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December 5, 2014

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

Re: Department of Energy's (DOE) Request for Information (RFI) for Energy  
Conservation Standards for Residential Central Air Conditioners and Heat Pumps  
*[Docket Number EERE-2014-BT-STD-0048]*

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Dear Ms. Edwards:

These comments are submitted by the Air-Conditioning, Heating, and Refrigeration Institute (AHRI) in response to the U.S. Department of Energy's (DOE) request for information (RFI) regarding energy conservation standards for residential central air conditioners and heat pumps appearing in the *Federal Register*<sup>1</sup> on November 5, 2014.

AHRI is the trade association representing manufacturers of heating, cooling, water heating, and commercial refrigeration equipment. More than 300 members strong, AHRI is an internationally recognized advocate for the industry, and develops standards for and certifies the performance of many of the products manufactured by our members. In North America, the annual output of the HVACR industry is worth more than \$20 billion. In the United States alone, our members employ approximately 130,000 people, and support some 800,000 dealers, contractors, and technicians.

### **Timing of the Rulemaking is Arbitrary and Unreasonable**

The statutory timeframe established in the Energy Policy and Conservation Act (EPCA) for the amendment of energy efficiency standards<sup>2</sup> fulfills two important purposes that ensure the fundamental fairness of DOE agency action. The first is to ensure that manufacturers have sufficient time to adjust to changes necessary to comply with revised standards, such as research and development of new technology, retooling,

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<sup>1</sup> 79 Fed. Reg. 65,603.

<sup>2</sup> 42 U.S.C. 6295(m)(1)

redesign, and other product development and marketing issues. The second is to ensure that the cost modeling, assumptions, and analysis DOE uses to analyze and determine whether existing standards do not need to be amended are grounded in reality and based upon market data that reflects the existing standards. DOE must analyze the market that actually exists and the impact to the existing market of any amended standards. This necessarily requires DOE to look at both the current standards, and whether they have achieved the energy savings predicted, as well as analyze the actual impact of any proposed amended standards on the market, shipments, jobs, and manufacturer costs relative to *the market that reflects the existing standards*.

By initiating the analysis of amended energy efficiency standards for central air conditioners two months before first ever regional standards are effective, 18 months before those standards will be fully implemented, and two and a half years before a NOPR or determination not to amend must be issued, it will be impossible to analyze whether amended standards would *actually* save significant energy, let alone whether amended standards would be technologically feasible and economically justified. The six year period between the effective date of prior standards and the determination of whether existing standards do not need to be amended is designed to provide sufficient time for the market to adjust to the prior standards, so that DOE can analyze the actual impact on the market and on energy savings of the prior standards and whether amended standards are justified. DOE has provided no justification for why a two and a half year period is necessary to make its determination, or how it can possibly do so given that the market for central air conditioners on a regional basis does not yet exist, and will not exist at all during the time the comment period on the RFI is open.

Specifically, DOE has requested information on issues such as a regional versus national approach, the overall market, market trends, baseline shipment data, and market distribution at various efficiency levels. DOE has provided no reason for proceeding with an analysis based on projections and speculation as to what the market will be is rather than an analysis of what the market actually is. DOE will be asking the industry to guess at information, since the industry cannot effectively evaluate the impact of the 2011 Direct Final Rule, including the impact of Regional Standards and the enforcement thereof, until the new standards are in effect and the 18 sell-off period has expired. DOE has provided no explanation of how it plans to analyze the economic impact of a rule that will not fully go into effect until the middle of 2016 as the baseline for its analysis.

Further, DOE is conducting Manufacturer Impact Analysis interviews before the 2011 Direct Final Rule goes into effect on January 1, 2015. The output of these interviews is used to drive the engineering and cost impact of the standard. It is unreasonable, arbitrary and capricious for DOE to base its analysis on such data rather than wait until the rule is effective and there is actual data as to the impact of current standards on shipments, markups, distribution and consumer demand. An additional unknown in trying to prematurely conduct a rulemaking is the issue of enforcement. While negotiated rulemaking sessions are complete, the Regional Standards enforcement

rules will not likely be finalized until well into 2015; the outcome of which will also have a significant impact on this rulemaking. As enforcement of the standards could have a significant impact on the market and distribution of the products subject to regional standards, this impact will be entirely lacking in DOE's analysis.

Accordingly, DOE should reissue the RFI or leave the comment period open until June 5, 2015 in order to allow the market to reflect the January 1, 2015, effective date and the significant changes it will have on the data relevant to DOE's analysis.

### **Timing Increasing Regulatory Burden**

Since the publication of the 2011 Direct Final Rule establishing new energy conservation standards for residential central air conditioners and heat pumps, effective January 1, 2015, our members have spent a considerable amount of time preparing for the implementation of these standards which will, for the first time ever, establish regional efficiency levels. This is a change that impacts much more than the manufacture of the equipment, but involves significant training and communication for the entire distribution chain - manufacturers, distributors, and contractors. In light of this, the RFI comment deadline is particularly ill timed and does not provide adequate time to substantively answer all 15 questions for which DOE is seeking input and data, particularly as the data under for regional efficiency standards does not yet exist, as discussed above. Extending the comment period for a minimum of 180-days will allow AHRI members to focus on responding to this rulemaking and to start evaluating the impact of the 2011 Direct Final Rule. AHRI and several other stakeholders submitted requests for extension earlier on in the comment process, but this requests have gone unanswered by the Department.

### **Issues on Which DOE Seeks Comments**

AHRI appreciates the opportunity to comment on issues in which the DOE has expressed interest although as noted above much of the data and information DOE is requesting cannot be provided until after the standards implemented through the 2011 Direct Final Rule are in effect and reflected in the marketplace.

- **Issue A.1** - AHRI does not have any suggested changes to the existing product classes for residential central air conditioners and heat pumps at this time.
- **Issue A.2** - Due to the timing of this RFI, we have no additional feedback on whether DOE should consider design options other than those considered in the analyses supporting the 2011 Direct Final Rule. The design options considered in the 2011 Direct Final are still representative of the feasible technology.
- **Issue B.1** - DOE must also consider the associated impacts of the recently issued final rule for energy conservation standards for residential furnace fans on the baseline and max-tech efficiency levels for each product class.<sup>3</sup> The furnace

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<sup>3</sup> 79 Fed. Reg. 38129

fan final rule provides a significant increase in SEER for Central Air Conditioners and Air Source Heat Pumps that are rated with furnace fan products. This standard will provide a de facto increase of 1.0 to 2.0 SEER, which is effective in 2019. DOE must consider this efficiency improvement in the determination of whether amended standards pertaining to residential central air conditioners and heat pumps are warranted.

- **Issue C.1** - Input on the distribution channels relevant for residential central air conditioners subject to regional standards that are yet to be effective, as well as heat pump standards that are yet to be effective, cannot be provided. AHRI shares DOE's goal in analyzing accurate data that reflects the relevant market, and thus urges DOE to gather this information once the market actually reflects the standards established in the 2011 Direct Final Rule.
- **Issue C.2** - Input on the markups for the parties involved with the distribution of the equipment subject to regional standards that are yet to be effective, cannot be provided. "Recent" data will reflect markups prior to the effective date of the standard so will necessarily be outdated and unreliable as soon as the DOE receives it. Again, AHRI shares DOE's goal in analyzing accurate data that reflects the relevant market, and thus urges DOE to gather this information once the market actually reflects the standards established in the 2011 Direct Final Rule.
- **Issue D.1** - AHRI again urges DOE to evaluate the impact of changes in SEER and EER on cooling energy savings once the 2011 Direct Final Rule standards are effective. DOE cannot determine whether additional improvements will save energy without evaluating whether the standards that have been adopted have actually resulted in the energy savings predicted in the Direct Final Rule analysis. If those savings have are not in fact realized, then DOE cannot have a basis for concluding that further changes will result in additional significant energy savings.
- **Issue D.2** - Residential central air conditioners and heat pumps are not utilized significantly in commercial buildings. Further, when residential central air conditioners and heat pumps are utilized in commercial buildings, those building are similar in construction and use to residential building types. AHRI does not recommend consideration of their use in commercial applications.
- **Issue E.1** - Installation costs are generally scalable with equipment size and weight and should continue to be included in the DOE's analysis. Additionally, AHRI suggest that DOE also recognize and include costs incurred by contractors and consumers associated with installation limitations such as local fire code access restrictions and indoor space constraints.
- **Issue E.2** - It is not appropriate to assume that changes in maintenance costs will be negligible for more-efficient products. Higher efficiency products have more complex and expensive components necessitating longer repair times by

more experienced technicians. Replacement parts for high efficiency components are also more expensive lower efficiency counterparts.

- **Issue E.3** - Repair costs are generally directly proportional with equipment price and should continue to be included in the DOE's analysis.
- **Issue E.4** - AHRI will endeavor to collect data on the fraction of central air conditioners and heat pumps that are sold above the minimum energy efficiency standards from manufacturers and provide industry aggregate to the Department within approximately 180-days. As stated above, AHRI questions the validity of guessing expected trends in product efficiency over the next five years when the impact of the 2011 Direct Final Rule and Regional Enforcement of Standards will not even begin in earnest for over 19 months from today. AHRI would like the DOE to justify the validity of its economic analysis under these conditions.
- **Issue F.1** - AHRI will endeavor to collect data showing the distribution of shipments by product class, market sector, and product placement channel and provide industry aggregate to the Department within approximately 180-days. We do not expect data will be available for showing the distribution of shipments by climactic region as a result of the 2011 Direct Final Rule until early in 2018 when one complete year of shipments has been collected.
- **Issue F.2** - There is evidence that the past rulemaking on residential central air conditioners and heat pumps had a negative impact on shipments. Data collected after the 2006 effective date of the 13 SEER standard showed that shipment was significantly down. That was to be expected as basic laws of supply and demand are applicable to the heating and air conditioning industry as well. The significant price increase of 13 SEER units (compared to 10 SEER) priced out many average American families out of the new equipment market and pushed them to either do without HVAC or find cheaper alternatives including repairing old equipment or switching to room air conditioners. Back then we noticed a 25-percent increase in compressor replacements (suggesting more repairs) and a significant jump in the sale of room air conditioners (when the sale of central air conditioners plummeted).
- **Issue G.1** - AHRI will endeavor to collect data showing historical shipment-weighted (SWEF) data for residential central air conditioner and heat pumps by product class and provide industry aggregate to the Department within approximately 180-days. AHRI does not expect data will be available for relevant SWEF data for residential central air conditioner and heat pumps by product class by climactic region as a result of the 2011 Direct Final Rule until early in 2018 when one complete year of shipments has been collected.

AHRI appreciates the opportunity to provide these comments. If you have any questions regarding this submission, please do not hesitate to contact me.

Sincerely,

A handwritten signature in black ink, appearing to read 'LPGR', with a long horizontal flourish extending to the right.

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