

September 9, 2020

Ms. Ann Bailey
US Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Dear Ms. Bailey:

The Consortium for Energy Efficiency (CEE) respectfully submits the following comments in response to the Draft 2021 ENERGY STAR® Most Efficient Criteria, released by the Environmental Protection Agency (EPA) on June 24, 2020.

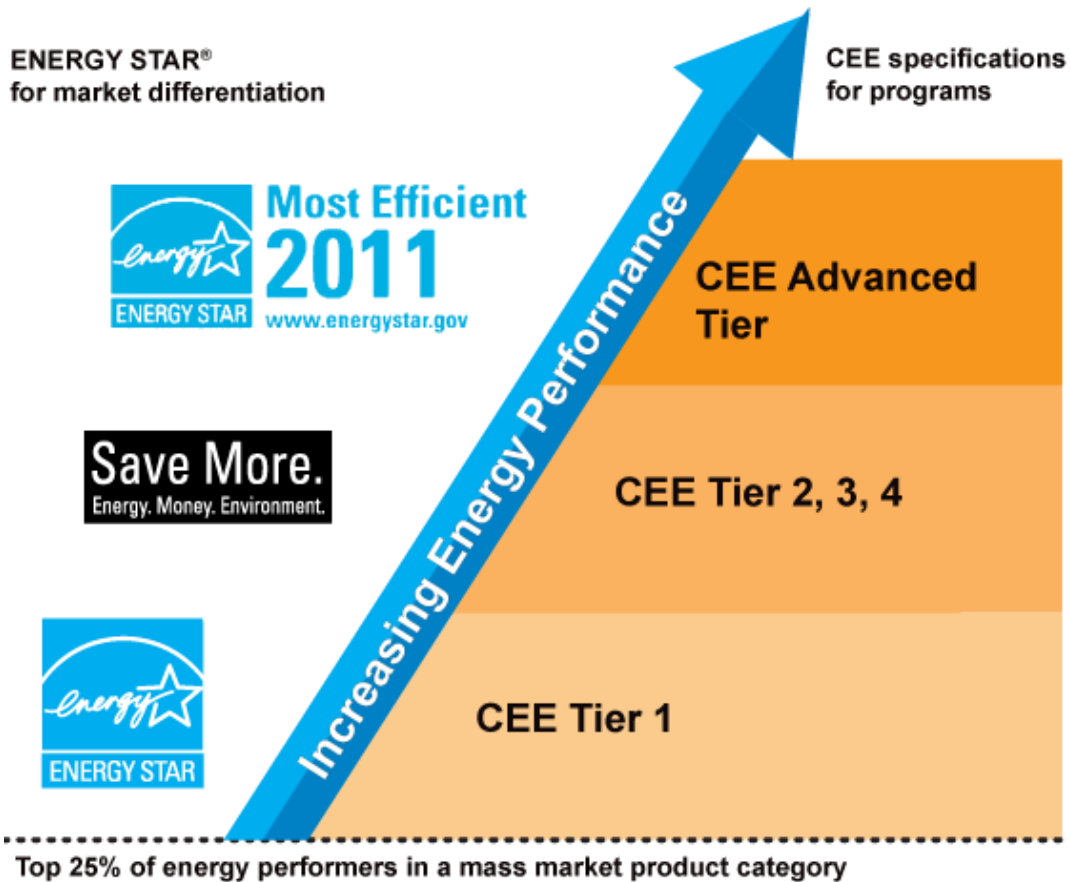
CEE is the binational organization of energy efficiency program administrators and a staunch supporter of the ENERGY STAR Program. CEE members are responsible for ratepayer-funded efficiency programs in 38 US states, the District of Columbia, and four Canadian provinces. In 2017, CEE members directed over 70 percent of the \$8.9 billion in energy efficiency and demand response program expenditures in the two countries. These comments are offered in support of the local activities CEE members carry out to actively leverage the ENERGY STAR brand. CEE consensus comments are offered in the spirit of strengthening ENERGY STAR so it may continue to serve as the national marketing platform for energy efficiency.

CEE highly values the role ENERGY STAR plays in differentiating energy efficient products and services that the CEE membership supports locally throughout the US and Canada. We appreciate the opportunity to provide these comments.

CEE Recognizes the Proposed Most Efficient Levels as Supporting CEE Member Objectives through Alignment with CEE Tiers

The ENERGY STAR Most Efficient designation is most impactful when it aligns with utility objectives for higher efficiency performance. CEE Tiers offer consensus on stringent efficiency levels that CEE members have identified to be worth supporting with incentives. In addition, alignment between CEE Tiers and ENERGY STAR Most Efficient is desirable as it provides a consistent market definition of superior efficiency for industry

partners to build towards. The relationship between CEE voluntary efficiency specifications and ENERGY STAR market differentiators is depicted below.



Given the age of a CEE specification and the rate of market change, it may vary which CEE Tier designation is the most appropriate for alignment with ENERGY STAR Most Efficient. A CEE Tier 2 or 3 designation is intended to provide significant per unit savings above and beyond the preceding tier and reflect the performance of products already available from numerous manufacturers. Though eligible products may be available at higher price points, these performance tiers are intended to yield cost-effective energy savings. A CEE Advanced Tier represents an aspirational level of efficiency and product performance that manufacturers agree is technically feasible. While few or no products may fulfill the Advanced Tier specification at the time it is created, and those that exist may not be appropriate for all applications, it lays the groundwork for future programs. It provides a longer-term focus, creates a consistent goal for the market to move towards, and provides recognition for the first manufacturers to develop products that achieve new heights of efficiency and performance.

CEE would like to recognize the product categories for which CEE Tiers and the 2021 ENERGY STAR Most Efficient are consistent. The proposed Most Efficient criteria for clothes washers and electric clothes dryers

align with CEE Tier 2 and the proposed Most Efficient criteria for gas clothes dryers align with the CEE Advanced Tier. In addition, the proposed Most Efficient criteria for standard size refrigerator-freezers align with CEE Tier 3. Industry players have communicated their support for this consistency and will help spur the appliance market to deliver more products at these efficiency levels.

CEE Requests Consistent Information Disclosure to Enable Program Administrator Assessment and Backing

To provide ENERGY STAR partners with the ability to support the Most Efficient platform, CEE encourages EPA to disclose data that informed each product proposal and provide clear rationale behind decisions made. Robust data are essential for all Most Efficient product categories, not just those with criteria EPA is proposing to modify. Detailed rationale and associated data ensure partners are able to fully assess the implications of the proposals and respond with valuable input.

CEE found the data and rationale shared during the ENERGY STAR Most Efficient Webinar on July 15, 2020 for ceiling and ventilation fans, central air conditioners, air source heat pumps, geothermal heat pumps, furnaces, boilers, and computer monitors to be robust and compelling. We appreciated having insight into the percent of Most Efficient models on the ENERGY STAR product finder and other relevant product databases, percent energy savings, as well as energy performance over time. CEE requests consistent data across categories and would like to see this type of rationale, including percent of total ENERGY STAR models and graphs of performance over time, for appliance and window categories. Percent energy savings over minimum efficiency standards were provided during the Most Efficient webinar, however, kWh per year values yield a more actionable reference point for program administrators to consider. We encourage EPA to consistently provide energy savings numbers and market share data (or percent of total ENERGY STAR models as a proxy) to enable full partner assessment and potential backing.

CEE Comments on the Most Efficient Criteria by Product

Given the Promise of Future Technology, the Boilers Most Efficient Category Should be Sunset, not Suspended

CEE recognizes that EPA's current Most Efficient criteria of 95% AFUE for boilers does not serve the intended purpose of the program platform to distinguish a subset of top performing models within a given category. We also agree with EPA's assessment that increasing the criteria to 96% AFUE would yield minimal incremental energy savings from a technical perspective. It is for these reasons that CEE Tier 2 is set at 95% AFUE and is proposed to stay at this level as we revise our [CEE Residential Heating and Cooling Systems Initiative](#).

We note that boilers represent a large portion of space heating solution in homes (6.6 million homes in the United States¹ and 1.3 million homes in Canada²), and therefore this category is one that greatly benefits from distinction of high performance equipment. In 2018, there were 50 CEE members actively running a residential boiler program.

As recognized in the EPA Most Efficient Memo Proposal, controls are one way in which boiler products may offer further energy opportunities. CEE members have also identified combination units and gas heat pumps as two other categories with great potential for significant savings. CEE urges ENERGY STAR to look into how Most Efficient could be leveraged to promote boiler technologies that are more nascent in the market. There are at least two areas that CEE members are interested in pursuing in this space: combination units and gas heat pumps. CEE is currently in the process of developing a new gas heat pump specification for inclusion in the *CEE Residential Heating and Cooling Systems Initiative* and offers that work as a potential solution for EPA to consider. Given these future opportunities, CEE recommends that EPA temporarily sunset the boilers category with aim to reinstate it once products become available in the US and Canadian markets.

Sustaining the Current Furnace Criteria Reflects Active Program Objectives

CEE Tier 3 sets a performance level for furnaces at 97% AFUE or higher. This tier has proven to be an effective tool in the market to differentiate high performing models across the United States and Canada. We agree with EPA's decision to maintain this level as the ongoing Most Efficient requirement moving into 2021. Our analysis similarly shows that this level designates roughly 10 percent of available models (305 of the 2,906) from the AHRI Directory as of July 2019. Of the 60 CEE members who were actively running a residential furnace program in 2018, 21 were leveraging the CEE Tier 3 / EPA Most Efficient level in their offerings. Only one member incentivized anything higher than 97% AFUE, suggesting that this level is serving as an effective mechanism for voluntary efficiency programs at this time.

Program Administrators Have Proposed the Following Performance Requirements for 2021

CEE is currently in the process of revising our Residential Heating and Cooling Systems Initiative. Our specification levels for central air conditioners and air source heat pumps are still in development, yet represent positions that members established through a consensus based process. The CEE draft levels shown below represent the tier that most closely aligns with the ENERGY STAR Most Efficient criteria for each respective equipment category. This comparison illustrates where members feel there might be opportunity in the market, while they do not represent official levels or positions at this time.

¹ U.S. Department of Energy, Energy Information Agency, "Residential Energy Consumption Surveys, 1993, 1997, 2001, 2005, 2009, and 2015" accessed October, 2019, <http://www.eia.gov/consumption/residential>.

² Natural Resources Canada. Natural Resources Canada, "2015 Survey of Household Energy Use".

Product Type	ENERGY STAR SEER	CEE SEER	ENERGY STAR EER	CEE EER	ENERGY STAR HSPF	CEE HSPF
Split CAC	18.0	18.0	13.0	13.0	–	–
Packaged CAC	16.0	16.0	12.0	12.0	–	–
Split ASHP	18.0	18.0	12.5	13.0	9.6	10.0
Packaged ASHP	16.0	16.0	12.0	12.0	8.2	8.2

We note that, at the time of this letter, Split ASHP is the one category where CEE and ENERGY STAR Most Efficient levels are not aligned. CEE is working to finalize our specifications, and always appreciates when EPA requirements equate to those of our Initiative. That said, until we have finalized and published our revised levels, it is premature to formally advise EPA to correspond with CEE levels.

Interest in Examination of Windows Performance Levels Given Rise in Model Availability Over Time

CEE appreciates the inclusion of residential windows as a category within the suite of end measures distinguished by a Most Efficient label. We recognize that these products face ambitious cost-effectiveness challenges when efficiency criteria for high performance is introduced. In reviewing the history of EPA’s Most Efficient criteria, we note that the levels (U-factor and SHGC) for windows have not changed since introduction of this category to the program in 2013, and yet there are an increasing number of models that meet the requirements.

Year	Models	ENERGY STAR Partners
2013	344	40
2014	380	43
2015	446	46
2016	453	38
2017	408	39
2018	419	40
2019	458	42
2020	477	43

Since the label was created eight years ago, there has been a 39% increase in available models, from 344 in 2013 to 477 in 2020. The change in model availability suggests that the specification levels should be revisited

in order to reflect the tenet of the Most Efficient label, which is to differentiate top performing products in the market

To better assess whether the sustained Most Efficient levels remain appropriate for 2021, CEE requests additional information regarding the market of available models and respective performance levels. This will help our members better determine whether there is an opportunity to consider revising the criteria to further push the market towards the highest feasible technologies.

Support for the New Inclusion of Laundry Centers

Given recent technological advancements in laundry centers, CEE supports EPA's decision to expand the Most Efficient scope to include laundry centers able to achieve Most Efficient requirements for both the clothes washer and clothes dryer. We believe that the addition of laundry centers to the suite of products recognized by ENERGY STAR Most Efficient will reward manufacturers that are currently able to deliver on exceptional levels of performance and push the market toward even greater efficiency improvements. Laundry centers represent an important market niche and provide an efficiency opportunity for space constrained consumers. Based on the lack of other market developments, CEE supports maintaining the efficiency levels for standard and compact sized washers and dryers.

Support for Maintaining the Most Efficient Criteria for Room Air Conditioners

CEE supports the inclusion of room air conditioners as a category within Most Efficient. Room air conditioners represent an important energy efficiency and demand response opportunity to CEE members and are one of the five products included within the *CEE Super Efficient Home Appliance (SEHA) Initiative*. Given technological advancements from 2018 and 2019, CEE has identified the importance of recognizing top performing models in the market and believes that the proposed criteria will continue to accelerate the market toward even higher levels of efficiency. CEE has plans to revisit the CEE Advanced Tier for room air conditioners to recognize these developments.

CEE would once again like to thank the EPA for the opportunity to comment on the ENERGY STAR Most Efficient proposal. Please contact CEE Senior Program Manager Eileen Eaton at (617) 337-9263 with any questions about these comments.

Sincerely,



Ed Wisniewski
Executive Director