

Appliance Standards Awareness Project  
American Council for an Energy-Efficient Economy  
Natural Resources Defense Council  
Northwest Energy Efficiency Alliance

May 12, 2014

Ms. Brenda Edwards  
U.S. Department of Energy  
Building Technologies Program  
1000 Independence Avenue, SW  
Mailstop EE-2J  
Washington, DC 20585

**RE: Docket Number EERE-2014-BT-STD-0015 / RIN 1904-AB23: Notice of Data Availability for Commercial Heating, Air-Conditioning, and Water-Heating Equipment**

Dear Ms. Edwards:

This letter constitutes the comments of the Appliance Standards Awareness Project (ASAP), American Council for an Energy-Efficient Economy (ACEEE), Natural Resources Defense Council (NRDC), and Northwest Energy Efficiency Alliance (NEEA) on the notice of data availability (NODA) for energy conservation standards for commercial heating, air-conditioning, and water-heating equipment. 79 Fed. Reg. 20114 (April 11, 2014). We appreciate the opportunity to provide input to the Department.

We are pleased that DOE has promptly initiated this rulemaking to review the standards for commercial heating, air-conditioning, and water-heating equipment for which the efficiency levels were updated in ASHRAE 90.1-2013. DOE's preliminary analysis for the NODA indicates that significant additional national energy savings could be achieved by adopting higher efficiency levels than those in 90.1-2013. Below we provide our specific recommendations regarding each of the five categories of equipment for which the efficiency levels were amended in 90.1-2013. In summary, we urge DOE to:

- Conduct further analysis to consider higher efficiency levels than those in ASHRAE 90.1-2013 for small (<65,000 Btu/h) commercial packaged air-cooled air conditioners and heat pumps and water-source heat pumps.
- Complete the already-initiated rulemaking for packaged terminal air conditioners and heat pumps, and initiate rulemakings for single-package vertical air conditioners and heat pumps and commercial water heaters as required by EPCA.

## **Small (<65,000 Btu/h) Commercial Packaged Air-Cooled Air Conditioners and Heat Pumps**

DOE's preliminary analysis for the NODA found that higher efficiency levels than those in ASHRAE 90.1-2013 for small commercial packaged air-cooled air conditioners and heat pumps could achieve additional national energy savings of up to 0.2 quads.<sup>1</sup> While the efficiency levels in 90.1-2013 for this equipment are SEER 14, DOE found that there are currently-available three-phase air conditioners and heat pumps with efficiency levels as high as SEER 19 and SEER 18, respectively.<sup>2</sup> We understand that three-phase commercial packaged air-cooled air conditioners and heat pumps are very similar to residential single-phase equipment, except that three-phase commercial units use a three-phase compressor. We also understand that three-phase compressors are generally more efficient than single-phase compressors, which suggests that a three-phase central air conditioner or heat pump will be more efficient than a comparable single-phase unit. We encourage DOE to conduct further analysis to consider higher efficiency levels than those in 90.1-2013 for small commercial packaged air-cooled air conditioners and heat pumps.

## **Water-Source Heat Pumps**

DOE found that higher efficiency levels than those in 90.1-2013 for water-source heat pumps could achieve additional national energy savings of up to 1 quad.<sup>3</sup> While the efficiency levels in 90.1-2013 for water-source heat pumps are EER 13 for most equipment, DOE found that there are currently-available water-source heat pumps with efficiency levels as high as EER 21.6.<sup>4</sup> We encourage DOE to conduct further analysis to consider higher efficiency levels than those in 90.1-2013 for water-source heat pumps.

## **Packaged Terminal Air Conditioners**

DOE published a framework document in February 2013 as the first step in a rulemaking to consider amended standards for packaged terminal air conditioners and heat pumps in accordance with the six-year review provision in EPCA. DOE notes in the NODA that the Department plans to issue a notice of proposed rulemaking (NOPR) that will include equipment classes for which 90.1-2013 increased efficiency levels (i.e. standard-sized packaged terminal air conditioners) as well as those for which it did not. We encourage DOE to complete the already-initiated rulemaking for packaged terminal air conditioners and heat pumps.

## **Single-Package Vertical Air Conditioners and Heat Pumps**

In the 2012 final rule for commercial heating, air-conditioning, and water-heating equipment, DOE stated that the Department planned to conduct a separate rulemaking for single-package vertical air conditioners and heat pumps (SPVUs) in order to fulfill the EPCA requirement that

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<sup>1</sup> 79 Fed. Reg. 20134. Based on sum of "max-tech" FFC energy savings for the three equipment classes.

<sup>2</sup> *Ibid.* 20126.

<sup>3</sup> *Ibid.* 20134-35. Based on sum of "max-tech" FFC energy savings for the three equipment classes.

<sup>4</sup> *Ibid.* 20127.

DOE review the most recently published ASHRAE Standard 90.1 with respect to SPVUs.<sup>5</sup> DOE's fall 2013 regulatory agenda indicates that the Department plans to issue a NOPR for SPVUs in August 2014.<sup>6</sup> DOE's preliminary analysis for the NODA found that higher efficiency levels than those in ASHRAE 90.1-2013 for SPVUs could achieve additional national energy savings of up to 0.48 quads.<sup>7</sup> We encourage DOE to initiate a rulemaking for SPVUs to consider higher efficiency levels than those in 90.1-2013.

### Commercial Water Heaters

The American Energy Manufacturing Technical Corrections Act (AEMTCA) of 2012 requires DOE to consider amending the standards for any covered equipment for which more than six years have passed since the issuance of the most recent final rule.<sup>8</sup> The current standards for commercial water heaters were established in a final rule published in 2001,<sup>9</sup> which means that DOE must consider amended standards for commercial water heaters, including oil-fired equipment.

Thank you for considering these comments.

Sincerely,



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<sup>5</sup> 77 Fed. Reg. 28932-33 (May 16, 2012).

<sup>6</sup> <http://www.reginfo.gov/public/do/eAgendaViewRule?pubId=201310&RIN=1904-AC85>.

<sup>7</sup> 79 Fed. Reg. 20136. Based on sum of "max-tech" FFC energy savings for equipment <65,000 Btu/h.

<sup>8</sup> 42 U.S.C. 6313(a)(6)(C)(vi).

<sup>9</sup> 66 Fed. Reg. 3336 (January 12, 2001).