

July 25, 2023

Ms. Abigail Daken  
1200 Pennsylvania Ave. NW, MC 6202A  
Washington, DC 20460

Dear Ms. Daken:

The Consortium for Energy Efficiency (CEE) respectfully submits the following comments in response to the ENERGY STAR® proposal to sunset the ENERGY STAR Version 4.1 Specification for Furnaces, remove central air conditioners (CACs) from the ENERGY STAR Version 6.1 Specification for CAC and Heat Pump Equipment, and sunset the ENERGY STAR Version 3.0 Specification for Boilers. CEE plans to review and submit additional feedback at a later date on the release of the ENERGY STAR Residential Boilers Discussion Guide and proposed launch of a new specification to cover heat pump hydronic heating appliances.

CEE is the binational organization of energy efficiency program administrators. Historically, the CEE Board of Directors determined to build a single brand for efficiency and elected to create standing for the ENERGY STAR program rather than advance the name recognition of CEE or other endeavors that existed at that time. The ENERGY STAR program adopted specifications supported by CEE and program administrators, providing the confidence that utility ratepayer programs needed to invest in incentives in association with ENERGY STAR. This was a conscious investment and contribution of equity and the sanctioned obligations of utility members, which include responsibility for delivering safe, reliable, and affordable service. The staff and membership of the Consortium continue to perform diligence relative to the ENERGY STAR brand promise and associated performance specifications, given the very serious obligations entrusted to US and Canadian utilities as well as others sanctioned with advancement of voluntary market transformation efforts.

CEE members are responsible for ratepayer-funded efficiency programs in 38 US states, the District of Columbia, and four Canadian provinces. In 2020, CEE members directed approximately 63% of the \$8.5 billion in energy efficiency and demand response program

expenditures in the two countries. 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. 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. We appreciate the opportunity to provide this feedback.

## **Sunsetting CACs, Gas Furnaces, and Gas Boilers is Premature at This Time**

Sunsetting CACs and gas furnaces in the timeline proposed by EPA<sup>1</sup> is premature due several reasons, including the remaining potential for energy use and carbon reduction, customer bill savings, limited availability of replacement technology, and insufficient levels of heat pump expertise amongst contractors and installers. Similarly, it is premature to propose sunseting the specification for gas boilers without a realistic high efficiency alternative for customers available in the market.

CEE members recognize and promote the role of efficient electric heat pumps for residential space conditioning in appropriate applications with quality installation to ensure customer, grid, and environmental benefits. However, there are currently technical and cost barriers that limit the ability of a given household to adopt electric heat pumps, particularly as the sole technology for heating and cooling. For example, customers can be challenged to switch fuel sources due to electric panel constraints, high upfront costs, and low gas prices in certain jurisdictions. Further, many electric heat pump technologies are not presently equipped to efficiently and cost-effectively deliver adequate heating on the coldest days, particularly in northern parts of the United States, which results in some customers continuing to seek an efficient natural gas back-up system. CEE members report that dual fuel solutions, which combine a right sized high-efficiency furnace with an electric heat pump, are an increasingly common residential solution to balance customer, grid, and environmental needs for affordable, accessible, low-carbon comfort. For this reason, members believe that there remains a strong opportunity for EPA to continue differentiating the most efficient systems in the market at this time. Voluntary efficiency programs strive to accommodate the diverse needs and conditions encountered across regions, allowing for the continued use of high-efficiency furnaces to replace inefficient,

---

<sup>1</sup> EPA proposes to sunset the ENERGY STAR Version 4.1 Specification for Furnaces and remove CAC from the ENERGY STAR V6.1 Specification for CAC and Heat Pump Equipment effective December 30, 2024, with no new certifications accepted after December 30, 2023.

lower-cost alternatives as a primary heat source, and provide auxiliary heating where necessary, efficient, and cost-effective. We believe ENERGY STAR can play an important role in these situations.

CEE therefore discourages EPA from eliminating the trusted, public-facing ENERGY STAR label for these commonly sold equipment types *at this point*. A reasonable ENERGY STAR sunset timeline would align with market conditions that have previously been applied in the ENERGY STAR program, such as:

- federal minimum efficiency standards and the belief that a technology has reached “maximum technology” that eliminate cost-effective energy potential from an ENERGY STAR designation and reduce the role for voluntary programs;
- a lack of market demand and shipment of furnaces, CAC, or boilers, thereby reducing the aggregate energy savings opportunity; or
- minimal difference in price between high-efficiency products and less efficient options.

Given existing technological and market conditions, the ENERGY STAR label for gas furnaces, CACs, and gas boilers continues to provide a meaningful mechanism for CEE members to differentiate and promote cost-effective, high performing equipment in their service territories. Additionally, the ENERGY STAR brand provides customers with clear recognition of high performing products that will help them reduce energy use and save money. In the absence of this recognizable symbol of energy efficiency for gas furnaces, CACs, and gas boilers, consumers may select products solely based on price, overlooking the energy-saving benefits that come with ENERGY STAR-certified options.

## The Proposed Residential CACs Specification Sunset Requires Analysis of Implications Across Climate Zones

There are still significant, cost-effective energy savings targeted by program administrators across North America for CACs. While program administrators are increasingly supporting air source heat pumps due to both energy and carbon savings opportunities, there are still questions in cooling dominant areas on the cost and energy savings of installing these systems in lieu of CACs. Further, sales of CACs continue to eclipse all other HVAC systems, and represent a tremendous spread in performance, providing a meaningful role for the ENERGY STAR program. At least 94 CEE member programs promoted split and/or packaged CACs in 2021, as shown in Table 1 below. Note that many of the programs included in the table are statewide programs promoted by members.

Table 1. CEE Members Offering CAC Programs, 2021

Ameren Illinois	National Grid—New York Upstate
Avista—Idaho	National Grid—Rhode Island
Avista—Oregon	New Jersey Natural Gas
Avista—Washington	New Mexico Gas Company
Baltimore Gas and Electric Company	New York Power Authority
BC Hydro	New York State Energy Research and Development Authority
Berkshire Gas	Nicor Gas
Cape Light Compact	Northern California Power Agency
Columbia Gas of Massachusetts	Northwest Energy Efficiency Alliance
Commonwealth Edison Company	Oncor
Connecticut Natural Gas	Orlando Utilities Commission
Consolidated Edison Company	Pacific Gas and Electric Company
Consumers Energy	PNM
DC Sustainable Energy Utility (DCSEU)	PSEG Long Island
Dominion Energy Utah	Public Service Electric & Gas
DTE Energy	Puget Sound Energy
Duke Energy Carolinas	Sacramento Municipal Utility District
Duke Energy Progress—Carolinas	Seattle City Light
Duke Energy—Florida	Snohomish County PUD
Duke Energy—Indiana	SoCalGas
Duke Energy—Kentucky	South Jersey Gas
Duke Energy—Ohio	Southern California Edison
Efficiency Maine	Southern Connecticut Gas
Efficiency Nova Scotia	Southern Minnesota Municipal Power Agency
Efficiency Vermont	Tacoma Power
Elizabethtown Gas	Tampa Electric
Enbridge Gas Distribution—New York	TECO Peoples Gas
Enbridge Gas Distribution—Ontario	Tennessee Valley Authority—Alabama
Enbridge Gas Distribution—Quebec	Tennessee Valley Authority—Georgia
Énergir	Tennessee Valley Authority—Kentucky
Energy Trust of Oregon—Oregon	Tennessee Valley Authority—Mississippi
Energy Trust of Oregon—Washington	Tennessee Valley Authority—North Carolina
Eversource—Connecticut	Tennessee Valley Authority—Tennessee
Eversource—Eastern Massachusetts	Tennessee Valley Authority—Virginia
Eversource—New Hampshire	United Illuminating Company
Eversource—Western Massachusetts	Unitil—Massachusetts
Focus on Energy—Wisconsin	Unitil—New Hampshire
FortisBC	Vectren Corporation—Ohio
Hawai'i Energy Efficiency Program	Vermont Gas
Hydro-Québec	Xcel Energy—Colorado
Idaho Power—Idaho	Xcel Energy—Michigan
Idaho Power—Oregon	Xcel Energy—Minnesota
IESO	Xcel Energy—New Mexico
Los Angeles Department of Water & Power	Xcel Energy—North Dakota
National Grid—Downstate Long Island	Xcel Energy—South Dakota
National Grid—Massachusetts	Xcel Energy—Texas
National Grid—New York City Downstate	Xcel Energy—Wisconsin

## Residential Furnaces Remain a Central Offering within CEE Members' Energy Efficiency Portfolios

Many CEE members continue to manage programs for gas furnaces, with 47 organizations promoting this measure in 2021, as shown in Table 2 below. This product type remains a fundamental offering within many natural gas and dual fuel utility members' residential

portfolios. Accordingly, CEE specifications continue to offer multiple gas furnace tier options to serve these program administrators. Program administrators, particularly in colder climate zones and localities, continue to see an opportunity for cost-effective energy savings that they support with regulator-approved prescriptive programs and the need for product differentiation with residential furnaces.

**Table 2. CEE Members Offering Natural Gas Furnace Programs, 2021**

Avista—Idaho	National Grid—New York Upstate
Avista—Oregon	National Grid—Rhode Island
Avista—Washington	New Jersey Natural Gas
Berkshire Gas	New Mexico Gas Company
Columbia Gas of Massachusetts	Nicor Gas
Connecticut Natural Gas	Pacific Gas and Electric Company
Consolidated Edison Company	Public Service Electric & Gas
Consumers Energy	Puget Sound Energy
Dominion Energy Utah	Sacramento Municipal Utility District
DTE Energy	SoCalGas
Elizabethtown Gas	South Jersey Gas
Enbridge Gas Distribution—New York	Southern Connecticut Gas
Enbridge Gas Distribution—Ontario	Southern Minnesota Municipal Power Agency
Enbridge Gas Distribution—Quebec	TECO Peoples Gas
Énergir	United Illuminating Company
Energy Trust of Oregon—Oregon	Unitil—Massachusetts
Energy Trust of Oregon—Washington	Vectren Corporation—Ohio
Eversource—Connecticut	Vermont Gas
Eversource—Eastern Massachusetts	Xcel Energy—Colorado
Focus on Energy—Wisconsin	Xcel Energy—Michigan
FortisBC	Xcel Energy—Minnesota
National Grid—Downstate Long Island	Xcel Energy—North Dakota
National Grid—Massachusetts	Xcel Energy—Wisconsin
National Grid—New York City Downstate	

### Residential Furnaces Continue to Have Significant Market Share and Savings Potential

According to AHRI Heating, Cooling Equipment Shipment Data,<sup>2</sup> total shipments for residential furnaces in 2022 were 3,872,368, up 24% from 3,133,768 in 2017. An average of 3,554,628 furnaces shipped per year between 2018 and 2021 according to AHRI. The ENERGY STAR label offers savings of 10-15 percent depending on the region over the minimum standard, and 43% of residential furnace products listed by AHRI are not labeled ENERGY STAR, and have an average AFUE of 82%, just above the current federal minimum with some as low as 80%. This can represent a difference of 8-10% for furnaces in the South, and 13-15% for furnaces sold in the North.

Maintaining the ENERGY STAR label for highly efficient furnaces until there are no longer significant energy savings due to lower shipments or lower availability of less efficient

<sup>2</sup> AHRI, Monthly Shipments, <https://www.ahrinet.org/analytics/statistics/monthly-shipments>.

models will ensure continued savings. DOE's proposed rule<sup>3</sup> from 2022 to raise the minimum performance standard to 95%, which will apply five years after the final rulemaking, will reduce the number of inefficient products available, therefore ENERGY STAR should not sunset its specification for highly efficient furnaces at least until the new federal standard takes effect.

### Highly Efficient Furnaces are an Important Part of a Decarbonization Pathway for Households

Given the technical limitations, consumer readiness, and system sizing challenges, dual fuel solutions are increasingly relevant in homes across the United States, particularly in retrofit applications. Further, industry partners report that they often promote dual fuel solutions given the opportunity for reduced customer comfort issues and callbacks as well as additional financial gain, and that the market for this system configuration is growing. The aforementioned challenges can make replacing a residential furnace with an air source heat pump as the sole heat source infeasible in certain applications. A tandem approach of installing an electric heat pump while maintaining or upgrading the existing furnace (oftentimes downsizing), can be a cost-effective path to saving energy, reducing carbon emissions, and preparing for future decarbonization and energy efficiency solutions. The system can be set up to manage cost, energy, or carbon savings.

Members indicate that there are significant challenges with retrofitting the older housing stock, such as electrical service capacity limitations, poor thermal enclosures, and leaky ductwork. CEE requests that EPA conduct additional research on the factors that may make it difficult for customers to pursue electric air source heat pump retrofits and share this analysis with stakeholders. Highly efficient furnaces are necessary to achieve efficient and cost-effective retrofit solutions at this time, particularly in colder climates, to support customer heating and comfort needs and provide fuel flexibility that supports grid balancing with increased electric loads.

The ENERGY STAR label for natural gas equipment residential space conditioning is important to maintain in the market to create a pathway for innovative near-term and future solutions such as gas heat pumps that can help meet efficiency, decarbonization, and fuel flexibility needs. Maintaining the trusted ENERGY STAR label in this space for highly efficient natural gas products enables consumers to continue to make informed decisions while preparing for a future with even more efficient technologies may be

---

<sup>3</sup> US Department of Energy, Appliance and Equipment Standards Rulemakings and Notices, [https://www1.eere.energy.gov/buildings/appliance\\_standards/standards.aspx?productid=59&action=viewlive#current\\_standards](https://www1.eere.energy.gov/buildings/appliance_standards/standards.aspx?productid=59&action=viewlive#current_standards).

available, contractors to communicate options, and utilities to support the most efficient solutions that fit customers' individual needs.

## CEE Requests Additional Analysis to Support the Evaluation of the Proposed Sunset and Timeline

The sunset proposal memo for gas furnaces and CACs released by EPA on May 18 states: “With the passage of the Inflation Reduction Act, EPA sees an unprecedented opportunity for the ENERGY STAR program to support the national transition to the most energy efficient equipment available. The Agency recognizes an important responsibility to guide consumers to the choices that support the efficient electrification of residential space conditioning. As such, EPA is proposing to phase out the labeling and promotion of residential gas furnaces and CACs.” CEE is concerned with a proposal that relies solely on the Inflation Reduction Act (IRA) to fill the void in the market to address decarbonization. The impact of IRA and by extension other rebate programs can be limited to equipment first costs, and the transition to electric air source heat pumps requires significant retrofit expenses and increased operational costs for some consumers. AGA estimates the annual residential bill for space heating with a condensing natural gas appliance to be \$632, versus \$971 with a cold climate heat pump<sup>4</sup>. A more thorough analysis of the potential impacts and unintended consequences needs to be conducted by EPA to inform the transition strategy and challenges associated with the proposed phase-out.

The ENERGY STAR proposal does not appear to consider variations in climate conditions and energy costs across different regions. This analysis would help identify the practicality and efficiency of heat pumps and other alternatives in specific geographical contexts. By understanding regional variations, policymakers and stakeholders can develop nuanced approaches that cater to the unique needs and challenges of different areas. CEE would support this understanding by characterizing program administrator experiences, lessons learned, and industry input.

Participants in a meeting of CEE members stressed the importance of evaluating the impact on low-income customers in particular. EPA's proposal lacks references to research on the influences this phase-out might have on low-income customers, long-term energy consumption, and carbon emissions. Applying existing research to this proposal may increase confidence that it would not adversely affect customer accessibility and affordability to ensure that low-income customers are not disproportionately affected by

---

<sup>4</sup> American Gas Association, “Natural Gas Homes are Lowest-Cost and Lowest-Emissions, Even Compared to Homes with Electric Cold-Climate Heat Pumps,” March 9, 2023, <https://www.aga.org/report-finds-gas-heating-beats-cold-climate-heat-pumps-on-cost-and-emissions/>.

the phase-out. Understanding the specific needs and challenges that this demographic faces would enable policymakers and utilities to develop or refine targeted strategies and support mechanisms to assist them in transitioning to more sustainable heating options.

Finally, CEE members highlight the importance of evaluating the long-term impact of the phase-out of CACs, furnaces, and boilers on energy consumption, carbon emissions, and overall sustainability goals. Conducting comprehensive studies (or compiling supportive data from existing studies) will provide insights into the actual energy savings achieved, the effectiveness of alternative heating options, and the potential carbon emissions reductions. This information is crucial for accurately assessing the environmental benefits and ensuring that the phase-out aligns with broader sustainability objectives.

## The Proposed Residential Boilers Sunset Requires Additional Technology and Consumer Readiness

While CEE is very supportive of ENERGY STAR's work with DOE to develop a test procedure for air-to-water heat pumps and excited about the future market transformation potential of electric hydronic heating, members are concerned that removing the ENERGY STAR label for high-efficiency boilers at this time – without suitable product alternatives – could result in lost energy savings, improper customer understanding, and inappropriate equipment installations. Because air-to-water heat pumps produce much lower-temperature water than boilers, they are not an appropriate retrofit solution without significant capital expense for the homeowner to change out the distribution system.

To mitigate these concerns, CEE recommends offering customers clear guidance and suitable alternatives should EPA phase out ENERGY STAR boilers in the future. This includes the identification and promotion of substitute efficient heating options that align with the customers' specific needs and infrastructure. Additionally, providing comprehensive educational materials and training to contractors and professionals could ensure they have the knowledge and expertise to guide customers appropriately during the transition. CEE is already working with program administrators, manufacturers, and other key stakeholders to develop materials for quality air source heat pump installation, and the CEE forum can provide a place to develop similar materials for efficient, effective hydronic systems.

CEE would once again like to thank EPA for the opportunity to comment on the proposal to sunset the ENERGY STAR Version 4.1 Specification for Furnaces, remove CACs from the



ENERGY STAR Version 6.1 Specification for CAC and Heat Pump Equipment, and sunset the ENERGY STAR Version 3.0 Specification for Boilers. Please contact CEE Senior Program Manager, Emma Hanson at [ehanson@cee1.org](mailto:ehanson@cee1.org) with any questions about these comments.

Sincerely,

A handwritten signature in black ink, appearing to read "John Taylor". The signature is fluid and cursive, with the first name "John" and last name "Taylor" clearly distinguishable.

John Taylor  
Executive Director