



2750 Monroe Boulevard
Audubon, PA 19403-2497

Terry Boston
President and CEO
610.666.8262
610.666.4281 | FAX

April 7, 2014

Dr. Kathleen Hogan
Deputy Assistant Secretary
Office of Energy Efficiency and Renewable Energy
U.S. Department of Energy
1000 Independence Ave., S.W.
Washington, DC 20585

RE: [Urgent Action on Energy Conservation Standards for Residential Water Heaters \(Docket Number: EERE-2012-BT-STD-0022\)](#)

Dear Dr. Hogan,

I am submitting this letter on behalf of PJM Interconnection, the electric grid operator for 13 states and the District of Columbia serving over 60 million people. As part of a coalition which includes the National Rural Electric Cooperative Association, water heater manufacturers and the Electric Power Research Institute, among others, we petitioned your office back in the winter of 2011 to reform the April 2010 efficiency standard governing residential electric resistance water heaters. The reforms are necessary to advance the benefits to energy efficiency and the environment from those water heaters which could interact with the grid and operate as energy storage devices.

I am concerned that, to date, there has been no action or clear indication of intent from DOE on our petition. The situation is becoming urgent because, without prompt action, these water heaters will be illegal to manufacture by [April 15, 2015](#). This pending deadline and the uncertainty of DOE's position are placing an undue risk and burden on manufacturers and utilities as to whether these cost-effective water heater control programs will have a path forward to expand, both in size and in sophistication of control.

PJM is working closely with manufactures and entrepreneurs to unleash the vast energy storage potential of residential electric water heating control – a resource with a combined energy storage capacity on par with today's pumped storage hydro fleet. Electric water heater storage is *the* most cost-effective form of energy storage available and has enormous potential to help PJM integrate the projected 33,000 MW of wind and 9,200 MW of solar energy that the state RPS requirements call for by 2029 in our footprint.

I urge your office's expedited action on this matter. Extensive information has been submitted in the docket along with proposals for resolution of this matter, all of which have been thoroughly briefed and discussed

Without action from DOE, it will be harder for the region and policymakers to meet the state goals for integrating renewables. A recent study by GE showed that PJM will need 1,500 MW of added regulation resources for load frequency control as wind is added to our system. Not only can storage water heaters help with load frequency control, they will help us manage other grid problems which occur primarily at night when loads on the system are low, causing us to reduce generation. Additional storage would help us avoid the need to reduce nuclear

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generator output (which can risk fuel damage) and being forced to feather the blades on wind turbines in the western part of PJM.

I appreciate your attention to this urgent matter and look forward to working together in the future to advance electric storage water heating technology. I would be grateful for an indication of the status of this matter and expedited action to prevent this promising energy storage option from being eliminated in light of the April 2015 deadline.

Sincerely,

A handwritten signature in black ink that reads "Terry Boston". The signature is written in a cursive, flowing style.

Terry Boston

cc: Secretary Earnest Moniz
John Cymbalsky, DOE
ExParteCommunications@hq.doe.gov ; Docket EERE-2012-BT-STD-002