

ONE HUNDRED FOURTEENTH CONGRESS
Congress of the United States
House of Representatives
COMMITTEE ON ENERGY AND COMMERCE
2125 RAYBURN HOUSE OFFICE BUILDING
WASHINGTON, DC 20515-6115

Majority (202) 225-2927
Minority (202) 225-3641

MEMORANDUM

March 18, 2015

To: Subcommittee on Energy and Power Democratic Members and Staff

Fr: Committee on Energy and Commerce Democratic Staff

Re: Hearing on “H.R. 906, a Bill to Modify the Efficiency Standards for Grid-Enabled Water Heaters.”

On Thursday, March 19, 2015, at 10:00 a.m. in room 2322 of the Rayburn House Office Building, the Subcommittee on Energy and Power will hold a legislative hearing on H.R. 906, “a Bill to Modify the Efficiency Standards for Grid-Enabled Water Heaters.” Energy and Power Subcommittee Chairman Whitfield (R-KY) introduced the legislation on February 11, 2015, along with five original cosponsors, Representatives Welch (D-VT), Latta (R-OH), Loeb sack (D-IA), Cramer (R-ND) and Doyle (D-PA). The legislation currently has 14 cosponsors.

I. DOE RULEMAKING

The Energy Policy and Conservation Act (EPCA) established a program governing the efficiency of consumer products other than automobiles. Section 322 specifically lists water heaters as a covered product for which the Secretary of Energy was required to issue efficiency standards under the Act.¹

On April 16, 2010, the Department of Energy (DOE) published in the Federal Register a final rule establishing new energy efficiency standards for a number of products including most residential water heaters.² DOE initiated the rulemaking in 2006, and the final rule represents the first updating of standards for water heaters since January 2001.³ The standards, which will

¹ Energy Policy and Conservation Act, Pub. L. No. 94-163 § 322(a)(4).

² Department of Energy, *Energy Conservation Program: Energy Conservation Standards for Residential Water Heaters, Direct Heating Equipment, and Pool Heaters*, 75 Fed. Reg. 20112 (Apr. 16, 2010) (online at www.gpo.gov/fdsys/pkg/FR-2010-04-16/pdf/2010-7611.pdf).

³ *Id.* at 20122.

take effect on April 16, 2015, cover all residential water heaters with the exception of “tabletop and electric instantaneous models.”⁴ The universe of water heater technology covered by the new standards includes what is commonly referred to as large capacity, electric resistance water heaters. In DOE’s rulemaking they are defined as electric storage water heaters with tank storage of greater than 80 gallons.⁵

II. BACKGROUND AND STATED NEED FOR LEGISLATION

Proponents of H.R. 906 argue that DOE’s rule effectively prohibits the continued manufacture of these large capacity, electric resistance water heaters and would, instead, promote the use of heat pump (or other) technology in its place.⁶ In particular, the National Rural Electric Cooperative Association (NRECA) asserts that this forced technology substitution would have severely adverse impacts on co-ops’ demand response efforts. Co-ops use existing large capacity water heaters “like a battery...to integrate renewable wind energy by heating water when the wind blows at night and storing it for use during daytime peak hours.”⁷

Initial efforts to craft a legislative solution to address the concerns of NRECA and others over DOE’s treatment of grid-enabled water heaters met with concern and opposition from non-governmental organizations and other traditional supporters of DOE’s efficiency efforts. For example, in June 2013 testimony before the Senate Energy and Natural Resources Committee, Steven Nadel, Executive Director of the American Council for an Energy-Efficient Economy (ACEEE), went to great lengths to express his organization’s concern over the effort and, specifically, the legislative language proposed at that time which he asserted, among other things, would “will allow widespread use of less-efficient water heaters in applications without off-peak water heating or load management.”⁸

Ultimately, negotiations amongst a variety of stakeholders resulted in compromise legislative language in 2013, which achieved the support of most interested parties, including both NRECA and ACEEE.⁹ Although the Committee has neither held hearings nor reported legislation on this matter in the past, in March 2014, the House included the compromise

⁴ *Id.* at 20112.

⁵ *Id.* at 20122.

⁶ *See, e.g.*, National Rural Electric Cooperative Association, *Fast Facts: New Efficiency Standard for Electric Water Heaters* (Apr. 25, 2014) (online at www.nreca.coop/wp-content/uploads/2014/04/FastFactWaterHeaters.pdf).

⁷ *Id.*

⁸ Senate Committee on Energy and Natural Resources, Testimony of Steven Nadel, Executive Director, American Council for an Energy-Efficient Economy, *Hearing to consider S. 1084, S. 717 and Other Pending Energy Efficiency Legislation*, 113th Cong. (June 25, 2013) (online at www.energy.senate.gov/public/index.cfm/files/serve?File_id=b13412e4-34af-429a-870f-cd51952f8e51).

⁹ *See, e.g.*, Letter from A.O. Smith Corporation, et al. to Senators Shaheen and Portman (Sept. 12, 2013).

language as title II of H.R. 2126, the “Energy Efficiency Improvement Act of 2014” which passed under suspension of the rules by a vote of 375-36.¹⁰ There was no Senate action on H.R. 2126 before the end of the 113th Congress, but identical language has gained traction in both chambers since the start of the 114th Congress.¹¹

Although H.R. 906 enjoys the support of a diverse group of stakeholders, it is important to note that support is not universal. Of particular note, the American Public Gas Association (APGA) and the American Gas Association (AGA) have stated their interest in seeing the bill’s carve out for grid-enabled water heaters limited to those areas that lack direct access to natural gas. The two trade associations note that there are “distinct energy efficiency benefits of natural gas fired water heaters over electric resistance water heaters” and that, where gas is available, the needs of “demand response programs could be easily served by natural gas storage water heaters....”¹²

Proponents of the bill argue that Congress must act before DOE’s new standards for water heaters go into effect next month. The Majority has indicated that H.R. 906 will be considered by the full committee with enough time to meet that deadline. However, unless the Senate acts soon on companion energy efficiency legislation, it is difficult to see how Congress can send legislation to the President for enactment prior to the DOE standards taking effect on April 16, 2015.¹³

III. H.R. 906, A BILL TO MODIFY THE EFFICIENCY STANDARDS FOR GRID-ENABLED WATER HEATERS

H.R. 906 allows for the continued sale and use of large capacity electric resistance water heaters by amending EPCA Title III Part B to require creation of a new, separate efficiency standard for such units, referred to as a “grid-enabled water heater”.¹⁴

The bill defines a grid-enabled water heater as an electric resistance water heater with rated storage tank volume of more than 75 gallons that is manufactured on or after April 16, 2016. An activation lock is required (either a physical device directly on the water heater or a control system integrated into the water heater) that is locked by default and contains a physical,

¹⁰ U.S. House of Representatives, Roll Call Vote on Agreeing to H.R. 2126 (Mar. 4, 2014) (375 yeas, 36 nays) (online at clerk.house.gov/evs/2014/roll098.xml).

¹¹ Provisions substantially similar to H.R. 906 were included as part of S. 1, legislation to construct the Keystone XL pipeline which President Obama ultimately vetoed for reasons unrelated to the content of H.R. 906.

¹² Letter from AGA and APGA to Chairman Whitfield (Feb. 28, 2014).

¹³ S. 535, energy efficiency legislation introduced by Sens. Portman (R-OH) and Shaheen (D-NH) contains a provision identical to the text of H.R. 906 and has been “hotlined” for floor consideration in the Senate.

¹⁴ H.R. 906, a bill to modify the efficiency standards for grid-enabled water heaters § 1(6)(A)(ii).

software, or digital communication that must be activated to enable the product to operate at its designed specifications and capabilities. Without activation, the product will not be able to provide more than 50% of the delivery of hot water as certified by the manufacturer. The activation key can only be provided by the manufacturer to a utility or other company that operates an electric thermal storage or demand response.

H.R. 906 also requires annual reports from: (1) manufacturers of such water heaters regarding the quantity of the products shipped each year, and (2) utilities and other demand response and thermal storage program operators regarding the quantity of products activated for their programs. Secretary of Energy is required to publish analyses of data collected from the annual reports and to establish procedures to prevent product diversion if sales of the water heaters exceed by at least 15% the number of water heaters activated annually.

The standards and publication procedures established by the bill would be maintained until the Secretary of Energy determines that: (1) such water heaters do not require a separate efficiency requirement, or (2) procedures to prevent product diversion for non-program purposes would not be adequate to prevent such product diversion.

Under the bill, the Secretary of Energy is required to consider the impact of EPCA electric water heater standards on thermal storage and demand response programs, including on energy savings, electric bills, peak load reduction, electric reliability, integration of renewable resources, and the environment. The Secretary is also directed to require water heaters to be equipped with communication capability to enable the grid-enabled water heaters to participate in ancillary services programs if the technology is available, practical, and cost-effective.

H.R. 906 also includes a number of provisions to help prevent abuse of relaxed efficiency standards for grid enabled water heaters. The bill outlines a number of prohibited actions including, among others, that it is unlawful to activate or distribute an activation key for a grid-enabled water heater with knowledge that it is not used as part of a designated efficiency program.

IV. WITNESSES

The following witnesses have been invited to testify:

Mr. Gary Connett

Director, Member Services and Demand Side Management
Great River Energy

Mr. Steven Nadel

Executive Director
American Council for an Energy-Efficient Economy

Mr. Robin Roy

Director, Building Energy Efficiency and Clean Energy Strategy
Natural Resources Defense Council

Mr. Steven Koep
Utility Sales Manager
Vaughn Thermal Corporation, Vaughn Electric Water Heaters