

Testimony of Gary Connett

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Before the House Committee on Energy & Commerce

Subcommittee on Energy & Power

To review legislation to protect grid-enabled water heaters

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Chairman Whitfield, Ranking Member Rush, members of the Subcommittee, thank you for inviting me to testify today on legislation to protect grid-enabled water heaters.

My name is Gary Connett, and I am Director of Demand-Side Management and Member Services at Great River Energy, a generation and transmission cooperative serving 28 member retail distribution cooperatives located in Minnesota and Northwestern Wisconsin.

I would like to thank the subcommittee for addressing this important and timely issue. Large capacity electric resistance water heaters are essential demand response tools for Great River Energy and our 28 member retail distribution cooperatives. Immediate action is needed to mitigate the impacts of a 2010 Department of Energy (DOE) efficiency rule, and help maintain our ability to use those water heaters in our demand response programs.

The DOE rule which goes into effect on April 16th effectively bans the manufacture of electric resistance water heaters with a storage capacity of over 55 gallons if action is not taken by Congress. As manufacturers prepare to shut down production lines, this widely supported legislation is urgently needed.

The electric industry is searching for a low-cost battery to store electricity. Great River Energy and our member cooperatives think we have it. It's in the basements of nearly 100,000 homes in Minnesota. It charges each night, and discharges every day in the form of hot water. It does this night after night, year after year – storing and discharging over 1,000 megawatt-hours every day. I would argue that it's the largest battery in the upper Midwest.

This “battery” consists of precisely the same large-capacity electric resistance water heaters whose manufacture would be eliminated due to the impending DOE ban.

Through demand response programs offered by electric cooperatives, these super insulated, high efficiency water heaters store low cost off-peak energy available in the night time hours as hot water. They allow for the optimization of renewable energy and more efficient operation of the electrical grid system. Most importantly, these large capacity water heaters play an important role in Great River Energy’s and other cooperatives’ efforts to provide its member-owners with safe, reliable, and affordable electric energy.

Even when not tied to renewable energy, cooperatives and other utilities across the country use these water heaters to reduce demand for electricity during peak hours which would otherwise be served by additional electric generators. When these peak demand periods occur, electricity is often produced by the most expensive and least efficient generators. Reducing peak demand reduces emissions and fuel use, saves cooperatives’ consumer-members tens of millions of dollars per year, and in many cases defers the need for new electric generation. Today over 250

electric cooperatives in 35 states across the country are engaged in voluntary demand response programs using large capacity electric resistance water heaters.

These water heaters are one of the best tools cooperatives have for meeting federal goals related to renewable energy integration, demand response, and electricity service reliability. In several major energy bills, Congress has declared the promotion of demand response an important federal policy.

Cooperative leadership in demand response programs dates back to the 1970s. A 2012 FERC study recognized cooperatives' leadership in this area. Despite accounting for just 10% of the nation's retail electricity sales, electric cooperatives are responsible for over 20% of the nation's actual peak reduction. This is largely accomplished through the trusty water heater, the most common household appliance.

As I have mentioned, on April 16th the new efficiency standard will take effect, which requires all large-capacity electric water heaters to operate at about 200% efficiency, a level that only heat-pump water heaters can achieve. While heat pump water heaters, also used and promoted within the cooperative community, are an

energy efficient technology that saves kilowatt-hours, they do not work as well with utility demand response programs or in cold climates, such as Minnesota.

The DOE, despite its good intentions, was unaware of the impact that its rule would have on utility demand response programs. This fact is acknowledged in the DOE rulemaking docket when they stated that action is necessary to mitigate the impacts of the rule. However, due to regulatory hurdles, the DOE has not been able to resolve the issue.

In a great example of industry-wide cooperation, the National Rural Electric Cooperative Association (NRECA) the national service organization that represents over 900 cooperatives, worked with an advisory group of cooperatives, other utilities, regional transmission operators, energy efficiency and environmental groups to come up with a legislative solution that will not only help protect these water heater programs, but will also advance water heater technology through establishing criteria for grid-enabled water heaters. The widespread support for this solution should make it an easy decision to pass this urgent legislation immediately.

This legislation (H.R. 906) does not repeal the new standard, but would permit the continued manufacture of large capacity electric resistance water heaters above 75 gallons for use in demand response programs. The legislation also includes language to prevent these water heaters from entering the market if they are not specifically tied to a utility demand response program. Such protections include a specified label on the box, an activation key to be used by the utility operating the demand response program, and annual reporting requirements for both manufacturers and utilities. There are also enforcement mechanisms to eliminate the potential for activation of these water heaters in instances not related to utility demand response programs.

As the subcommittee is well aware, the consensus legislation has been incorporated into numerous pieces of energy efficiency legislation in both the House and the Senate over the past two years. Last March 2014, the House passed H.R. 2126, the Energy Efficiency Improvement Act, by an overwhelming vote of 375-36. Three of the four titles of H.R. 2126 were recently attached to S. 1, a bill to approve the Keystone XL pipeline--a bill that passed both the House and Senate in this Congress, but was clearly vetoed for reasons unrelated to the water heater title. In fact, the Portman amendment to S. 1 enjoyed great support, passing the Senate 94-5.

On behalf of Great River Energy and other cooperatives across the nation who face the threat of this new DOE standard, we thank Chairman Whitfield, and Representative Welch, as well as Representatives Latta, Loeb sack, Cramer, and Doyle for their leadership on the current legislation (H.R. 906) and their persistence in seeing it through.

It is Great River Energy's sincere hope that the legislation examined today can see swift action on the House floor and ultimately be sent to the President's desk for his signature.

Again, I appreciate the Subcommittee's invitation and time today to discuss this important issue for cooperatives and other stakeholders, and look forward to updating you on the progress of demand response programs in the future