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Additional submitted attachment is included below.



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July 31, 2015

Commissioner Andrew McAllister
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512
andrew.mcallister@energy.ca.gov

RE: CEC Docket number 15-BSTD-02 2016 Comments on the Residential Compliance Manual

Dear Commissioner McAllister,

Several years ago, on June 13, 2012, the U.S. Department of Energy (DOE) Energy Efficiency and Renewable Energy Office (EERE) issued a Request for Information (RFI) regarding energy conservation standards for residential water heaters in the April 2010 Final Rule which would apply to water heaters manufactured on or after April 16, 2015. This RFI was in response to a number of electric utility companies expressing concerns regarding the amended energy conservation standard impacts on electric thermal storage programs that utility companies administered to manage peak load.

<http://www.regulations.gov/#!documentDetail;D=EERE-2012-BT-STD-0022-0001>

A wide array of stakeholders participated and DOE received 127 replies to the RFI which later grew to nearly 300 documents and submittals posted to this docket.

On February 26, 2013, DOE published both in the Federal Register and on that docket site a notice of proposed rulemaking (NOPR) and an announcement of public meeting regarding Energy Conservation Program for Consumer Products: Energy Conservation Standards for Residential Water Heaters.

<http://www.regulations.gov/#!documentDetail;D=EERE-2012-BT-STD-0022-0158>

Federal Register 12969 Vol. 78, No. 38 Tuesday, February 26, 2013

<http://www.gpo.gov/fdsys/pkg/FR-2013-02-26/html/2013-04099.htm>

That NOPR concluded that "DOE believes that the evidence presented indicates that these programs provide a number of valuable benefits to consumers, utilities, and the Nation. As a result, DOE agrees with the majority of commenters that action should be taken to mitigate the impacts of the April 2010 final rule standard levels on utility ETS programs in order to help preserve these benefits, if no practical alternatives exist to allow for the continuation of ETS programs in the absence of large-volume [Electric Resistance Water Heaters] ERWHs." Unfortunately, the Waiver Process outlined in the NOPR was considered unworkable by most stakeholders and on September 26, 2013 a very diverse group which included The Natural Resources Defense Council, The American Council for an Energy-Efficient Economy, PJM Interconnection LLC, The National Rural Electric Cooperative Association, The Edison Electric Institute, The American Public Power Association, and Steffes Corporation, A.O. Smith, Rheem Manufacturing, and Steffes Corporation presented DOE with a copy of draft legislative language agreed to by the stakeholders in the meeting. Although the group did not have full consensus on any specific regulatory alternative they expressed hope that DOE would be able to find an alternative regulatory approach to achieving the same ends as the proposed legislation.

Unfortunately DOE did not craft a regulatory solution and on April 30, 2015 President Obama signed into law a bipartisan bill – the Energy Efficiency Improvement Act – which included amended draft language for electric water heaters.¹

That legislative language referenced Grid-Enabled Electric Water Heaters (GEWH) which is a more basic form of Grid-Interactive Electric Water Heaters (GIWH). Steffes is a manufacturer of one variety of GIWH (which we refer to as “GETS”) which has been proven over several years of field trials and pilots. One such pilot that is just concluding in Hawaii has proven our ability to perform very high order grid services (capacity and ancillary services) and to perform in very many ways in the same manner as a fast-ramp battery.

This backs up remarks made by Terry Boston, CEO of PJM, in a April 7, 2014 letter to Dr. Kathleen Hogan, Deputy Assistant Director of DOE’s EERE: “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.”

<http://www.regulations.gov/#!documentDetail;D=EERE-2012-BT-STD-0022-0302>

<http://energy.gov/sites/prod/files/2014/04/f14/DOE---LETTER%20TO%20KATHLEEN%20HOGAN.pdf>

Steffes Corporation is just one vendor of GIWH proving high order grid capabilities, but another competitive GIWH technology provider, Sequentric Energy Systems LLC along with PJM, NRDC, and the City of Palo Alto Utilities have been working together successfully with Stanford University on helping to define GIWH grid benefits.

<https://energy.stanford.edu/energy-transformation-collaborative/projects>

In Steffes case, our pilot in Hawaii is also showing significant synergy between rooftop solar and our GETS System. We think, in particular, there is evidence that our system is ideal to address issues contained in a CAISO July 9 Management proposal on variable energy resources to help deal with real-time market – localized excess supply of solar generation.

https://www.caiso.com/Documents/Department_MarketMonitoringReport-Memo-Jul2015.pdf

As it stands now however, we see the same type of unintended consequences – in this case thwarting cost-effective energy storage from being used synergistically with Solar PV - stemming from certain rules and parameters within the 2016 Draft of Chapter 5 of the Residential Compliance Manual.

We will be e-filing these remarks via the Commission EComment link but as you are the Commissioner lead on this Manual we wanted to make sure to also contact you directly.

Very truly yours,

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¹ To the extent provisions of the Residential Compliance Manual may conflict with federal minimum appliance efficiency standards for water heaters and other appliances promulgated by the U.S. Department of Energy under authority granted by the National Appliance Energy Efficiency Act, Steffes is unclear as to the effect of federal preemption provisions found therein.