversight, this could easily result in

vendors' dominance of Coalition activities. Again, NRECA believes the Coalition's time would be better spent on increasing state and local regulatory decision-makers' awareness and knowledge about the potential costs and benefits of demand response, the different options available, and what they would need to do to secure those benefits if they so choose. It must not become just a platform for XYZ company to sell equipment.