ENERGY MARKETERS OF AMERICA EMAI

July 7, 2023

U.S. Environmental Protection Agency
ENERGY STAR Labeling Branch
Ann Bailey, Director
1200 Pennsylvania Ave NW
Washington, DC 20460

RE: EPA Proposal to Sunset the ENERGY STAR Boilers Specification and Launching a New Specification to Cover Heat Pump Hydronic Heating Appliances (Boiler Sunset Proposal).

ELECTRONIC SUBMISSION VIA: HVAC@energystar.gov; Daken.Abigail@epa.gov; Tapani.holly@epa.gov

---

INTRODUCTION

EMA is a federation of 48 state and regional trade associations representing family-owned and operated small business energy marketers throughout the United States. EMA members supply 80 percent of all finished motor fuels nationwide on the wholesale and retail level. EMA also represents heating fuel dealers and distributors across the Northeast, Mid-Atlantic, Midwest and Northwest regions. EMA heating fuel marketers also install and service EnergyStar rated residential and commercial heating and cooling appliances including liquid fuel furnaces and boilers, HVAC systems, electric heat pumps, and natural gas and propane appliances.

COMMENTS

EMA is filing these supplemental comments in addition to group comments signed on to as part of a stakeholder coalition led by the National Propane Gas Association. While the coalition comments refer to *all* boilers, these supplemental comments focus solely on heating oil boilers, including those boilers designed to operate on HO and biodiesel blends.

First, EMA wishes to reaffirm general points made in our coalition comments referenced above:

- EPA is proposing to sunset the ENERGY STAR certification for liquid fuel boilers in favor of electric heat pumps. However, the EPA provides little evidence, in terms of emission reduction, efficiency gains or consumer cost savings sufficient to justify sunsetting the ENERGY STAR

Rating for liquid fuel boilers. This lack of evidence directly contradicts ENERGY STAR'S own mission, statement and the very purpose of the energy efficiency program itself as spelled out on its website" The ENERGY STAR label "provides simple, credible, and unbiased information that consumers and businesses rely on to make well-informed decisions." The EPA must provide sufficient evidence to justify the sunset proposal and extend the comment period so stakeholders may respond in a more informed manner. The EPA must maintain the ENERGY STAR certification for liquid and gas boilers in order to fulfill its statutory obligations to provide unbiased information to consumer so that they can make well informed decisions regarding residential home heating appliances.

EMA SUPPLEMENTAL COMMENTS

The EPA ignores the important value, scope and influence of the ENERGY STAR label when stating in the June 2003 notice that "the proposal to sunset the ENERGY STAR boiler specification will in no way, affect consumer's continued access to, or the availability of boilers. EMA strongly disagrees with the EPA on this point. One need only look at the ENERGY STAR webpage[1] to find a comprehensive list of what the EPA itself believes is the value, scope and influence of the ENERGY STAR label:

- More than 90% of American households recognize the ENERGY STAR.
- The estimated annual benefit of ENERGY STAR is more than $100 billion.
- Americans purchased more than 300 million ENERGY STAR certified products and more than 500 million ENERGY STAR certified light bulbs in 2021.
- A majority of American households surveyed reported purchasing an ENERGY STAR certified product in the last year.
- Nearly 840 utilities, plus state/local governments and nonprofits leverage ENERGY STAR in their efficiency programs, reaching roughly 95% of households in all 50 states.
- Approximately 1,700 manufacturers and 1,200 retailers, partner with ENERGY STAR to make and sell millions of ENERGY STAR certified products.
- Nearly 2.5 million ENERGY STAR certified single-family, multifamily, and manufactured new homes and apartments have been built to date, including more than 140,000 in 2022, representing more than 9.4% of all U.S. homes built.
- Nearly 3,000 builders, developers, and manufactured housing plants are ENERGY STAR partners, including all of the nation's twenty largest home builders.

[1] https://www.energystar.gov/about/impacts

While EPA is correct that consumers will continue to have access to boilers without the ENERGY STAR label, the agency fails to consider what will those boilers will look like and how appliance efficiency, consumer cost savings and CO2 emission reductions be affected by the sunset proposal.

Impact on Boiler Efficiency

Sunsetting the ENERGY STAR label for liquid fuel boilers will lead to a loss in future efficiency gains for liquid fuel boilers. Loss of the ENERGY STAR label removes an important incentive for manufacturers to continue efficiency improvements in liquid fueled boilers. Many consumers purchase heating appliances based solely on the ENERGY STAR label[2]. Without the ENERGY STAR label, consumers will remain uniformed about more efficient liquid fuel boilers and sales will decrease. In response to lower sales, manufacturers will likely discontinue capital investment in more fuel-efficient boilers. As a result, meaningful efficiency gains for liquid fuel boiler appliances will effectively end. In this way, the EPA's sunset proposal actually incentivizes inefficiency by eliminating customer choice.

Impact on Consumer Choice

The EPA believes sunsetting the ENERGY STAR certification for liquid fuel boilers and focusing solely on electric heat pumps presents "an unprecedented opportunity for the ENERGY STAR program to support the national transition to the most energy efficient equipment available."[3]

EMA believes the EPA is misinterpreting the scope of the transition to electric heat pumps that the sunset proposal is likely to bring. The majority of consumers will more than likely continue use of their liquid fuel appliances despite EPA's decision to promote electrification. EMA liquid heating fuel marketers install the majority of electric heat pumps in homes currently equipped with liquid fuel boiler systems. These marketers consistently report that consumers are increasingly purchasing electric heat pumps, not for a sole source heating use, but instead for air conditioning use. It is reported that consumers are keeping their liquid fuel boilers for their main source of heat. This is particularly true in the colder climates of the country where liquid fuel boilers predominate. Consumers find that liquid fuel boilers provide sufficient, even heat during the height of the winter heating season than electric heat pumps. As a result, consumers using electric heat pumps for cooling will continue use liquid fuel boilers, regardless of their efficiency rating for the remainder of their operational life cycle and beyond.

Also, when aging boilers fail, consumers generally upgrade to a new, more efficient boiler appliance. Consumers often choose to upgrade because it is far less expensive and disruptive than full conversion to a single source electric heat pump system. Heat pump conversion, requires removal and disposal of old boilers, oil tanks, hot water pipes and radiators in an environmentally safe manner. Conversion often requires significant construction activities throughout every room in a house. Consumers find it far

---

[2] EPA Office of Air and Radiation, *National Awareness of ENERGY STAR for 2019: Analysis of 2019 CEE household Survey.* (2019) www.energystar.gov/awareness .

[3] EPA Office of Air and Radiation, *ENERGY STAR Residential Boilers Discussion Guide*, (June 5, 2023) p. 1

cheaper and more convenient to maintain and upgrade existing liquid fuel boilers than fully convert to electric heat pumps.

Finally, there are a large number low-income households with liquid fuel boilers that cannot afford conversion to electric heat pumps, regardless of federal, state and utility rebate offers. These homes will not be converting to electric heat pumps. The liquid fuel boilers in these homes tend to be the least efficient and only replaced with more efficient boilers when they are well beyond the end of their operational life. Moreover, these boilers are not upgraded with the most efficient models extant due to cost.

As a result, it is unlikely that many of the more than 5,000,000 liquid fuel boiler systems currently in use will not be replaced with electric heat pumps for many years to come, if, at all. These boilers fall across the entire efficiency spectrum, with only a small percentage at the most efficient end of the spectrum.

Liquid fuel boilers are here to stay and the EPA has the opportunity to make them more efficient and more carbon neutral through the Energy Star Program. The EPA states, without offering evidence that "market penetration of ENERGY STAR boilers remains high with no meaningful improvements in efficiency on the horizon."[4] EMA agrees that market penetration of liquid fuel boilers remains high. However, EPA offers no evidence to show that improvements in efficiency for liquid fuel boilers has come to an end. EMA has not learned of any boiler manufacturer that has announced an end to efficiency improvements. In fact, significant strides are being made in liquid fuel boilers capable of burning renewable biodiesel fuel blends. Recently, a liquid fuel boiler capable of running on 100 percent biodiesel has been introduced. These liquid fuel boilers achieve a net zero CO2 emission standard when fueled with 100 percent diesel fuel.

EPA Ignores the Role of Biodiesel in Reducing GHG Emissions from Liquid Fuel Boilers

The truth is, EPA is using the efficiency standard for boilers as a way to eliminate fossil fuels as a source for home heating appliances. This view is entirely consistent with the Biden Administration's policy to turn away from fossil fuels in favor of renewable energy sources[5]. However, the EPA fails to recognize that the production of biodiesel derived from plant material, used cooking oil and animal fat is expanding rapidly[6] in the liquid fuel heating industry. Shifting to low carbon fuel heating oil/ biodiesel blends dramatically reduces greenhouse gas emissions[7]. Moreover, the heating oil industry is committed

[4] EPA Office of Air and Radiation, *ENERGY STAR Residential Boilers Discussion Guide*, (June 5, 2023) p. 1
[5] Dan Lashof, *Tracking Progress: Climate Action Under the Biden Administration*, World Resources Institute, (January 23, 2023) https://www.wri.org/insights/biden-administration-tracking-climate-action-progress
[6] U.S. Department of Energy, *Biodiesel Production and Distribution,* Alternative Fuels Data Center, *https://afdc.energy.gov/fuels/biodiesel_production.html*
[7] BIOHEAT® https://mybioheat.com/bioheat-fuel-benefits/

to a net-zero carbon emissions by 2050. This goal will be achieved by incremental increases of biodiesel content in heating oil from the current 5-20 percent range to 100 percent fossil free biodiesel by 2050.[8]

EPA's Missed Opportunity by the Numbers

EMA believes, the elimination of liquid fuel boilers from the ENERGY STAR program will result in a missed opportunity for the EPA to significantly reduce greenhouse gas emissions, consumer costs and fuel consumption. The following illustration based on contemporary data reveals the significance of this missed opportunity should the EPA sunset the ENERGY STAR label for liquid fuel boiler systems:

- The average consumer uses 800 gallons of heating oil per year, at an average cost of $4.00 per gallon. Each gallon of heating oil burned emits 22 pounds of CO2.

- Assuming older boilers are replaced with a current model that is 25% more efficient, *each* consumer would reduce their oil consumption by 200 gallons per year, eliminate 4400 pounds of CO2 emissions and average fuel cost savings of $800 per customer.

- Currently, there are 5,000,000 HO customers using liquid fuel boilers nationwide. Assuming liquid fuel boilers have a 20-year operational life; and that on average 250,000 new boilers with a 25% gain in efficiency are installed during year 1 of operational life; the potential annual cost savings for consumers equal $200 million dollars. Additionally, during the first year of operational life, CO2 emissions will be reduced by 1.1 billion pounds. In addition, over the same 20-year operational life for liquid fuel boilers, consumer cost savings would equal $4 billion with a reduction of CO2 emissions equaling *22 billion pounds.*

- Assuming *all* consumers use the *most efficient* liquid fuel boiler appliances available today, over the full 20-year operational life, consumers cost savings would increase to $80 billion with a reduction of *440 billion pounds* of CO2 emissions.

The fundamental question the EPA must answer is why the agency would leave these significant potential economic and environmental benefits that more efficient liquid boilers can easily deliver? Why not treat all heating appliances, boilers and heat pumps equally and let the consumer decide which one is the best choice for their heating needs. Liquid fuel boilers are here to stay. It doesn't make sense to eliminate an important incentive that will drive liquid fuel boilers to be more efficient with a net-zero carbon footprint.

Conclusion

The significant improvement in fuel consumption, reduced consumer costs and CO2 emission reductions

[8] BIOHEAT®, *Heating Oil Industry Commits to Net Zero Emissions by 2050,* https://mybioheat.com/net-zero-emissions-by-2050/

will continue to make gains as liquid fuel boilers become more efficient and the biodiesel content of heating oil reaches 100 percent by 2050. The National Oil Heat Research Alliance (NORA) was authorized by Congress in 2000 to provide funding that enables the liquid fuel heating industry to provide more efficient, more reliable and lower carbon home heating and hot water to American Consumers.[9] NORA research[10] shows that in the case of radiant heating and forced-air home heating and cooling systems, all three liquid fuels-based heating technologies, coupled with three specific fuel scenarios, reduce carbon emissions more than cold climate electric heat pumps using electricity from low emissions, advanced natural gas central station and combined cycle combustion turbine production. The EPA cannot ignore the importance of treating all home heating sources equally, in an unbiased manner under the ENERGY STAR program.

EMA urges EPA to take an object approach to advance efficiency improvements in all heating appliances across the board. An objective rather than subjective approach to heating appliance efficiency will maintain consumer choice, reduce energy consumption while reducing CO2 emissions by billions of pounds reductions. The EPA must not ignore the significant environmental and economic benefits from the continued efficiency improvements in liquid fuel boiler systems. EMA urges the EPA return to an unbiased evaluation of heating appliances by keeping the ENERGY STAR certification for liquid fuel boiler systems.

Thank you for the opportunity to comment on this important. Please feel free to contact me should you have any questions or need additional information.

Sincerely,

Mark S. Morgan, EMA Regulatory Counsel

Energy Marketers of America
300 New Jersey Avenue, NW, Suite 900
Washington, D.C. 20001

(202) 487-4536

[9] The National Oilheat Research Alliance Act of 2000, Pub L. 106-469, Title VII, 114 Stat 2043 (2000)
[10] Richard Sweetser, *The Future Fuel: Reduced Carbon Liquid Fuel Can Answer GHG Demands,* Indoor Comfort Marketing, (Jan/Feb 2019) https://industry-publications.com/The%20Future%20Fuel%20ICM%20Jan%202019.pdf