Proposed Rules

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This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF ENERGY

10 CFR Part 430

[EERE–2021–BT–STD–0031]

RIN 1904–AF19

Energy Conservation Program: Energy Conservation Standards for Consumer Furnaces

AGENCY: Office of Energy Efficiency and Renewable Energy, Department of Energy.

ACTION: Request for information.

SUMMARY: The U.S. Department of Energy (''DOE'') is initiating an effort to determine whether to amend the current energy conservation standards for certain classes of consumer furnaces. Under the Energy Policy and Conservation Act, as amended, DOE must review these standards at least once every six years and publish either a notice of proposed rulemaking (''NOPR'') to propose new standards or a notification of determination that the existing standards do not need to be amended. This request for information (''RFI'') solicits information from the public to help DOE determine whether amended standards for non-weatherized oil-fired, mobile home oil-fired, weatherized oil-fired, weatherized gas, and electric consumer furnaces would result in significant energy savings and whether such standards would be technologically feasible and economically justified. DOE also welcomes written comments from the public on any subject within the scope of this document (including those topics not specifically raised), as well as the submission of data and other relevant information.

DATES: Written comments and information are requested and will be accepted on or before February 28, 2022.

ADDRESSES: Interested persons are encouraged to submit comments using the Federal eRulemaking Portal at *www.regulations.gov.* Follow the instructions for submitting comments. Alternatively, interested persons may submit comments, identified by docket number EERE–2021–BT–STD–0031, by any of the following methods:

1. *Federal eRulemaking Portal: www.regulations.gov.* Follow the instructions for submitting comments.

2. *Email:* To *OEWGFurnaces2021STD0031@ee.doe.gov.* Include docket number EERE–2021–BT–STD–0031 in the subject line of the message.

No telefacsimiles (''faxes'') will be accepted. For detailed instructions on submitting comments and additional information on this process, see section IV of this document.

Although DOE has routinely accepted public comment submissions through a variety of mechanisms, including postal mail and hand delivery/courier, the Department has found it necessary to make temporary modifications to the comment submission process in light of the ongoing coronavirus 2019 (''COVID–19'') pandemic. DOE is currently suspending receipt of public comments via postal mail and hand delivery/courier. If a commenter finds that this change poses an undue hardship, please contact Appliance Standards Program staff at (202) 586–1445 to discuss the need for alternative arrangements. Once the COVID–19 pandemic health emergency is resolved, DOE anticipates resuming all of its regular options for public comment submission, including postal mail and hand delivery/courier.

Docket: The docket for this activity, which includes **Federal Register** notices, comments, and other supporting documents/materials, is available for review at *www.regulations.gov.* All documents in the docket are listed in the *www.regulations.gov* index. However, some documents listed in the index, such as those containing information that is exempt from public disclosure, may not be publicly available.

The docket web page can be found at: *www.regulations.gov/docket/EERE-2021-BT-STD-0031.* The docket web page contains instructions on how to access all documents, including public comments, in the docket. See section III for information on how to submit comments through *www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT:

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For further information on how to submit a comment or review other public comments and the docket, contact the Appliance and Equipment Standards Program staff at (202) 287–1445 or by email: *ApplianceStandardsQuestions@ee.doe.gov.*

SUPPLEMENTARY INFORMATION:

Table of Contents

I. Introduction

A. Authority and Background

The Energy Policy and Conservation Act, as amended (''EPCA''),[1] authorizes DOE to regulate the energy efficiency of a number of consumer products and certain industrial equipment. (42 U.S.C. 6291–6317) Title III, Part B [2] of EPCA established the Energy Conservation Program for Consumer Products Other Than Automobiles. These products include consumer furnaces, the subject of this document. (42 U.S.C. 6292(a)(5)). EPCA prescribed energy conservation standards for these products, and

[1] All references to EPCA in this document refer to the statute as amended through the Energy Act of 2020, Public Law 116–260 (Dec. 27, 2020).

[2] For editorial reasons, upon codification in the U.S. Code, Part B was redesignated Part A.

directed DOE to conduct two cycles of rulemakings to determine whether to amend these standards. (42 U.S.C. 6295(f)).

Under EPCA, DOE's energy conservation program consists essentially of four parts: (1) Testing, (2) labeling, (3) Federal energy conservation standards, and (4) certification and enforcement procedures. Relevant provisions of EPCA include definitions (42 U.S.C. 6291), test procedures (42 U.S.C. 6293), labeling provisions (42 U.S.C. 6294), energy conservation standards (42 U.S.C. 6295), and the authority to require information and reports from manufacturers (42 U.S.C. 6296).

Federal energy efficiency requirements for covered products established under EPCA generally supersede State laws and regulations concerning energy conservation testing, labeling, and standards. (42 U.S.C. 6297(a)–(c)) DOE may, however, grant waivers of Federal preemption in limited instances for particular State laws or regulations, in accordance with the procedures and other provisions set forth under. (42 U.S.C. 6297(d)).

As previously noted, EPCA established energy conservation standards for consumer furnaces, which are expressed in terms of minimum annual fuel utilization efficiency (''AFUE''). (42 U.S.C. 6295(f)(1)–(2)) Pursuant to EPCA, DOE was required to conduct two rounds of rulemaking to consider amended energy conservation standards for consumer furnaces. (42 U.S.C. 6295(f)(4)(B) and (C)) In satisfaction of the first round of rulemaking under 42 U.S.C. 6295(f)(4)(B), DOE published a final rule on November 19, 2007 (''November 2007 final rule'') that revised the initial standards for four classes of consumer furnaces (*i.e.,* non-weatherized gas furnaces (''NWGFs''), mobile home gas furnaces (''MHGFs''), weatherized gas furnaces (''WGFs''), and non-weatherized oil-fired furnaces (''NWOFs''), but left them in place for two product classes (*i.e.,* mobile home oil-fired furnaces (''MHOFs'') and weatherized oil-fired furnaces (''WOFs'')). 72 FR 65136, 65137. Compliance with the amended standards established in the November 2007 final rule was to be required beginning November 19, 2015. *Id.* at 72 FR 65136, 65169.

On June 27, 2011, DOE published a direct final rule (''DFR'') (''June 2011 DFR'') revising the energy conservation standards for consumer furnaces pursuant to the voluntary remand in *State of New York, et al.* v. *Department of Energy, et al.* 76 FR 37408, 37415. In the June 2011 DFR, DOE addressed the energy conservation standards for the same six product classes addressed in the November 2007 final rule (*i.e.,* NWGFs, MHGFs, WGFs, NWOF, MHOFs, and WOFs) plus electric furnaces. The June 2011 DFR amended the existing AFUE energy conservation standards for NWGFs, MHGFs, and NWOFs, and amended the compliance date (but left the existing standards in place) for WGFs. The June 2011 DFR also established electrical standby mode and off mode standards for NWGFs, MHGFs, NWOFs, MHOFs, and electric furnaces. DOE confirmed the standards and compliance dates promulgated in the June 2011 DFR in a notice of effective date and compliance dates published on October 31, 2011 (''October 2011 notice''). 76 FR 67037. After publication of the October 2011 notice, the American Public Gas Association sued DOE to invalidate the rule as it pertained to NWGFs. Petition for Review, *American Public Gas Association, et al.* v. *Department of Energy, et al.,* No. 11–1485 (D.C. Cir. filed Dec. 23, 2011). On April 24, 2014, the Court granted a motion that approved a settlement agreement that was reached between DOE, APGA, and the various intervenors in the case, in which DOE agreed to a remand of the non-weatherized gas furnace and mobile home gas furnace portions of the June 2011 direct final rule in order to conduct further notice-and-comment rulemaking. Accordingly, the Court's order vacated the June 2011 DFR in part (*i.e.,* those portions relating to non-weatherized gas furnaces and mobile home gas furnaces) and remanded to the agency for further rulemaking. 86 FR 43120, 43124 (Aug. 6, 2021). As a result, the standards established by the June 2011 DFR for NWGFs and MHGFs did not go into effect. The court order left in place the standards for WGFs, NWOFs, MHOFs, WOFs, and electric furnaces. Amended standards for NWGFs and MHGFs are being addressed in a separate rulemaking. This RFI covers WGFs, NWOFs, MHOFs, WOFs, and electric furnaces.

On January 15, 2021, in response to a petition for rulemaking submitted by the American Public Gas Association, Spire, Inc., the Natural Gas Supply Association, the American Gas Association, and the National Propane Gas Association (83 FR 544883; Nov. 1, 2018) DOE published a final interpretive rule determining that, in the context of residential furnaces, commercial water heaters, and similarly situated products/equipment, use of non-condensing technology (and associated venting constitutes a performance-related ''feature'' under EPCA that cannot be eliminated through adoption of an energy conservation standard. 86 FR 4776 (''January 2021 Final Interpretive Rule'').

However, on December 29, 2021, DOE subsequently published a final interpretive rule that returns to the previous and long-standing interpretation (in effect prior to the January 15, 2021 final interpretive rule), under which the technology used to supply heated air or hot water is not a performance-related ''feature'' that provides a distinct consumer utility under EPCA. 86 FR 73947 (''December 2021 Final Interpretive Rule'').

EPCA also requires that, not later than 6 years after the issuance of any final rule establishing or amending a standard, DOE evaluate the energy conservation standards for each type of covered product, including those at issue here, and publish either a notification of determination that the standards do not need to be amended, or a NOPR that includes new proposed energy conservation standards (proceeding to a final rule, as appropriate). (42 U.S.C. 6295(m)(1)) If DOE determines not to amend a standard based on the statutory criteria, not later than 3 years after the issuance of a final determination not to amend standards, DOE must publish either a notification of determination that standards for the product do not need to be amended, or a NOPR including new proposed energy conservation standards (proceeding to a final rule, as appropriate). (42 U.S.C. 6295(m)(3)(B)) DOE must make the analysis on which a determination is based publicly available and provide an opportunity for written comment. (42 U.S.C. 6295(m)(2)).

In proposing new standards, DOE must evaluate that proposal against the criteria of 42 U.S.C. 6295(o), as described in the following section, and follow the rulemaking procedures set out in 42 U.S.C. 6295(p). (42 U.S.C. 6295(m)(1)(B)) If DOE decides to amend the standard based on the statutory criteria, DOE must publish a final rule not later than two years after energy conservation standards are proposed. (42 U.S.C. 6295(m)(3)(A)).

DOE is publishing this RFI to collect data and information to inform its decision consistent with its obligations under EPCA.

B. Rulemaking Process

DOE must follow specific statutory criteria for prescribing new or amended standards for covered products. EPCA requires that any new or amended

energy conservation standard prescribed by the Secretary of Energy (''Secretary'') be designed to achieve the maximum improvement in energy or water efficiency that is technologically feasible and economically justified. (42 U.S.C. 6295(o)(2)(A)) The Secretary may not prescribe an amended or new standard that will not result in significant conservation of energy, or is not technologically feasible or economically justified. (42 U.S.C. 6295(o)(3)).

To adopt any new or amended standards for a covered product, DOE must determine that such action would result in significant energy savings. (42 U.S.C. 6295(o)(3)(B)) The significance of energy savings offered by a new or amended energy conservation standard cannot be determined without knowledge of the specific circumstances surrounding a given rulemaking.[3] For example, the United States has now rejoined the Paris Agreement on February 19, 2021. As part of that agreement, the United States has committed to reducing GHG emissions in order to limit the rise in mean global temperature. As such, energy savings that reduce GHG emission have taken on greater importance. Additionally, some covered products and equipment have most of their energy consumption occur during periods of peak energy demand. The impacts of these products on the energy infrastructure can be more pronounced than products with relatively constant demand. In evaluating the significance of energy savings, DOE considers differences in primary energy and FFC effects for different covered products and equipment when determining whether energy savings are significant. Primary energy and FFC effects include the energy consumed in electricity production (depending on load shape), in distribution and transmission, and in extracting, processing, and transporting primary fuels (*i.e.,* coal, natural gas, petroleum fuels), and thus present a holistic picture of the impacts of energy conservation standards. Accordingly, DOE evaluates the significance of energy savings on a case-by-case basis.

To determine whether a standard is economically justified, EPCA requires that DOE determine whether the benefits of the standard exceed its burdens by considering, to the greatest extent practicable, the following seven factors:

(1) The economic impact of the standard on the manufacturers and consumers of the affected products;

(2) The savings in operating costs throughout the estimated average life of the product compared to any increases in the initial cost, or maintenance expenses likely to result from the standard;

(3) The total projected amount of energy and water (if applicable) savings likely to result directly from the standard;

(4) Any lessening of the utility or the performance of the products likely to result from the standard;

(5) The impact of any lessening of competition, as determined in writing by the Attorney General, that is likely to result from the standard;

(6) The need for national energy and water conservation; and

(7) Other factors the Secretary considers relevant.

(42 U.S.C. 6295(o)(2)(B)(i)(I)–(VII))

DOE fulfills these and other applicable requirements by conducting a series of analyses throughout the rulemaking process. Table I.1 shows the individual analyses that are performed to satisfy each of the requirements within EPCA.

TABLE I.1—EPCA REQUIREMENTS AND CORRESPONDING DOE ANALYSIS

EPCA requirement	Corresponding DOE analysis
Significant Energy Savings	• Shipments Analysis. • National Impact Analysis. • Energy and Water Use Determination.
Technological Feasibility	• Market and Technology Assessment. • Screening Analysis. • Engineering Analysis.
Economic Justification:	
1. Economic Impact on Manufacturers and Consumers.	• Manufacturer Impact Analysis. • Life-Cycle Cost and Payback Period Analysis. • Life-Cycle Cost Subgroup Analysis. • Shipments Analysis.
2. Lifetime Operating Cost Savings Compared to Increased Cost for the Product.	• Markups for Product Price Determination. • Energy and Water Use Determination. • Life-Cycle Cost and Payback Period Analysis.
3. Total Projected Energy Savings	• Shipments Analysis. • National Impact Analysis.
4. Impact on Utility or Performance	• Screening Analysis. • Engineering Analysis.
5. Impact of Any Lessening of Competition	• Manufacturer Impact Analysis.
6. Need for National Energy and Water Conservation.	• Shipments Analysis. • National Impact Analysis.
7. Other Factors the Secretary Considers Relevant.	• Employment Impact Analysis. • Utility Impact Analysis. • Emissions Analysis. • Monetization of Emission Reductions Benefits. • Regulatory Impact Analysis.

[3] See 86 FR 70892, 70901 (Dec. 13, 2021).

As detailed throughout this RFI, DOE is publishing this document seeking input and data from interested parties to aid in the development of the technical analyses on which DOE will ultimately rely to determine whether (and if so, how) to amend the standards for WGFs, NWOFs, MHOFs, WOFs, and electric furnaces.

C. Deviation From Appendix A

In accordance with Section 3(a) of 10 CFR part 430, subpart C, appendix A, DOE notes that it is deviating from that appendix's provision requiring a 75-day comment period for all pre-NOPR standards documents. 10 CFR part 430, subpart C, appendix A, section 6(d)(2). DOE is opting to deviate from this step because DOE believes that 30 days is a sufficient time to respond to this initial rulemaking document because the market and available technologies have not changed substantially from the previous rulemaking.

II. Request for Information

In the following sections, DOE has identified a variety of issues on which it seeks input to aid in the development of the technical and economic analyses regarding whether amended standards for WGFs, NWOFs, MHOFs, WOFs, and electric furnaces may be warranted.

A. Scope & Product Classes

When evaluating and establishing energy conservation standards, DOE divides covered products into product classes by the type of energy used, or by capacity or other performance-related features that justify differing standards. (42 U.S.C. 6295(q)) In making a determination whether a performance-related feature justifies a different standard, DOE must consider such factors as the utility of the feature to the consumer and other factors DOE determines are appropriate. *(Id.)* As discussed in Section I.A, DOE has recently published the December 2021 Final Interpretive Rule that returns to the previous and long-standing interpretation (in effect prior to the January 15, 2021 final interpretive rule), under which the technology used to supply heated air or hot water is not a performance-related ''feature'' that provides a distinct utility under EPCA. 86 FR 73947 (Dec. 29, 2021).

A ''furnace'' is ''a product which utilizes only single-phase electric current, or single-phase electric current or DC current in conjunction with natural gas, propane, or home heating oil, and which—

(1) Is designed to be the principal heating source for the living space of a residence;

(2) Is not contained within the same cabinet with a central air conditioner whose rated cooling capacity is above 65,000 British thermal units (''Btu'') per hour;

(3) Is an electric central furnace, electric boiler, forced-air central furnace, gravity central furnace, or low-pressure steam or hot water boiler; and

(4) Has a heat input rate of less than 300,000 Btu per hour for electric boilers and low-pressure steam or hot water boilers and less than 225,000 Btu per hour for forced-air central furnaces, gravity central furnaces, and electric central furnaces. 10 CFR 430.2. (See also 42 U.S.C. 6291(23)).[4]

DOE divides consumer furnaces into seven classes for the purpose of setting energy conservation standards: (1) NWGFs, (2) MHGFs, (3) WGFs, (4) NWOFs, (5) MHOFs, (6) WOFs, and (7) electric furnaces. 10 CFR 430.32(e)(ii). As discussed in section I.B of this document, NWGFs and MHGFs were the subject of a lawsuit that resulted in an order to remand the standards to DOE for further analysis. As a result, DOE has been analyzing amended standards for those two consumer furnace classes as part of a separate, ongoing rulemaking covering only those two classes (see Docket No. EERE–BT–STD–2014–0031 [5]). Therefore, DOE is not considering NWGFs and MHGFs as part of this review. The product classes that DOE considered for this document are NWOFs, WGFs, MHOFs, WOFs, and electric furnaces. The current standards for WGFs, NWOFs, MHOFs, WOFs, and electric furnaces are shown in Table II–1.

TABLE II–1—ENERGY CONSERVATION STANDARDS FOR CONSUMER FURNACES COVERED IN THIS RFI

Product class	AFUE (percent)	$P_{W,SB}$ and $P_{W,OFF}$ (watts)
Non-weatherized oil-fired furnaces (not including mobile home furnaces)	83	11
Mobile Home oil-fired furnaces	75	11
Weatherized gas furnaces	81	N/A
Weatherized oil-fired furnaces	78	N/A
Electric furnaces	78	10

Issue 1: DOE seeks comment on whether there are any products that are covered by the definition of ''furnace'' and should be regulated by DOE, but are not covered by any of the current classes of consumer furnaces that are regulated by DOE.

Issue 2: DOE seeks information regarding any other new product classes it should consider for inclusion in its analysis. DOE also requests relevant data detailing the corresponding impacts on energy use that would justify separate product classes (*i.e.,* explanation for why the presence of these performance-related features would increase or decrease energy consumption).

B. Significant Savings of Energy

On June 27, 2011, DOE adopted amended energy conservations standard for consumer furnaces, central air conditioners, and heat pumps that are expected to result in an estimated 3.36 to 4.38 quadrillion Btu (''quads'') of cumulative energy savings over a 30-year period for the three products. 76 FR 37408, 37412 (June 27, 2011). Of this, 0.012 quads were from the efficiency standards adopted for NWOFs at 83 percent AFUE. Additionally, in the June 2011 DFR, DOE estimated that an energy conservation standard established at the maximum technologically feasible (''max-tech'') AFUE level, which was

[4] In turn, a forced-air central furnace is defined as a gas or oil burning furnace designed to supply heat through a system of ducts with air as the heating medium. The heat generated by combustion of gas or oil is transferred to the air within a casing by conduction through heat exchange surfaces and is circulated through the duct system by means of a fan or blower. 10 CFR 430.2. A gravity central furnace is defined as a gas fueled furnace which depends primarily on natural convection for circulation of heated air and which is designed to be used in conjunction with a system of ducts. 10 CFR 430.2. An electric central furnace is defined as a furnace designed to supply heat through a system of ducts with air as the heating medium, in which heat is generated by one or more electric resistance heating elements and the heated air is circulated by means of a fan or blower. 10 CFR 430.2.

[5] The rulemaking docket is available online at: *www.regulations.gov/docket/EERE-2014-BT-STD-0031.*

determined to be 97 percent, would have resulted in 0.376 additional quads of savings for NWOFs.[6] Potential energy savings for MHOFs, WOFs, and electric furnaces from amended AFUE standards were not considered in the June 2011 DFR. (EERE–2011–BT–STD–0011–0012, Technical Support Document: Chapter 10. National and Regional Impact Analyses at pp. 10–96–10–97) For MHOFs and WOFs, DOE found that only a very small number of these products are shipped, resulting in *de minimis* potential for energy savings from amended AFUE standards. Because electric furnace efficiency already approaches 100-percent AFUE, DOE concluded that electric furnaces would also have *de minimis* energy savings potential and did not consider amending the AFUE standards. 76 FR 37408, 37443, 37445.

While DOE's RFI is not limited to the following issues, DOE is particularly interested in comment, information, and data on energy use and shipments, as outlined in sections II.B.1 and II.B.2 of this document, to inform whether potential amended energy conservation standards would result in a significant savings of energy.

1. Energy Use Analysis

As part of the rulemaking process, DOE conducts an energy use analysis to identify how products are used by consumers, and thereby determine the energy savings potential of energy efficiency improvements. The energy use analysis is meant to represent typical energy consumption in the field.

Issue 3: DOE requests feedback on the levels of energy savings that could be expected from the adoption of more-stringent standards for consumer furnaces, specifically for those classes of consumer furnaces covered by this notice (WGFs, NWOFs, MHOFs, WOFs, and electric furnaces).

Issue 4: DOE requests data on the typical operating conditions for WGFs, NWOFs, MHOFs, WOFs, and electric furnaces in high heating and reduced heating modes.

Issue 5: DOE requests feedback and sources of data or recommendations to support sizing criteria of WGFs, NWOFs, MHOFs, WOFs, and electric furnaces for typical consumer space-heating applications.

2. Shipments

DOE develops shipments forecasts of consumer furnaces to calculate the national impacts of potential amended energy conservation standards on energy consumption, net present value (''NPV''), and future manufacturer cash flows. DOE shipments projections are based on available historical data broken out by product class and efficiency. Current sales estimates allow for a more accurate model that captures recent trends in the market.

Issue 6: DOE requests historical consumer furnace shipments data for each product class covered by this notice (*i.e.,* WGFs, NWOFs, MHOFs, WOFs, and electric furnaces). DOE is interested in shipments data, broken out by product class, efficiency level, and region. If disaggregated shipments data are not available at the product class level, DOE requests shipments data at any broader available category.

C. Technological Feasibility

1. Technology Options

In the development of the June 2011 DFR, DOE considered a number of technology options that manufacturers could use to reduce energy consumption in NWOFs, WGFs, MHOFs, WOFs, and electric furnaces. However, as discussed in section II.B of this document, DOE did not consider amended AFUE standards for MHOFs, WOFs, and electric furnaces in the June 2011 DFR. Regarding NWOFs and WGFs, DOE considered 13 technology options that would be expected to impact the AFUE of consumer furnaces: (1) Condensing secondary heat exchanger for non-weatherized furnaces, (2) heat exchanger improvements for non-weatherized furnaces, (3) condensing and near-condensing technologies for WGFs, (4) two-stage or modulating combustion, (5) pulse combustion, (6) low NO_X premix burners, (7) burner derating, (8) insulation improvements, (9) off-cycle dampers, (10) concentric venting, (11) low-pressure, air-atomized oil burners, (12) high-static oil burners, and (13) delayed-action oil pump solenoid valves. 76 FR 37408, 37449. DOE seeks comment on any changes to these technology options that could affect whether DOE could propose a ''no-new-standards'' determination, such as an insignificant increase in the range of efficiencies and performance characteristics of these technology options. DOE also seeks comment on whether there are any other technology options that DOE should consider in its analysis.

Issue 7: DOE seeks information on the aforementioned technologies, including their applicability to the current market and how these technologies may impact the energy use of consumer furnaces as measured according to the DOE test procedure. DOE also seeks information on how these technologies may have changed since they were considered in the June 2011 DFR analysis.

Additionally, the June 2011 DFR established separate standby mode and off mode energy conservation standards for NWOFs and electric furnaces. 76 FR 37408, 37433. WGFs and WOFs were not considered in the analysis of standby mode and off mode energy consumption because DOE did not find any weatherized furnaces that were not sold as part of a single package air conditioner or ''dual fuel'' single package heat pump systems, and determined that the existing test procedures for central air conditioners and heat pumps account for standby mode power consumption within the seasonal energy efficiency ratio (''SEER'') rating. MHOFs were not considered in the analysis of standby mode and off mode standards due to *de minimis* potential for energy savings. 76 FR 37408, 37433. For the standby/off mode metric, DOE considered three technology options that would be expected to impact the standby/off mode efficiency rating: (1) Switching mode power supplies, (2) toroidal transformers, and (3) a relay that disconnects power to the blower's brushless permanent magnet[7] (''BPM'') motor while in standby mode. 76 FR 37408, 37450.

Issue 8: DOE seeks information on the aforementioned technologies, including their applicability to the current market and how these technologies may impact the standby mode and/or off mode energy use of NWOFs and electric furnaces as measured according to the DOE test procedure. DOE also seeks information on how these technologies may have changed since they were considered in the June 2011 DFR analysis.

Issue 9: DOE request information on whether other standby mode and off mode technologies are available to reduce energy consumption of consumer furnaces in standby mode and/or off mode.

2. Screening Analysis

The purpose of the screening analysis is to evaluate the technologies that improve product efficiency to determine which technologies will be eliminated

[6] This value was calculated by subtracting the energy savings in quads for furnaces at the standard level adopted in the June 2011 DFR (*i.e.,* 83 percent AFUE which corresponded to efficiency level 1 in that analysis) from the energy savings in quads associated with max-tech level (*i.e.,* 97 percent AFUE, which corresponded to efficiency level 4).

[7] In the June 2011 DFR, DOE referred to these motors as electronically commutated motors (''ECM''). BPM is a more generalized term for the same type of motor.

from further consideration and which will be passed to the engineering analysis for further consideration. DOE determines whether to eliminate certain technology options from further consideration based on the following criteria: (1) Technological feasibility; (2) practicability to manufacture, install, and service; (3) adverse impacts on product utility or product availability; (4) adverse impacts on health or safety; and (5) unique-pathway proprietary technologies. 10 CFR part 430, subpart C, appendix A, 7(b).

The technology options screened out in the June 2011 DFR for both AFUE and standby/off mode power consumption are summarized in Table II.2. 76 FR 37408, 37448–37450.

TABLE II.2—PREVIOUS SCREENING ANALYSIS FROM THE JUNE 2011 DFR

Technology option	Reason for screening				
	Technological feasibility	Practicability to manufacture	Adverse impacts on product utility or availability	Adverse impacts on health and safety	Unique pathway proprietary technologies
Condensing and near-condensing technologies for WGFs	X				
Pulse combustion				X	
Low NO_X premix burners	X				
Burner derating			X		
Advanced forms of insulation	X				
Low-pressure, air-atomized oil burners	X				
Relay that disconnects power to the blower's BPM motor *			X		

* This technology option applies to standby mode and off mode power consumption.

As displayed in Table II.2, a condensing secondary heat exchanger was screened out for WGFs in the June 2011 DFR. As of the publication of the June 2011 DFR, DOE was not aware of any WGFs that included a condensing secondary heat exchanger. For WGFs, condensate disposal presented challenges for using condensing technology. In particular, condensate can freeze in cold climates, which could cause the unit to malfunction. However, DOE has since identified one such model on the market, which suggests that technical challenges associated with condensate disposal in WGFs have been overcome. While DOE's RFI is not limited to the following issues, DOE is particularly interested in comment, information, and data on the following.

Issue 10: DOE requests feedback on what impact, if any, the screening criteria described in this section would have on each of the aforementioned technology options. Similarly, DOE seeks information regarding how these same criteria would affect any other technology options not already identified in this document with respect to their potential use in consumer furnaces.

Issue 11: DOE requests data and information on WGFs that include a condensing secondary heat exchanger. In particular, DOE requests information on methods for condensate disposal and preventing condensate freezing and any associated increase in installation or maintenance costs. Additionally, DOE seeks comment on whether this technology and associated condensing efficiency levels would be appropriate for consideration as a national standard for WGFs.

3. Engineering Efficiency Analysis

The engineering analysis estimates the cost-efficiency relationship of equipment at different levels of increased energy efficiency (''efficiency levels''). This relationship serves as the basis for the cost-benefit calculations for consumers, manufacturers, and the Nation.

The current energy conservation standard for each consumer furnace product class is based on AFUE and determined according to appendix N to subpart B of 10 CFR part 430. The current standards for consumer furnaces are found at 10 CFR 430.32(e). As part of DOE's analysis, DOE develops efficiency levels as potential energy conservation standards to evaluate in the rulemaking analyses. Among these, DOE typically establishes efficiency levels at the maximum-available and max-tech efficiencies. The maximum-available efficiency level represents the highest efficiency units currently available on the market. The max-tech efficiency level represents the theoretical maximum possible efficiency if all available design options are incorporated in a model. In applying these design options, DOE would only include those that are compatible with each other that when combined, would represent the theoretical maximum possible efficiency.

In the energy efficiency analysis in the June 2011 DFR, the max-tech level for NWOFs was determined to incorporate a condensing secondary heat exchanger at 97-percent AFUE. (EERE–2011–BT–STD–0011–0012, Technical Support Document: Chapter 5. Engineering Analysis at p. 5–7). As discussed in section II.C.2 of this document, a condensing secondary heat exchanger was screened out as a design option for WGFs, so the max-tech level was determined to incorporate non-condensing technology at a level of 81-percent AFUE. 76 FR 37408, 37439. As discussed in section IV.A.1.a of this document, MHOFs, WOFs, and electric furnaces were not analyzed for amended AFUE standards and therefore no max-tech level was determined for those classes. For the analysis of standby mode and off mode in the June 2011 DFR, which as discussed in section III.E.1 of this document applied only to NWOFs and electric furnaces, DOE determined the max-tech level to be 10 and 9 watts, respectively. 76 FR 37408, 37463.

Issue 12: DOE seeks input on whether the maximum-available AFUE levels are appropriate and technologically feasible for consideration as possible energy conservation standards for consumer furnaces for each current product class. DOE seeks information on the design options incorporated into these maximum-available models, and also on the order in which manufacturers incorporate each design option when improving efficiency from the baseline to the maximum-available efficiency level (*i.e.,* which design options would be included at intermediate efficiency levels between the baseline and maximum-available).

Issue 13: DOE seeks feedback on the max-tech AFUE level for each product class, and on the design options that

would be incorporated at the max-tech AFUE level. As part of this request, DOE also seeks information as to whether there are limitations on the use of certain combinations of design options. DOE is particularly interested in any design options that may have become available since the June 2011 DFR that would allow greater energy savings relative to the max-tech efficiency levels assessed for each product class in that rulemaking. Specifically, DOE requests comment and data regarding whether max-tech AFUE levels and associated technologies considered in the June 2011 DFR for NWOFs and WGFs are still appropriate.

Issue 14: DOE seeks feedback on the max-tech standby mode and off mode power consumption (*i.e.,* the lowest power consumption possible) for each product class, and on the design options that would be incorporated at the max-tech level. As part of this request, DOE also seeks information as to whether there are limitations on the use of certain combinations of design options. DOE is particularly interested in any design options that may have become available since the June 2011 DFR that would allow greater energy savings relative to the max-tech levels assessed for each product class in that rulemaking. DOE also seeks comment and data on whether the standby mode and off mode power consumption levels considered in the June 2011 DFR for NWOFs and electric furnaces are still appropriate.

D. Economic Justification

In determining whether a proposed energy conservation standard is economically justified, DOE analyzes, among other things, the potential economic impact on consumers, manufacturers, and the Nation. DOE seeks comment on whether there are economic barriers to the adoption of more-stringent energy conservation standards. DOE also seeks comment and data on any aspects of its economic justification analysis from the June 2011 DFR that may indicate whether a more-stringent energy conservation standard would be economically justified or cost effective.

While DOE's request for information is not limited to the following issues, DOE is particularly interested in comment, information, and data on the following.

1. Life-Cycle Cost and Payback Period Analysis

DOE conducts the life-cycle cost (''LCC'') and payback period (''PBP'') analysis to evaluate the economic effects of potential energy conservation standards for consumer furnaces on individual consumers. For any given efficiency level, DOE measures the PBP and the change in LCC relative to an estimated baseline level. The LCC is the total consumer expense over the life of the equipment, consisting of purchase, installation, and operating costs (expenses for energy use, maintenance, and repair). Inputs to the calculation of total installed cost include the cost of the equipment—which includes the manufacturer selling price, distribution channel markups, and sales taxes—and installation costs. Inputs to the calculation of operating expenses include annual energy consumption, energy prices and price projections, repair and maintenance costs, equipment lifetimes, discount rates, and the year that compliance with new and amended standards is required.

Issue 15: DOE requests feedback on the typical distribution channels for consumer furnaces. DOE further seeks comment on whether there is a significant retail distribution channel for consumer furnaces.

Issue 16: DOE requests shipments data for consumer furnaces, broken down by product class, that show current market shares by efficiency level. DOE also seeks input on similar historic data.

Issue 17: DOE requests comment on the anticipated future market share of higher-efficiency products as compared to less-efficient products for each consumer furnace product class, in the absence of amended efficiency standards.

2. Manufacturer Impact Analysis

The purpose of the manufacturer impact analysis (''MIA'') is to estimate the financial impact of amended energy conservation standards on manufacturers of consumer furnaces, and to evaluate the potential impact of such standards on direct employment and manufacturing capacity. As part of the MIA, DOE would analyze impacts of amended energy conservation standards on subgroups of manufacturers of covered equipment, including small business manufacturers. DOE uses the Small Business Administration's (''SBA'') small business size standards to determine whether manufacturers qualify as small businesses, which are listed by the North American Industry Classification System (''NAICS'').[8] Manufacturing of consumer furnaces is classified under NAICS 333415, ''Air-conditioning and warm air heating equipment and commercial and industrial refrigeration equipment manufacturing,'' and the SBA sets a threshold of 1,250 employees or less for a domestic entity to be considered as a small business. This employee threshold includes all employees in a business' parent company and any other subsidiaries.

One aspect of assessing manufacturer burden involves examining the cumulative impact of multiple DOE standards and the product-specific regulatory actions of other Federal agencies that affect the manufacturers of a covered product or equipment. Multiple regulations affecting the same manufacturer can strain profits and lead companies to abandon product lines or markets with lower expected future returns than competing products. For these reasons, DOE conducts an analysis of cumulative regulatory burden as part of its rulemakings pertaining to appliance efficiency.

Issue 18: To the extent feasible, DOE seeks the names and contact information of any domestic or foreign-based manufacturers in the United States of the consumer furnaces that are the subject of this notification.

Issue 19: DOE requests the names and contact information of small business manufacturers, as defined by the SBA's size threshold that distribute in the United States consumer furnaces that are the subject of this notification. In addition, DOE requests comment on any other manufacturer subgroups that could disproportionally be impacted by amended energy conservation standards. DOE requests feedback on any potential approaches that could be considered to address impacts on manufacturers, including small businesses.

Issue 20: DOE requests information regarding the cumulative regulatory burden impacts on manufacturers of consumer furnaces associated with (1) other DOE standards applying to different products or equipment that these manufacturers may also make, and (2) product-specific regulatory actions of other Federal agencies. DOE also requests comment on its methodology for computing cumulative regulatory burden and whether there are any flexibilities it can consider that would reduce this burden while remaining consistent with the requirements of EPCA.

III. Submission of Comments

DOE invites all interested parties to submit in writing by the date under the **DATES** heading, comments and information on matters addressed in this notification and on other matters relevant to DOE's consideration of

[8] Available online at: *www.sba.gov/document/support-table-size-standards.*

amended energy conservation standards for the consumer furnaces covered by this notification (specifically, WGFs, NWOFs, WOFs, MHOFs, and electric furnaces). After the close of the comment period, DOE will review the public comments received and may begin collecting data and conducting the analyses discussed in this document.

Submitting comments via www.regulations.gov. The *www.regulations.gov* web page requires you to provide your name and contact information. Your contact information will be viewable to DOE Building Technologies staff only. Your contact information will not be publicly viewable except for your first and last names, organization name (if any), and submitter representative name (if any). If your comment is not processed properly because of technical difficulties, DOE will use this information to contact you. If DOE cannot read your comment due to technical difficulties and cannot contact you for clarification, DOE may not be able to consider your comment.

However, your contact information will be publicly viewable if you include it in the comment or in any documents attached to your comment. Any information that you do not want to be publicly viewable should not be included in your comment, nor in any document attached to your comment. If this instruction is followed, persons viewing comments will see only first and last names, organization names, correspondence containing comments, and any documents submitted with the comments.

Do not submit to *www.regulations.gov* information for which disclosure is restricted by statute, such as trade secrets and commercial or financial information (hereinafter referred to as Confidential Business Information (''CBI'')). Comments submitted through *www.regulations.gov* cannot be claimed as CBI. Comments received through the website will waive any CBI claims for the information submitted. For information on submitting CBI, see the Confidential Business Information section.

DOE processes submissions made through *www.regulations.gov* before posting. Normally, comments will be posted within a few days of being submitted. However, if large volumes of comments are being processed simultaneously, your comment may not be viewable for up to several weeks. Please keep the comment tracking number that *www.regulations.gov* provides after you have successfully uploaded your comment.

Submitting comments via email. Comments and documents submitted via email also will be posted to *www.regulations.gov*. If you do not want your personal contact information to be publicly viewable, do not include it in your comment or any accompanying documents. Instead, provide your contact information in a cover letter. Include your first and last names, email address, telephone number, and optional mailing address. The cover letter will not be publicly viewable as long as it does not include any comments.

Include contact information each time you submit comments, data, documents, and other information to DOE. Faxes will not be accepted.

Comments, data, and other information submitted to DOE electronically should be provided in PDF (preferred), Microsoft Word or Excel, or text (ASCII) file format. Provide documents that are not secured, written in English, and free of any defects or viruses. Documents should not contain special characters or any form of encryption and, if possible, they should carry the electronic signature of the author.

Campaign form letters. Please submit campaign form letters by the originating organization in batches of between 50 to 500 form letters per PDF or as one form letter with a list of supporters' names compiled into one or more PDFs. This reduces comment processing and posting time.

Confidential Business Information. Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email two well-marked copies: One copy of the document marked ''confidential'' including all the information believed to be confidential, and one copy of the document marked ''non-confidential'' with the information believed to be confidential deleted. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

It is DOE's policy that all comments may be included in the public docket, without change and as received, including any personal information provided in the comments (except information deemed to be exempt from public disclosure).

DOE considers public participation to be a very important part of the process for developing test procedures and energy conservation standards. DOE actively encourages the participation and interaction of the public during the comment period in each stage of this process. Interactions with and between members of the public provide a balanced discussion of the issues and assist DOE in the process. Anyone who wishes to be added to the DOE mailing list to receive future notices and information about this process should contact Appliance and Equipment Standards Program staff at (202) 287–1445 or via email at *ApplianceStandardsQuestions@ee.doe.gov.*

Signing Authority

This document of the Department of Energy was signed on January 23, 2022, by Kelly J. Speakes-Backman, Principal Deputy Assistant Secretary for Energy Efficiency and Renewable Energy, pursuant to delegated authority from the Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document upon publication in the **Federal Register**.

Signed in Washington, DC, on January 25, 2022.

Treena V. Garrett,

Federal Register Liaison Officer, U.S. Department of Energy.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 71

[Docket No. FAA–2022–0027; Airspace Docket No. 21–ANM–70]

RIN 2120–AA66

Proposed Amendment of Domestic VOR Federal Airway V–356; Mile High, CO

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This action proposes to amend Domestic VOR Federal Airway V–356, by revoking the segment between the FIDLE and ELORE intersections due to the absence of a supporting navigational aid signal.