ENERGY STAR® Version 5.0 Furnaces Draft 1 Specification Stakeholder Comment Response Matrix

Topic	Comment	EPA Response
Revision vs. Sunset	49 commenters support the Environmental Protection Agency (EPA)'s decision to reconsider the original proposal to sunset the ENERGY STAR program for furnaces and instead propose a revision. Comments point to the diversity of U.S. climates and their varied heating needs, carbon emissions reductions from continuing to provide incentives for more efficient furnaces given their ongoing market prevalence, customer affordability and applicability concerns of whole-home heating with heat pumps, Inflation Reduction Act (IRA) incentives for furnaces, electric grid readiness, among others, as reasons to maintain the furnace program. Stakeholders also support the proposed revision as a technology neutral strategy consistent with promoting the responsible use of all energy sources. Three commenters support continuation of the furnace program, but request the Agency wait to revise the ENERGY STAR Furnace specification until the court proceedings for the Department of Energy's (DOE's) Consumer Furnace Rule are fully resolved. One requests no revision and maintenance of the current specification. 11 stakeholders disagree with the revised proposal and request the EPA sunset the furnace program as originally proposed. Three of these stakeholders are concerned that by maintaining the specification, even with higher efficiency requirements, the EPA will signal to the market that furnaces should continue to be incentivized and hinder state decarbonization goals. Another eight state that the ENERGY STAR label should be reserved for higher energy efficiency products, like heat pumps, that increase consumer savings, reduce carbon emissions and other air pollutants, and ensure year-round comfort for occupants. They also describe heat pump technology improvements that enable them to meet nationwide heating needs, even in the coldest parts of the country, and how heat pump sales have now outpaced furnaces for three consecutive years. If the specification is not sunset at this time, they request the EPA consider sunsetting the program ahead of the new DOE standards effective date in 2028.	Given the overwhelming comment support, the EPA has decided to move forward with a revision to the ENERGY STAR furnace specification rather than choosing to sunset the program at this time. The Agency considers efficient heat pumps to be widely applicable for heating homes across the U.S. but understands the lingering relevancy of furnaces as the market transforms from gas to electric heating. While not electing to sunset the program at this time, the EPA will continue to monitor the market and may choose to do so at a later date. The EPA has noted the ongoing court proceedings regarding the upcoming DOE furnace efficiency standards, effective December 2028, but highlights that this specification revision is not bound to any future standards updates. The upcoming 2028 standard was not the basis for the decision to revise.
Regional Distinction	Six stakeholders support the removal of the regional distinction, allowing for a more consolidated specification. One commenter describes regional distinctions as diluting program participation and effectiveness while another expresses support for removal to align with CEE's approach. In contrast, 23 stakeholders recommend that the EPA maintains the regional distinction to allow for different gas furnace efficiency requirements and labels in different regions of the country. Many of these commenters note that the cost/benefit analysis for a high-efficiency furnace is greatly dependent on the number of heating days for a customer—when the number of heating days is low, the rate of return on the additional cost for the improved efficiency of the unit is extremely diminished. Therefore, by setting the AFUE requirement identically to the north, the EPA may deter consumers from higher-efficiency models due to their greater cost burden and longer payback period. Commenters also note the differences in furnace design for the North and the South. They explain that in the South, furnaces are optimized for cooling needs, much larger than heating needs, which often require greater airflow than systems in the North. Five stakeholders request the EPA provide the data to the public that supported removing the regional distinction from the requirements. One provided data showing the significant difference in furnace market trends in northern states compared to southern states and notes that setting a lower AFUE requirement for the south will allow for improved ENERGY STAR market penetration and energy savings in a region that largely opts for minimum efficiency units.	The EPA agrees with commenters highlighting the benefits of a consolidated specification, which was the original intent of the Draft 1 proposal to remove the regional distinction. However, the EPA has decided to reinstate the regional distinction for gas furnaces in the Final Draft. This will provide consumers in the South more favorable payback and takes into account the market landscape of furnaces in the South specifically, as shown by data that stakeholders provided with their comments. The EPA will continue recognizing furnaces for the South that have a lower requirement, but that still provide high savings and acceptable consumer payback. The EPA acknowledges that continuation of two different requirements for furnaces adds administrative burden for manufacturers and misaligns with CEE's and with DOE's approach and will, therefore, revisit this decision in the next revision.
Gas Furnace Efficiency Levels	14 stakeholders support the proposed 97 AFUE level for gas furnaces, given the current availability of nearly 500 qualifying models, the DOE Final Rulemaking increasing national furnace efficiency standards to 95 AFUE in 2028 and harmonization with the IRA 25C tax credit levels set by the Consortium for Energy Efficiency (CEE). However, of these commenters, one manufacturer requests removal of the "all orientations" requirement for ENERGY STAR furnaces, given that none of their models would qualify for ENERGY STAR at the 97 AFUE level with this requirement and that DOE and AHRI furnace ratings are both identified by orientation. They note that several of their models are able to meet 97 AFUE in one or two orientations. One stakeholder supports 97 AFUE for gas furnaces, but only if the regional distinction in maintained. In this circumstance, the stakeholder and one other request a 92 AFUE level for the South. One of these stakeholders requests no revision to the AFUE requirements unless the effective date is pushed to 2032. Another stakeholder requests a 96 AFUE level if the effective date remains in 2026. Otherwise, they accept the 97 AFUE level if the effective date is changed to 2027 to allow more time for development of qualifying models. Many stakeholders	The Agency thanks stakeholders for their support of the proposed 97 AFUE level for the North and will move forward with it. For the South, the Agency has added a 95 AFUE level in the Final Draft, chosen because consumers will recover additional purchase cost fastest at this level. In addition, the Agency will allow products to be certified in particular orientations, consistent with the DOE approach for minimum standards. When revising an ENERGY STAR specification, the EPA uses model counts from manufacturers to determine the availability of eligible products for utility programs and consumers. Consumer choice when selecting the right product for their circumstances is directly related to the variety of models available. The EPA

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	express their concern that the proposed AFUE levels will reduce qualifying models too much, recommending model count reductions only up to 30%. One suggests that the EPA is overestimating product availability at the 97 AFUE level by referencing model counts. Instead, they request that shipment data be used to characterize the market, claiming that model counts are not a good indicator of the market.	considers the furnace model counts included in the data package accurately represent product availability and notes that more than 45% of models meet the 95 AFUE level.
Oil Furnaces	Four stakeholders support the oil furnace proposal at 87 AFUE. Two of these commenters also express support for the proposed biofuel requirement but note that the correct UL standard for oil-fired central furnaces is UL 727, not UL 726 as currently referenced. Alternatively, four stakeholders disagree with the 87 AFUE proposal, noting it as higher than the federal tax credit level defined in the IRA, and request the EPA align the oil furnace AFUE requirement with the tax credits. They claim this may confuse consumers with respect to incentives and rebate benefits.	Based on the comments received, the EPA is maintaining the 87 AFUE requirement for oil furnaces in the Final Draft, as proposed. Commenters from both industry and oil utilities support this level. The Agency understands the request to align the specification requirements with the tax credit levels; however, tax credit eligibility for oil furnaces changes during the time this specification will be in effect in any case. The erroneous UL Standard referenced in the specification has been corrected from UL 726 to UL 727.
Effective Date	Five industry stakeholders support the proposed effective date of 2026, while nine recommend an expedited timeline. Eight request a more immediate effective date of 2025, citing the feasibility of this timeline (nearly 500 models are readily available and would qualify under the proposal) and highlighting that an earlier date would deliver an additional year's worth of pollution reduction and energy savings and is in line with historic ENERGY STAR decisions to revise product specifications. One stakeholder supported this assertion by including a short analysis of the historic timeline for ENERGY STAR Furnace specification revisions, showing 86 weeks between revision initiation and initiation. A similar schedule would put the V5.0 effective date in 2025. One manufacturer supports 2026 if the AFUE requirement is lowered to 96 but requests a 2027 effective date if the proposed 97 AFUE requirement remains. Other comments note preference for later dates than 2026. 20 stakeholders suggest an effective date in 2028, noting that utility energy efficiency programs typically run on three-year cycles, so an effective date in 2028 would provide the programs with enough time for updates. They also indicate that 2028 would align with the DOE Consumer Furnace Final Rule's effective date and that aligning these timelines would reduce consumer confusion and manufacturer burden by allowing simultaneous compliance with the EPA and DOE. The other 20 stakeholders request that the EPA extend the timeline for the revision to be consistent with the IRA, expiring in 2031 and 2032. These stakeholders note that many of the incentives and credits in the IRA are connected to the ENERGY STAR program and request that the EPA maximize the availability of these benefits by delaying the effective date of V5.0 until their expiration. Several commenters provided multiple recommendations for the effective date of this revision and expressed support for more than one of the timelines discussed above. Notably, three commenters requested delaying the revision until court rulings related to the new DOE efficiency standard for furnaces are finalized and either aligning the effective date of the revision with expiration of IRA benefits or the effective date of the future DOE minimum efficiency standard, while one of them also noted their support for the proposed 2026 date if the EPA maintains the regional distinction and a 92 AFUE level for the South.	In careful consideration of the comments received, the EPA has selected a July 31, 2026, effective date for V5.0 of the ENERGY STAR Furnace specification. The Agency views 2026 to be an appropriate timeline in consideration of the various interests of a large number of relevant stakeholders. In response to commenters concerned with energy efficiency program cycles and upcoming changes to federal efficiency standards, the selected date allows for a greater than 18-month transition period (double the typical for ENERGY STAR specifications) more than sufficient for efficiency programs to adjust. Setting an effective date ahead of an upcoming change in DOE minimum efficiency requirements is not an unusual practice for the ENERGY STAR program. In fact, the EPA often supports recognizing manufacturers electing to redesign earlier than required. With respect to commenters' concern over IRA benefits for furnaces, the EPA notes that eligibility for tax credits under the IRA is based on CEE initiatives, unrelated to this specification, while HOME/HEAR rebates are connected to ENERGY STAR certification. With this revision, furnaces remain eligible for state rebates under the HOMES program. Despite the increase in AFUE requirements, availability of eligible models remains sufficient and consumers will benefit from applying the rebates to the purchase price of products that deliver greater savings. On balance, the Agency believes the proposed effective date to be appropriate. The EPA selected July 31 to make the revision effective ahead of the typical late summer manufacturing ramp up for the 2026/2027 heating season. A January 1 effective date would inconvenience manufacturers, occurring in the middle of the major manufacturing season for furnaces.
Consumer Payback and Energy Savings	Several stakeholders express their concern with the EPA's approach to calculating consumer payback and potential energy savings for ENERGY STAR gas furnaces. Eight argue that calculating savings and payback by comparing 97 AFUE furnaces to the currently effective 80 AFUE federal minimum could mislead consumers. Of these, seven raise concerns with the EPA's analysis, given that the new federal minimum will only be 2% lower, not 17%, effective December 18, 2028. These stakeholders recommend the EPA calculate energy savings when compared to the finalized, but not yet effective, federal minimum efficiency standard. The other stakeholder requests that the	Calculating consumer payback and energy savings relative to the current federal minimum efficiency standard for ENERGY STAR products is typical of the program (as is assuming base ENERGY STAR rather than an average above the ENERGY STAR minimum). Given that the V5.0 effective date will be earlier than the effective date of the future standard, the EPA considers its analysis to be relevant and,

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	EPA compare savings to the current ENERGY STAR program in order to justify the revision, not the DOE minimum efficiency, so as not to overstate the energy savings potential for the revision. Commenters also claim that the energy savings justified by assuming customers will make the switch from an 80 to a 97 AFUE furnace in the South are inaccurate because only 1.3% of southern customers currently purchase 97 AFUE or greater furnaces. They postulate that a customer who would normally purchase a 92 AFUE model using ENERGY STAR incentives may now opt for a minimum efficiency 80 AFUE model, given the diminished cost/benefit analysis for efficient furnaces in southern climates. In such a scenario, the commenter concludes there could be a reduction in energy savings in the South, rather than an increase as reported by the EPA. These stakeholders recommend characterizing the energy savings potential by using regional market weighted shipments rather than the "average" furnace consumer. Another commenter states that the EPA is considerably underestimating the installed cost of furnaces and therefore understating the number of years for consumer payback. They claim that more accurate prices would show poorer payback for consumers at the 97 AFUE level, especially for southern customers requiring financing and without access to the same level of incentives available to those in the north. They also request the EPA present documented furnace pricing and correlated energy savings instead of estimating consumer payback through linear interpolation. Four stakeholders recommend that the EPA adopt the Full Fuel Cycle (FFC) approach, as used by the National Academies of Sciences, Engineering, and Medicine and the DOE, to provide more comprehensive information on energy consumption, environmental impacts, and greenhouse gas emissions.	providing an estimate of energy savings potential for consumers. However, the Agency recognizes that for some consumers, the savings will be smaller based on products currently prevalent in the market. Further, after the DOE minimum efficiency increases to 95 AFUE in 2028, the savings will be dramatically lower. The EPA recognizes that the savings analysis conducted without the regional distinction could mask significant regional differences for consumer payback that were previously apparent when separately considering the North and the South. Given the reasons for deciding to maintain the regional distinction discussed above, the EPA agrees with the commenters concerned about low market penetration for efficient furnaces in the South and the potential effects of raising the requirement from 90 to 97 AFUE. Therefore, the Agency is setting a 95 AFUE level for southern furnaces and has separately considered consumer payback and energy savings. The other issues mentioned by commenters concerning how the EPA conducts its analysis of consumer payback and energy savings are noted by the EPA. However, consistent with the principles of the ENERGY STAR program and its voluntary nature, the intent is to determine whether the savings are of a sufficient order of magnitude to justify a specification change. Assumptions related to factors like price can vary widely by region, manufacturer, and the individual considerations of a particular home. The EPA has therefore made assumptions based on reliable data sources, including the DOE, so that it may draw generally meaningful conclusions about energy savings and consumer payback for ENERGY STAR products.
Program Needs, Consumer Choice, and Affordability	Eight stakeholders support the proposal as they feel it appropriately captures the most efficient furnaces in the market and would not negatively affect consumers. They note that ENERGY STAR is a voluntary program; even after certain residential furnaces no longer qualify for the ENERGY STAR label, consumers will still be able to purchase those products and any others available on the market. These stakeholders also highlight that nearly 500 models would remain available for programs at the AFUE levels proposed, and that an effective date as early as 2025 would provide sufficient time for efficiency programs to respond to the updated requirements. Another commenter supports the proposal to revise given the significant role ENERGY STAR plays in qualifying furnaces for federal rebates and the straightforward, performance-based nature of the program, highlighting efficient products. One stakeholder supports maintaining the furnace program, noting that many of their customers prefer gas heating over electric, and requests that the revision continues to provide sufficient low-cost heating options for consumers in northern climates by retaining natural gas products. 12 stakeholders request the EPA reconsider the proposal to allow more models to meet the requirements, balancing energy efficiency and affordability to make high-efficiency furnaces accessible to more consumers. Several argue that the proposal undermines effective energy efficiency programs by reducing the number of eligible gas furnaces too significantly, with one requesting no more than a 30% reduction in model count, and others noting a 4.5% certification eligibility, reducing available models by 95%, as too low. Four stakeholders request that the EPA re-evaluate the proposal to promote gas-fuel products that are realistically available for low and middle-income and disadvantaged communities, claiming that a 97 AFUE level is financially burdensome for consumers. Another stakeholder is particularly concerned that the proposed revision will hinder implementation of the DOE's Home Energy Rebate Programs by reducing eligible furnaces to only financially inaccessible models.	ENERGY STAR is a voluntary leadership program designed to identify and increase demand for top performing models available on the market. Setting levels that represent the highest efficiency, while maintaining adequate selection and a reasonable payback, sets the stage for more significant savings as the market transforms towards that improved level of efficiency. To support the different market considerations in the South, the EPA is electing to maintain the regional distinction in the program and setting the southern AFUE requirement at 95 AFUE, lower than in the North. This change will better support southern programmatic needs in a region where minimum efficiency furnace installations remain high. With respect to low-income and disadvantaged communities, the EPA notes that these households will benefit from additional savings by taking advantage of state rebates, tax credits and utility rebates to lower the purchase price of products with the increased level of efficiency this specification represents. Low-income customers also have the option of selecting an efficient ENERGY STAR certified heat pump in place of a gas furnace to help reduce the combined price of a central air conditioner and a furnace, while avoiding potentially significant future increases in gas utility prices as the grid electrifies. Especially when considering the large number of incentive-eligible heat pump models, the EPA is confident in

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		the availability of affordable efficient heating options for all communities across the U.S.
ENERGY STAR Process, Procedure, and Guiding Principles	Two stakeholders note that the EPA must follow their Strategic Vision and Guiding Principles and be consistent with prior revisions related to ENERGY STAR HVAC products by not eliminating an excessive number of products from the program and follow previously used timelines. Five stakeholders are concerned with the EPA's stakeholder engagement and comment/response procedures for the ENERGY STAR program. Four claim that the EPA did not provide evidence on how it is in compliance with its enabling legislation, which calls for ENERGY STAR to promote energy efficiency, reduce pollution, enhance public awareness, preserve the integrity of the ENERGY STAR label, regularly update product criteria, or solicit comments from interested parties. These stakeholders recommend a Federal Register Notice to ensure sufficient stakeholder involvement. The fifth commenter notes that the EPA has a duty to respond to comments, and that stakeholders have raised issues with the proposal. Therefore, the EPA should respond to those concerns with a cogent and reasoned response supported by data and evidence. One stakeholder notes that the EPA justified the 97 AFUE level based upon IRA program efficiency requirements but highlights that the IRA requirements for furnace efficiency were promulgated without rulemaking, and their setting is not consistent with ENERGY STAR program criteria dealing with ENERGY STAR process and procedure.	The EPA follows a standard process documented in the ENERGY STAR Standard Operating Procedure (SOP) that the Agency uses for all ENERGY STAR specification actions including proposals related to new and revised specifications and sunsets. ENERGY STAR posts documents for public notice on its website, consistent with OMB's 2010 Guidance on Social Media, Web-Based Interactive Technologies, and the Paperwork Reduction Act: Memorandum for the Heads of Executive Departments and Agencies, and Independent Regulatory Agencies (whitehouse.gov). The EPA distributed the proposal to a list of stakeholders while also posting it to the broadly available ENERGY STAR Partner Public Notices web page. The ENERGY STAR SOP provides for a 30-day comment period for proposals with more time allowable as needed. The EPA has also made accommodations for comment submittals beyond the deadline to ensure all stakeholder feedback is considered and has responded to all comments received in this comment/response matrix. The Agency sets ENERGY STAR program efficiency requirements independently of other programs and specifications, including the IRA. While alignment sometimes offers certain benefits, justification for AFUE levels in the proposal is based on stakeholder comments, and feedback and other market trends related to furnaces, consistent with ENERGY STAR Guiding Principles.
Renewables	One stakeholder believes the ENERGY STAR program should fully embrace the use of renewable gases and hydrogen in homes and businesses.	This comment is out of scope of the ENERGY STAR V5.0 Furnaces Draft 1 specification.
Gas Heat Pumps	22 stakeholders suggest that the ENERGY STAR program should include natural gas heat pumps (GHPs) in the furnace specification. 17 stakeholders believe that not including GHPs under the ENERGY STAR label would negatively affect low and moderate-income households. ENERGY STAR certification would make GHPs eligible for IRA incentives, further lowering initial costs. GHPs are already eligible for the Energy Efficient Home Improvement tax credit. One stakeholder proposes pathways for recognizing GHPs under ENERGY STAR, such as incorporating the ANSI Z21.40.4 test method into the furnace specification (and renaming it to "Residential Gas-Fired Forced Hot Air Specification"), creating an ENERGY STAR Most Efficient category for GHPs, or introducing an Emerging Technology Award for residential GHPs.	The EPA has taken note of the commenters' support for an ENERGY STAR gas heat pump specification and will continue to monitor the market to determine whether it would be appropriate to include these products in the ENERGY STAR program in the future.
Dual Fuel	Nine stakeholders express their interest in ENERGY STAR including ratings and performance requirements for dual fuel systems in the furnaces specification. Three of these stakeholders suggest that the EPA consider the furnace ENERGY STAR requirement to be at an AFUE greater than or equal to 95%, when paired with a heat pump, in a dual fuel system. Another recommends that the EPA review the California Energy code development process, and the items filed in the proceeding, specifically regarding dual-fuel systems since such products offer another opportunity for energy savings and emissions reductions in the ENERGY STAR program.	The EPA recognizes the potential benefits of a dual fuel HVAC system and intends to work with stakeholders to develop ENERGY STAR recognition of dual fuel systems that have both a furnace and a heat pump.