No.

In the Supreme Court of the United States

AMERICAN GAS ASSOCIATION, ET AL.,

Petitioners,

v.

U.S. DEPARTMENT OF ENERGY, ET AL.,

Respondents.

On Petition for Writ of Certiorari to the United States Court of Appeals for the D.C. Circuit

PETITION FOR WRIT OF CERTIORARI

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QUESTIONS PRESENTED

The Energy Policy and Conservation Act (EPCA) prohibits the Department of Energy from adopting efficiency standards that ban consumer access to appliances with distinct performance characteristics. In this case, the Department adopted standards abolishing gas-fired furnaces and water heaters that work with existing venting systems in millions of homes and buildings across the country. These standards will force consumers to either renovate their homes or switch to electric appliances.

The Department overhauled these standards by interpreting the statutory term "performance characteristic" to exclude features that allow an appliance to function in a home without renovation, dismissing that characteristic as a mere matter of "cost." App.26a. Over Judge Rao's dissent, the D.C. Circuit deferred to the Department's statutory interpretation, asserting the statutory term required "case-specific" interpretation. App.16a.

The questions presented are:

1. Whether courts may defer to an agency's legal interpretation of a statute because an agency applied the statute to undisputed facts, despite this Court's holding in *Loper Bright Enterprises v. Raimondo* that courts must construe statutes without deference to agency statutory interpretations. 603 U.S. 369, 395 (2024).
2. Whether an appliance's ability to operate in existing homes and buildings without renovation is a "performance characteristic" that EPCA prohibits the Department from eliminating. 42 U.S.C. §§ 6295(o)(4); 6313(a)(6)(B)(iii)(II)(aa).

PARTIES TO THE PROCEEDING

Petitioners are the American Gas Association ("AGA"), the American Public Gas Association ("APGA"), the National Propane Gas Association ("NPGA"), and NCTP, Inc., doing business as Thermo Products. AGA, APGA, and NPGA were petitioners below.[1] NCTP, Inc. has purchased substantially all the assets of Thermo Products, LLC, a petitioner below, and manufactures and sells gas-powered furnaces and other appliances under the brand name Thermo Products. Thermo Products, LLC, has changed its name to TP10, LLC. TP10, LLC has sold certain of its remaining assets and liabilities to TP97, LLC.

Respondents, which were also respondents below, are the U.S. Department of Energy, the Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy, and Chris Wright, Secretary, U.S. Department of Energy.

Intervenor-Respondents are the City of New York, Commonwealth of Massachusetts, Consumer Federation of America, District of Columbia, State of Illinois, State of Maine, State of Maryland, State of Minnesota, State of Nevada, State of New Jersey, State of New Mexico, State of New York, State of Oregon, State of Vermont, State of Washington, Massachusetts Union of Public Housing Tenants, Natural Resources Defense Council, and Sierra Club.

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[1] Spire Inc., Spire Alabama Inc., and Spire Missouri Inc. were also petitioners below.

CORPORATE DISCLOSURE STATEMENT

The American Gas Association has no parent corporation, and no publicly held company has 10% or greater ownership in AGA.

The American Public Gas Association has no parent corporation, and no publicly held company has 10% or greater ownership in APGA.

The National Propane Gas Association has no parent corporation, and no publicly held company has 10% or greater ownership in NPGA.

NCTP, Inc. has no parent corporation and no publicly held company has 10% or greater ownership interest in NCTP, Inc.

RELATED PROCEEDINGS

This case involves consolidated challenges to three Department of Energy rules. In *AGA v. DOE*, No. 22-1030 (D.C. Cir. 2023), Petitioners challenged an interpretive rule effecting a wholesale change in the Department's interpretation of "performance characteristics." *Energy Conservation Program for Appliance Standards: Energy Conservation Standards for Residential Furnaces and Commercial Water Heaters, Notification of Final Interpretive Rule*, 86 Fed. Reg. 73,947 (Dec. 29, 2021). In *AGA v. DOE*, No. 23-1285 (D.C. Cir. 2023), Petitioners challenged a rule setting efficiency standards for commercial water heaters that relied on the interpretive rule. *Energy Conservation Program: Energy Conservation Standards for Commercial Water Heating Equipment*, 88 Fed. Reg. 69,686 (Oct. 6, 2023). In *AGA v. DOE*, No. 23-1337 (D.C. Cir. 2023), Petitioners challenged efficiency standards for consumer furnaces that also

relied on the interpretive rule. *Energy Conservation Program: Energy Conservation Standards for Consumer Furnaces*, 88 Fed. Reg. 87,502 (Dec. 18, 2023). The three challenges were consolidated on December 21, 2023. *See* Document No. 2032925, *AGA v. DOE*, No. 22-1030 (D.C. Cir.). The D.C. Circuit entered judgment in these cases on November 4, 2025.

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INTRODUCTION

Chevron deference has returned in the D.C. Circuit. In the decision below, that court refused to "second-guess" the Department of Energy's interpretation of a statutory provision that should have limited the Department's authority. The D.C. Circuit chose to defer to the agency's "expertise" on statutory meaning by asserting the statute had to be applied to a specific set of facts. App. 14a-27a. In doing so, the D.C. Circuit essentially resurrected *Chevron* deference, directly undermining this Court's decision in *Loper Bright Enterprises v. Raimondo*, 603 U.S. 369 (2024).

The D.C. Circuit's decision reflects not only legal error but also practical folly. Under its novel statutory interpretation, the Department of Energy adopted energy efficiency standards that will force millions of Americans with gas appliances to either renovate their homes or switch to electric appliances. These regulations eliminate non-condensing gas furnaces and commercial water heaters, which work with the chimneys and natural-draft venting already in millions of American homes and businesses. The new standards mandate *condensing* appliances instead, which require different venting incompatible with existing chimneys. Installing them will often require homeowners to make significant alterations to their residences. These include punching new holes through exterior walls for plastic vents, running new piping through living areas, rewiring electrical systems, and abandoning functional chimneys. In many rowhouses, townhomes, and older apartments, such installation is

impracticable. The only alternative is abandoning gas appliances and switching to electric ones. This all comes at a time when the electric grid is "increasingly unreliable." *Evaluating the Reliability and Security of the United States Electric Grid* at vi, Department of Energy (July 2025), https://perma.cc/UP7L-D7N8.

The Energy Policy and Conservation Act (EPCA) prohibits the Department from imposing this mandate on consumers. EPCA bars the Department from adopting efficiency standards that "result in the unavailability" of products with unique "performance characteristics" currently available to consumers. 42 U.S.C. §§ 6295(o)(4); 6313(a)(6)(B)(iii)(II)(aa). Non-condensing appliances qualify for protection by offering consumers an important installation compatibility feature: they perform with the ventilation systems already in millions of Americans' homes. Yet the Department interpreted "performance characteristics" to exclude this installation compatibility, dismissing it as merely a matter of "cost." App.26a. The D.C. Circuit, over Judge Rao's dissent, then deferred to the Department's "expertise" on how to interpret the statutory term "performance characteristic" because the interpretive question arose in the context of a "case-specific" application. App.16a.

This case presents an urgent question fundamental to administrative law: Whether courts must exercise independent judgment, under *Loper Bright*, when interpreting statutes that must be applied to a set of undisputed facts or instead defer to agencies' interpretive judgment. Review is necessary because the D.C. Circuit's approach revives the very

Chevron deference that *Loper Bright* sought to eliminate.

The stakes are high: The D.C. Circuit plays an influential role in our nation's administrative law jurisprudence. Its interpretation of *Loper Bright* will shape how administrative law cases are resolved for the entire country. If left uncorrected, the decision below establishes a loophole swallowing *Loper Bright*'s rule. An agency could regain *Chevron* deference by simply asserting its new broadly-applicable and prospective interpretation applies statutory language in some "case-specific" fashion. That result is particularly absurd in this case, where the relevant facts are undisputed—and thus cannot possibly require any deference to non-judicial, expert judgments. The outsized role of the D.C. Circuit in administrative law thus heightens the need for this Court's review.

This case presents an ideal vehicle to resolve this fundamental question of administrative law. The D.C. Circuit acknowledged that the statutory text Congress enacted to cabin this agency power ("performance characteristics") has a "plain" and "broad" meaning. App.15a. All parties also agree on the relevant facts: non-condensing appliances function in millions of existing buildings that condensing appliances cannot serve without sometimes substantial renovation. The dispute is purely legal: whether an appliance's ability to operate in existing homes without significant changes is a "performance characteristic" EPCA protects. Resolving that question requires no technical expertise, only independent judicial judgment.

This Court therefore should grant review for two reasons of exceptional national importance: (1) stopping lower courts from circumventing *Loper Bright* and deferring to agency statutory interpretations, and (2) preventing the practical harm of forcing millions of Americans to either renovate their homes or abandon gas heating.

OPINIONS BELOW

The D.C. Circuit's opinion is reported at 157 F.4th 476 and reproduced at App.1a-69a.

JURISDICTION

The D.C. Circuit issued its opinion on November 4, 2025. Petitioners timely petitioned for certiorari on January 20, 2026. This Court has jurisdiction under 28 U.S.C. § 1254(1).

CONSTITUTIONAL AND STATUTORY PROVISIONS INVOLVED

"The judicial Power of the United States, shall be vested in one supreme Court, and in such inferior Courts as the Congress may from time to time ordain and establish." U.S. CONST. art. III, § 1. "The judicial Power shall extend to all Cases, in Law and Equity, arising under this Constitution, the Laws of the United States, and Treaties made, or which shall be made, under their Authority . . . ." *Id.* § 2; *see Loper Bright Enters. v. Raimondo*, 603 U.S. 369, 384-85 (2024).

Relevant statutory provisions are reproduced at App.70a to 83a.

STATEMENT

A. Statutory Background

EPCA balances energy efficiency with consumer choice. Congress set initial standards for many consumer and commercial appliances. *See* 42 U.S.C. § 6295(f); *id.* § 6313(a). The Department of Energy may amend those standards, but Congress imposed critical limits.

The Department may not adopt standards "likely to result in the unavailability" of products with distinct "*performance characteristics* (including reliability, features, sizes, capacities, and volumes)." *Id.* § 6313(a)(6)(B)(iii)(II)(aa) (emphasis added); *see id.* § 6295(o)(4). Congress also directed the Department to create separate product "classes," with different standards, when products have unique "performance-related features" justifying different treatment. *Id.* § 6295(q)(1).

The Department must also find that amended standards are "technologically feasible and economically justified." *Id.* §§ 6295(o)(2)(A), 6313(a)(6)(A)(ii)(II). Congress directed the Department to consider several factors—including the "economic impact of the standard" on manufacturers and consumers, estimated efficiency savings the standard will produce compared to any price increases, installation charges or maintenance expenses, the amount of any likely energy savings, and any "lessening of the utility or the performance of the covered products." *Id.* § 6295(o)(2)(b)(i)(I)-(VII); *id.* § 6313(a)(6)(B)(ii) (same).

B. Factual Background

Gas-fired consumer furnaces and commercial water heaters use either condensing or non-condensing technologies. App.6a. Both varieties require venting systems to operate safely because the combustion process results in exhaust gases. *Id.* But condensing and non-condensing technologies require different venting systems.

Non-condensing appliances use unpowered venting systems like chimneys (also known as "natural draft" or "atmospheric venting"). *Id.* These rely on the natural heat and buoyancy of exhaust gases to carry them outside. *Id.* They have been used for generations and remain the primary exhaust gas venting system in millions of homes, apartments, and buildings throughout the country. 86 Fed. Reg. at 73,947, 73,959.

Condensing appliances, on the other hand, cannot use unpowered venting systems. App.6a-7a. That is because condensing appliances have a secondary heat exchanger, which pulls additional heat from post-combustion gases before they are vented. This action changes the volume, temperature, and other characteristics of the exhaust gases, including by creating liquid condensate. App.7a. The cooler exhaust gases of condensing appliances cannot naturally rise out of a vertical vent like a chimney. Instead, condensing appliances require a fan to generate enough pressure to push or pull the gases outside, and they generally use a *horizontal* vent. *Id.* And condensing appliances require plumbing to dispose of the liquid condensate. *Id.*

For millions of existing buildings with vertical chimneys, transitioning to condensing appliances can be tremendously difficult. 86 Fed. Reg. at 73,959. Some buildings lack available exterior walls for horizontal venting, including many rowhouses, townhomes, and apartments. "[S]afety and building codes" may prevent horizontal venting near windows and walkways or where vents could be blocked by snow. *See id.* at 73,961-62; 88 Fed. Reg. 69,686, 69,744.

More generally, the renovation process can be costly, time-consuming, and disruptive. For example, replacing a non-condensing furnace with a condensing furnace often involves "interior wall displacement" and "vent or equipment relocation." 88 Fed. Reg. 87,502, 87,565. Because exhaust vents cannot be near operable windows, horizontal venting sometimes means sacrificing "interior living space, a balcony, or a window." 86 Fed. Reg. 4,776, 4,798 (Jan. 15, 2021). Businesses might be required to give up closet storage space, or even retail shelf space. *Id.* at 4,816. Renovation can impact business operating hours too. 88 Fed. Reg. at 69,750-51. And during emergency winter replacements in homes, time without heat can mean freezing pipes and temporary relocation. *Id.*; 88 Fed. Reg. at 87,565.

C. The Department's Rulemakings

The Department has flip-flopped on whether non-condensing appliances offer "performance characteristics" protected by EPCA.

In 2016, the Department proposed efficiency standards that would have functionally banned non-condensing furnaces and commercial water heaters. *See* 81 Fed. Reg. 34,440 (May 31, 2016); 81 Fed. Reg. 65,720 (Sept. 23, 2016). It never finalized that proposal.

In 2018, regulated parties (including Petitioners) asked the Department to determine that non-condensing appliances offer "performance characteristics" protected by EPCA. *See* 83 Fed. Reg. 54,883 (Nov. 1, 2018). The Department agreed, issuing a final interpretive rule in January 2021. *See* 86 Fed. Reg. 4,776. The Department found that eliminating non-condensing appliances would undermine consumer utility. *Id.* It acknowledged that "a condensing appliance may necessitate significant and unwelcome physical modifications to a home or business (*e.g.*, by adding new venting into living/commercial space or decreasing closet or other storage/retail space)." *Id.* at 4,817. Because of that, eliminating non-condensing appliances would force many consumers to switch to electric appliances. *Id.* But coerced fuel-switching would contradict the Department's longstanding policy of "remain[ing] neutral regarding competing energy sources in the marketplace." *Id.* at 4,816. The Department's January 2021 Interpretive Rule thus construed EPCA to "preclude the adoption of energy conservation

standards that would limit the market to [gas-fired] furnaces [and] water heaters . . . that use condensing combustion technology, as that would result in the unavailability of a performance related feature within the meaning of 42 U.S.C. § 6295(o)(4) and 42 U.S.C. § 6313(a)(6)(B)(iii)(II)(aa)." *Id.*

Less than a year later, the Department reversed course. It published another interpretive rule, this time reaching the opposite conclusion. *See* 86 Fed. Reg. at 73,950. In that December 2021 Interpretive Rule, the Department argued that "non-condensing technology (and the associated venting) does not provide unique utility to consumers separate from an appliance's function of providing heated air or water," so it does not qualify as a "performance-related 'feature'" under sections 6295(o)(4) and 6313(a)(6)(B)(iii)(II)(aa). 86 Fed. Reg. at 73,951. The Department interpreted EPCA as protecting only "the benefits and usefulness the feature provides to the consumer while interacting with the product" after installation, "not through design parameters impacting installation complexity, or costs that anyone, including the consumer, manufacturer, installer, or utility companies, may bear." *Id.* Under the Department's new interpretation, non-condensing appliances offer no "unique utility" despite helping customers avoid home renovation. *Id.* at 73,953. The Department reasoned that consumers interact with both types identically—"to initiate demand for heated air or water"—making installation complications mere "matters of cost." *Id.* at 73,951, 73,953.

The Department then finalized new efficiency standards for both commercial water heaters and consumer furnaces that non-condensing appliances cannot meet. *See* 88 Fed. Reg. at 87,503; 88 Fed. Reg. at 69,687. In both rulemakings, the Department relied on its December 2021 Interpretive Rule's conclusion that it could eliminate non-condensing appliances despite EPCA's "unavailability" provisions. *See* 88 Fed. Reg. at 87,535; 88 Fed. Reg. at 69,710.

D. Decision Below

Petitioners challenged the December 2021 Interpretive Rule, 86 Fed. Reg. 73,947, the Commercial Water Heater Rule, 88 Fed. Reg. 69,686, and the Consumer Furnace Rule, 88 Fed. Reg. 87,502, in the D.C. Circuit. Over Judge Rao's dissent, the D.C. Circuit denied the petitions for review and upheld the Department's final rules. App.1a-69a.

1. After finding Petitioners had standing, the majority evaluated the statutory terms "performance characteristics" and "features." App.14a-27a. Before discussing "the plain text of the statute," the majority "note[d]" that while the Department's "interpretation of EPCA" might not be binding, it "may be especially informative 'to the extent it rests on factual premises within . . . [DOE's] expertise.'" App.14a (quoting *Loper Bright Enters. v. Raimondo*, 603 U.S. 369, 402 (2024)). The majority likewise suggested that Congress gave the Department "'a degree of discretion' to decide what constitutes a performance characteristic or feature under EPCA." *Id.* (quoting *Loper Bright*, 603 U.S. at 394).

When it eventually got to the plain text, the majority acknowledged "the plain meaning of 'performance characteristics' is broad." App.15a. All parties agreed that under the plain text "performance characteristic" means "a product attribute that provides utility to consumers desiring to use the product." *Id.* But the D.C. Circuit declined to decide whether non-condensing appliances' ability to function with existing venting fits that plain meaning.

Instead, the majority agreed with the Department that "because every appliance offers a unique function to consumers, the concept of a feature or performance characteristic is 'very case-specific.'" App.16a (citing 86 Fed. Reg. at 73,948). "No single definition could effectively capture the potential for features across the broad array of consumer products and commercial equipment subject to EPCA's regulatory scheme." *Id.* So the D.C. Circuit majority concluded "the plain text of the statute does not . . . resolve the specific ambiguity here as it relates to consumer furnaces and commercial water heaters." *Id.*

To resolve that "specific ambiguity," the majority looked first to "legislative history." *Id.* (quoting *United States v. Braxtonbrown-Smith*, 278 F.3d 1348, 1352 (D.C. Cir. 2002)). It noted that Petitioner AGA told Congress in 1986 that EPCA's "energy efficiency standards" could eliminate "conventional, atmospherically vented furnace[s]." App.17a. Yet the committee report cited by the D.C. Circuit did not identify venting as an example of a protected feature. App.18a.

According to the majority, this legislative history supported the purportedly "obvious" point that "consumers do not buy small furnaces or commercial water heaters because of how the appliance vents." App.18a. The majority thus assumed without evidence that consumers do not care about whether they will have to renovate their homes in order to install a new gas appliance. In the majority's view, "venting is a quality that both condensing and non-condensing appliances share," so the court reasoned that differences in venting must not matter to consumers. *Id*. The D.C. Circuit repeated the December 2021 Interpretive Rule's conclusion that the only "unique utility a consumer furnace or commercial water heater provides to the consumer" is to "provide hot air or hot water." App.19a.

That conclusion conflicts with prior Department rulemakings, which the majority tried to distinguish. For instance, the Department previously separated the efficiency standards for condensing and non-condensing furnace fans, even though both provide hot air, because condensing furnaces "achieve higher thermal efficiency but may have lower fan performance." App.23a (quoting 78 Fed. Reg. 64,068, 64,080 (Oct. 25, 2013)). The majority held that decision was appropriate because the "design" of condensing and non-condensing furnace fans is "directly related to the performance requirements of the particular product." *Id.*

The majority similarly acknowledged the Department created separate product classes for standard-sized and non-standard-sized packaged

terminal air conditioners. App.25a n.8. These appliances are installed in a hole or "sleeve" cut into a building's wall, but older buildings do not have standard-sized sleeves. *Id.* The Department "created two different product classes for standard size versus their non-standard size counterparts because 'altering the existing wall sleeve opening to accommodate the more efficient, standard size equipment could include extensive structural changes to the building.'" *Id*. The court did not explain how that was distinguishable from the installation requirements of condensing versus non-condensing appliances.

The majority acknowledged that "installation of condensing products/equipment [sometimes] requires modifications to the installed space . . . and that such modifications may impact the installation cost and/or complexity." App.25a (quoting 86 Fed. Reg. at 73,953). But "[b]ecause [the Department] found that consumers are able to replace non-condensing appliances with condensing appliances in 'all cases,'" the D.C. Circuit held "that installation factors are more appropriately addressed in the economic-justification analysis." App.25a-26a. It did not matter that these renovation costs "may financially deter consumers from" choosing to keep a gas appliance by installing a condensing one. App.26a.

Having skipped past the statute's "broad" plain meaning, the majority found "no reason to second-guess" the Department's statutory interpretation. App.27a. It did not acknowledge the Department's shifting interpretation of the statute. Instead, the court deferred to the agency's *current* interpretation,

asserting it "rests on the agency's evaluations of scientific data within its area of expertise." App.27a (quoting *Actavis Elizabeth LLC v. FDA*, 625 F.3d 760, 766 (D.C. Cir. 2010)). The D.C. Circuit then rejected Petitioners' arguments that the final rules were not economically justified and the notice and comment procedures were defective. App.28a-43a.

2. Judge Rao dissented. App.44a-69a. As she explained, "[t]he ability to vent through a traditional chimney is exactly the kind of real-world feature Congress protected from elimination in the marketplace." App.45a. The challenged "efficiency standards, which make non-condensing appliances unavailable, are therefore contrary to law." *Id.*

Judge Rao recognized that "[t]he question in this case is . . . a legal one: Is a non-condensing appliance's compatibility with existing, standard chimney vents a protected 'performance characteristic' under EPCA?" App.51a-52a. She agreed with the majority that EPCA's plain text establishes that "performance characteristic[s]" are attributes "that provide[] utility to the consumer." App.52a.

But unlike the majority, Judge Rao concluded that "[n]on-condensing appliances plainly provide such utility: a venting method that is compatible with the conventional chimneys found in millions of older homes and buildings." App.50a. They "integrate directly into an existing exhaust system" instead of "requir[ing] cumbersome and costly retrofits"—such as "punching new holes through exterior walls for plastic vents, sacrificing closets or other living space to run new piping, giving up windows or balconies that

are too close to a new vent's exhaust, and re-lining or abandoning a perfectly functional chimney." App.50a-51a. Non-condensing appliances thus "have a protected 'performance characteristic' under the plain meaning of EPCA." App.51a. And "because it is undisputed that the efficiency standards make these appliances unavailable, the standards are contrary to law." *Id.*

Judge Rao rejected the Department's conflicting arguments. "Nothing in EPCA suggests" the "limitation" the Department advanced: "that a 'performance characteristic' is limited to features providing utility during operation, 'not through design parameters impacting installation complexity[ ] or costs.'" App.54a-55a (quoting 86 Fed. Reg. at 73,951). EPCA instead gives as examples "terms that plainly encompass an appliance's . . . compatibility with a building's existing infrastructure," such as "sizes, capacities, and volumes." App.55a. Nothing in the text supports the illogical result "that consumers derive utility only from operational features . . . and not from the ability to install a product in their home without cumbersome (and costly) renovations that change the use of their interior space." *Id.*

The dissent concluded that the Department's arguments contradicted "its long-standing practice" as well. *Id.* "The agency has frequently invoked its authority to create separate efficiency standards to preserve a 'performance-related feature' based on installation-related features." *Id.* That makes the challenged rulemakings "an unexplained and

arbitrary departure from the agency's long-standing practice." App.56a.

Judge Rao thus faulted the majority for "largely duck[ing]" the "legal question" at issue "by declaring that EPCA is ambiguous as to the meaning of 'performance characteristic' and 'utility.'" App.57a-58a. "The majority takes this ambiguity as a license to defer to the Department," Judge Rao explained. App. 58a. "But this *Loper Bright* avoidance is inconsistent with the Supreme Court's directive that a court must 'use every tool at [its] disposal to determine the best reading of the statute and resolve the ambiguity.'" *Id.* (citation omitted). Because "the Department's interpretation of EPCA contradicts the statute's text, context, and the agency's regulatory practice," the "Department's standards are contrary to law." App.59a.[2]

REASONS TO GRANT THE PETITION

I. This Court should grant review to decide whether, under *Loper Bright*, courts should defer to agency statutory interpretations when issued in the context of "case-specific" rulemakings.

The D.C. Circuit has revived *Chevron* deference. This Court therefore should grant review to vindicate *Loper Bright*'s sound principles in the most consequential lower court for administrative law.

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[2] Judge Rao also would have vacated the challenged rules on the grounds that "the Department's economic justification for the challenged standards is fundamentally flawed." App.68a.

The D.C. Circuit majority acknowledged that "performance characteristics" has a "plain" and "broad" meaning. App.15a. Yet it refused to independently determine whether the undisputed facts fit that broad statutory term. Instead, it deferred to the agency, holding that applying the statute to the undisputed facts purportedly involved "case-specific" judgment. App.16a. This runs roughshod over *Loper Bright*'s core holding. It permits courts to defer to a broadly-applicable agency interpretation any time the agency interprets the statute in the context of real-world facts—something which occurs in every challenge to an agency rule.

Loper Bright held that courts must "exercise their independent judgment in deciding whether an agency has acted within its statutory authority." 603 U.S. at 412. Agency views may be considered for their persuasive force, but they receive no special weight merely because Congress charged the agency with administering the statute. *Id.* at 395-96. The D.C. Circuit violated that command, yielding to the Department's "expertise" to resolve a "specific ambiguity" it found in the statute's meaning. App.14a, 16a. This nullifies *Loper Bright*.

Statutory interpretation always turns on "whether the language at issue has a plain and unambiguous meaning *with regard to the particular dispute in the case*." *Robinson v. Shell Oil Co.*, 519 U.S. 337, 340 (1997) (emphasis added). For instance, *Weyerhaeuser Co. v. U.S. Fish & Wildlife Service*, 586 U.S. 9, 14-21 (2018), determined whether "critical habitat" included land formerly occupied by

endangered dusky gopher frogs. That question of statutory interpretation required consideration of the case's facts, but this Court did not defer to the Fish and Wildlife Service. *See id.* at 20-21. Similarly, *Becerra v. Empire Health Foundation, for Valley Hospital Medical Center*, 597 U.S. 424, 434 (2022), interpreted the meaning of a "technical" provision in the Medicare statute without deferring to HHS's expertise. And in the same term as *Loper Bright*, this Court decided whether the term "machinegun" included bump stocks, without deferring to ATF's firearms expertise. *Garland v. Cargill*, 602 U.S. 406, 415-23 (2024).

This Court's major-questions cases (which pre-date *Loper Bright*) illustrate the same point. *National Federation of Independent Business v. Department of Labor*, 595 U.S. 109, 117-18 (2022) (per curiam), did not defer to OSHA's view that a nationwide employer vaccine mandate fell within that agency's authority over "occupational safety," even though that term can be fact-dependent. *Alabama Association of Realtors v. Department of Health & Human Services*, 594 U.S. 758, 763-65 (2021) (per curiam), similarly rejected the CDC's claim that an eviction moratorium fell within its statutory authority to prevent the spread of disease, notwithstanding the agency's argument that public-health measures are context-specific. This Court has thus repeatedly exercised independent judgment over statutory meaning rather than deferring to an agency's interpretation when a dispute involves "case-specific" facts. Indeed, there is little that is "case-specific" here: the Department's rules

affect entire classes of appliances. Moreover, its interpretation of whether installation compatibilities can constitute a "performance characteristic" will presumably govern future rulemakings and D.C. Circuit decisions.

The decision below also highlights confusion over *Loper Bright*'s discussion of statutory "discretion." *Loper Bright* recognized that Congress sometimes confers discretion through express textual signals—such as directing agencies to act when "appropriate" or "reasonable." 603 U.S. at 395. But general administrative responsibility does not allow agencies to redefine statutory limits. *Id.* at 401-03.

Other Circuits have properly recognized this distinction, refusing to defer absent language expressly empowering agencies to exercise judgment over statutory scope. The Sixth Circuit refused to defer to an agency absent "broad language" that "expressly empower[s] the agency to exercise judgment"—"terms such as 'appropriate' and 'reasonable.'" *Moctezuma-Reyes v. Garland*, 124 F.4th 416, 420-21 (6th Cir. 2024). The Tenth Circuit likewise emphasized that interpretive discretion must be clearly conferred by Congress. *See Rangel-Fuentes v. Bondi*, 155 F.4th 1138, 1143 (10th Cir. 2025).

The D.C. Circuit, in contrast, now grants deference whenever an agency interprets a statute in the process of deciding a "case-specific" issue. App.16a. It did not rely on any specific language that explicitly vests discretion in the Department to interpret the meaning of the provision limiting the Department's

standard-making authority. This conflict in implementing *Loper Bright* requires resolution.

The decision below further demonstrates conflicting views among the Circuits about this Court's suggestion that "an agency's interpretation of a statute" may be informative "to the extent it rests on factual premises within [the agency's] expertise." *Loper Bright*, 603 U.S. at 402 (citation omitted). Some courts have properly limited this reliance on agency views to "scientifically complex area[s]," like "air pollution patterns." *See, e.g.*, *Texas v. EPA*, 156 F.4th 523, 550 (5th Cir. 2025) (finding EPA's interpretation of the Clean Air Act persuasive because it relied on "scientific knowledge about air pollution patterns and the practicalities of [Clean Air Act] enforcement"); *United States v. Rutherford*, 120 F.4th 360, 379 (3d Cir. 2024), *cert. granted on other grounds*, 145 S. Ct. 2776 (2025) ("In *Loper Bright Enterprises v. Raimondo*, the Supreme Court overturned the long-standing rule that courts must defer to agency interpretations of statutes within an agency's expertise."); *Corner Post, Inc. v. Bd. of Governors of Fed. Reserve Sys.*, 794 F. Supp. 3d 610, 623 (D.N.D. 2025) (explaining "the court is by no means bound to give deference" to "[a]n agency's claim of having expertise in the statute's subject area or holding the same statutory interpretation for a period of time").

Here, all factual issues are undisputed, so the only question is statutory meaning, which is "the proper and peculiar province of the courts." *Loper Bright*, 603 U.S. at 385 (citation omitted). Yet the D.C. Circuit abdicated its responsibility under *Loper Bright* by

deferring to the Department's "expertise." App.14a. The Ninth Circuit, too, has deferred to an administrative entity's views on purely legal questions. *See Lopez v. Garland*, 116 F.4th 1032, 1039-41 (9th Cir. 2024).

The inconsistency across lower court review of agency actions after *Loper Bright* alone warrants review. Making matters worse, the *Loper Bright* loophole created by the decision below comes from the D.C. Circuit, where fidelity to *Loper Bright* is most important. The D.C. Circuit handles a substantial amount of the challenges to federal regulations. Its reinvigoration of agency deference will ripple nationwide. If the D.C. Circuit can defer to agency statutory interpretations by invoking "case-specific" factors, *Loper Bright* accomplished little. Certiorari is warranted to determine whether the D.C. Circuit's latest formulation of agency deference should govern the lion's share of challenges to federal regulations.

II. This case presents another issue of exceptional national importance because the D.C. Circuit's decision forces millions of Americans to renovate their homes or stop using gas appliances.

The practical consequences compound the urgent need for review. The Department's rules will require millions of Americans to undergo costly renovations to keep their gas appliances. Because many consumers will not or cannot bear these costs, the challenged rules will force millions to switch to electric appliances. Congress did not permit that momentous

result in EPCA. This Court's review is necessary to rectify this consequential agency overreach.

Congress enacted EPCA against the backdrop of an existing national housing and commercial building stock, much of which was designed to accommodate specific types of equipment. It expressly prohibits efficiency standards "likely to result in the unavailability" of covered products with distinct performance characteristics. 42 U.S.C. § 6295(o)(4). Consumers derive utility not only from what an appliance does in isolation, but also from its compatibility with the consumer's actual use case (including whether it can perform within spaces they already occupy without substantial alteration).

The Department did not dispute—and the D.C. Circuit below did not question—that condensing furnaces and water heaters often cannot be installed in buildings designed for natural-draft venting without substantial physical modification. The record reflects that switching to condensing gas appliances frequently requires new venting pathways, loss of interior space, structural alterations, or abandonment of existing systems. *See* App.26a-27a; App. 44a-45a (Rao, J., dissenting). Yet the court held that these consequences are legally irrelevant because they relate to "installation" rather than operation. *See* App.26a-27a. Treating real-world usability as a characteristic irrelevant to consumer utility severely undermines Congress's substantive statutory constraint on agency power.

The efficiency standards at issue here alone significantly impact millions of Americans who rely on

natural gas and propane appliances and would face substantial constraints to comply. But EPCA also governs a broad range of other consumer and commercial equipment intertwined with existing buildings. For example, the Department's reasoning would apply equally to commercial gas furnaces and boilers, *see id.* § 6313(a)(4)(A); consumer water and pool heaters, *see id.* § 6295(e)(1)-(2); and consumer direct heating equipment, including room heaters, wall furnaces, and floor furnaces, *id.* § 6295(e)(3). If the decision below stands, the Department can eliminate any product so long as a theoretical substitute exists after substantial alteration. This especially impacts older buildings that cannot be easily modified—including homes and apartments, public housing, schools, and businesses nationwide.

For these and other products, the interpretation below creates a model for evading EPCA's statutory constraints. The Department may redefine protected "performance characteristics" in a way that is divorced from the text and eliminates consumer protections for real-world features. It can dismiss incompatibility with existing structures as an economic inconvenience rather than a loss of utility. And then it can eliminate longstanding product categories by regulation. Nothing in EPCA authorizes that result, and the Department will continue regulating across appliance categories where the same logic may recur. *See* 42 U.S.C. § 6313(a)(6)(C)(i) (requiring the Department to reevaluate appliance standards for covered products every 6 years).

Congress's decision to prohibit standards rendering performance characteristics unavailable serves an important structural function, too. It prevents agencies from eliminating products based on contestable or marginal economic modeling. That concern is not abstract. As the dissent below acknowledged, modest changes to the Department's modeling assumptions materially affect whether the challenged standards produce net benefits at all. App.64a (Rao, J., dissenting). Even under the Department's preferred assumptions, the projected benefits to consumers would take years to materialize. By treating "unavailability" as subsumed within economic justification, the interpretation approved below eliminated EPCA's backstop in precisely the circumstances where it is most important—when the case for eliminating consumer choice depends on fragile economic analysis rather than clear necessity.

That concern is heightened by uncertainty surrounding the Department's ability to relax standards. EPCA contains a provision that prohibits the Department from "prescrib[ing] any amended standard which increases the maximum allowable energy use . . . of a covered product." *See* 42 U.S.C. § 6295(o)(1). This ratchet may prevent the Department from correcting standards that are legally or technically flawed. The Department has recently taken the position that it does not prevent the Department from rescinding amended standards and reverting to the original standards issued by Congress. *See* 90 Fed. Reg. 20,899, 20,900-901 (May 16, 2025) (proposed rule explaining that Section

6295(o) only prevents setting standards less stringent than those initially set by Congress). But that view is untested. If the ratchet does apply to standards previously promulgated by the Department, then those standards establish a new floor, even if a later administration determines they were legally or factually flawed.

In other words, if the court of appeals' approach to *Loper Bright* improperly constricts statutory protections for consumer choice, the resulting interpretation may become permanently entrenched. This Court's review is necessary to prevent that result, which will have significant practical impact on millions of consumers.

III. The D.C. Circuit majority erred on the merits in deferring to the agency's interpretation of the Energy Policy and Conservation Act.

EPCA's plain text confirms non-condensing appliances have protected performance characteristics. The D.C. Circuit majority below erroneously reached the opposite result by improperly deferring to the agency's statutory interpretation.

A. The Department cannot make "unavailab[le]" any products with distinct "performance characteristics." 42 U.S.C. § 6313(a)(6)(B)(iii)(II)(aa). All parties agree the term "performance characteristics" is "broad" and means "a product attribute that provides utility to consumers desiring to use the product." App.15a.

Non-condensing technology should easily satisfy the statutory term "performance characteristics." Non-condensing appliances function with existing unpowered vertical venting, providing utility to consumers wanting gas appliances by allowing them to replace their appliances without substantial renovation. Condensing appliances lack this characteristic. They cannot perform in the millions of buildings designed to use non-condensing appliances without costly renovation.

Context confirms the plain statutory text. The statute contains non-exhaustive lists of examples of "performance characteristics": they "includ[e] reliability, features, sizes, capacities, and volumes." 42 U.S.C. § 6313(a)(6)(B)(iii)(II)(aa); *see id.* § 6295(o)(4) ("any covered product type (or class) of performance characteristics (including reliability), features, sizes, capacities, and volumes"). These examples confirm EPCA prohibits the Department from eliminating physical and functional appliance attributes, not just operational outputs. *See Dubin v. United States*, 599 U.S. 110, 124 (2023) ("Under the familiar interpretive canon *noscitur a sociis*, 'a word is known by the company it keeps.'" (citation omitted)). They contain broad concepts, such as "features." They include "size[]" as distinct from "capacit[y]" and "volume[]," which means the statute is concerned not only with how much a product can hold but also where and how the appliance fits. And they reference "reliability," which protects not just *how* the appliance performs after installation but also *whether* it works in the consumer's building at all.

EPCA's structure further confirms that Congress protected all product characteristics providing consumers utility, including installation-related benefits. Section 6295(q)(1)(B) requires the Department to establish different efficiency standards when a "performance-related feature" justifies the establishment of a "higher or lower standard." In making this determination, the Department "shall consider" *all* "utility to the consumer" provided by the product, not simply its end-use by the consumer. *Id.*

Consistent with that direction, Congress itself created initial product classes based on installation, size, venting, condensing technology, and other design-related considerations. For example, Congress separated "through-the-wall central air conditioners," from other air conditioners because they are "designed to be installed totally or partially within a fixed-size opening in an exterior wall." 42 U.S.C. § 6295(d)(4)(A)(ii). It distinguishes mobile home gas-fired furnaces from other furnaces because of the different physical installation and venting requirements for mobile homes. *Id.* § 6295(f)(1)-(2); *see* 88 Fed. Reg. at 69,837 ("[S]uitability for use with condensing technology in a furnace fan is a performance-related feature under EPCA."). And it divided detached remote condensing from self-contained condensing refrigerators, freezers, and automatic ice makers due to their distinct physical and design characteristics. *Id.* §§ 6313(c), 6313(d)(1); 78 Fed. Reg. 55,890, 55,905 (Sept. 11, 2013). Congress would not have created these overlapping safeguards

to preserve consumer choice if EPCA protected only an appliance's post-installation functions.

B. The Department has repeatedly recognized that "space constraints and similar limitations" warrant separate product classes or standards. January 2021 Interpretive Rule, 86 Fed. Reg. at 4,782. This practice confirms that installation-related features constitute protected "performance characteristics" under EPCA.

For example, the Department created separate classes for standard size packaged terminal air conditioners and non-standard size packaged terminal air conditioners because older buildings often lack standard-sized wall openings. *See* 73 Fed. Reg. 58,772 (Oct. 7, 2008). It explained that, absent the separate standards, "customers could be forced to invest in costly building modifications to convert non-standard sleeve openings to standard size dimensions." *Id.* at 58,782. The same is true of the non-condensing furnaces and water heaters at issue in this case. Similarly, the Department has protected front-loading clothes washers even though they are less efficient than top-loading ones. 84 Fed. Reg. 37,794, 37,797 (Aug. 2, 2019). That was, in part, because they can fit in small spaces and cabinets. *Id.*

The Department has recognized that venting and condensing technologies are relevant to setting efficiency standards, too. The Department understood that ventless clothes dryers provide "unique utility" to people, like many apartment dwellers, who do not have a dryer vent or have limited space for appliances. 76 Fed. Reg. 22,454, 22,485 (Apr. 21, 2011); *see* 86 Fed.

Reg. at 73,949 (conceding that ventless dryers warrant separate standards because they can be used in existing buildings that cannot easily accommodate vents). In 2023, the Department adopted different efficiency standards for the fans needed to distribute hot air from non-condensing gas furnaces and condensing gas furnaces, because even though non-condensing furnace fans are more efficient, they do not function with condensing furnaces. *See* 88 Fed. Reg. at 69,836-37; *see* 79 Fed. Reg. 38,130, 38,142 (July 3, 2014) (same).

The Department has created a separate category for manufactured home furnace fans because they "meet certain design requirements that allow them to be installed in manufactured homes" like fitting in "a more compact cabinet size." 78 Fed. Reg. at 64,077. And it has separated appliances into "weatherized" (*i.e.*, appliances with components designed to remain outside the building) versus "non-weatherized" classes (*i.e.*, those kept indoors). *E.g.*, 10 C.F.R. § 430.32(e) (separating weatherized and non-weatherized furnaces); 10 C.F.R. § 430.32(y) (separating weatherized and non-weatherized furnace fans).

The Department has thus repeatedly recognized that "performance characteristics" include design-related features allowing consumers to install appliances in existing spaces that will not easily accommodate other forms of the appliance at issue. The Department did not dismiss dryer vent installation issues for consumers living in apartments as mere installation issues or expect those wanting dryers to simply change their residence (*e.g.,* by

renovating buildings or moving apartments to one with dryer vents). Once installed, consumers do not interact with a dryer vent or furnace fan. The Department has nonetheless recognized significant installation and design parameters are a performance characteristic that should not be eliminated under EPCA. Yet although only non-condensing furnaces will function within consumers' buildings as they exist, the agency arbitrarily did not preserve their availability in the challenged rules.

C. The majority's decision below has no basis in the statute. *See* App.25a-26a, 27a. The D.C. Circuit refused to "second-guess" the Department's interpretation that "performance characteristics" does not include installation-related attributes. App.27a. This ruling is solely the result of deference to an agency's creative statutory interpretation, which *Loper Bright* rejected.

The statute's listing of "initial charges" as a consideration for the Department's economic analysis does not preclude installation and design parameters from being a protected "performance characteristic." *See* App.26a. After all, another mandatory consideration in this economic analysis is "any lessening of the utility or the performance of the products." 42 U.S.C. § 6313(a)(6)(B)(ii). Utility *must* be part of the "performance characteristic" analysis. *See id.* § 6295(q)(1)(B) (mandating separate efficiency standards for product classes with unique performance characteristics taking into account "such factors as the utility to the consumer of such a feature").

Non-condensing appliances provide exactly the type of utility to consumers protected by EPCA. The Department itself concluded, in January 2021, that non-condensing appliances provide an important performance characteristic. *See* 86 Fed. Reg. 4,776. Just like a larger-sized appliance will not fit in certain homes easily, condensing appliances will not fit into some homes designed with vertical venting systems without significant renovations to accommodate horizontal venting. *Id.* at 4,786-87. The Department expressly admitted that such replacements would sometimes be "impracticable," so consumers would instead "choose to replace the existing appliance with one utilizing a different fuel type." 86 Fed. Reg. at 73,962.

Plus, EPCA does not permit the Department to eliminate performance characteristics any time consumers could bear the national average cost of alternatives. Congress directed the Department to consider both whether "a standard is economically justified" and independently whether "the standard is likely to result in the unavailability in the United States" of any product class with distinct performance characteristics. 42 U.S.C. §§ 6313(a)(6)(B)(ii), 6313(a)(6)(B)(iii)(II)(aa), 6295(o)(4). Almost any kind of consumer impact could be framed as "cost issues," not "performance-related impacts." 86 Fed. Reg. at 73,959-60. If the Department must show only that an efficiency standard is, in the aggregate, cost-justified, then EPCA's unavailability provisions offer illusory protection.

As Judge Rao's dissent explained, non-condensing appliances "plainly provide" utility to consumers. App.56a. They possess a "venting method that is compatible with the conventional chimneys found in millions of older homes and buildings," without "requir[ing] cumbersome and costly retrofits." App.50a. They integrate directly into existing exhaust systems rather than requiring consumers to modify their homes to accommodate different venting technology. *Id.* And unlike their condensing alternative, they do not require consumers to "punch[] new holes through exterior walls for plastic vents, sacrific[e] closets or other living space to run new piping, giv[e] up windows or balconies that are too close to a new vent's exhaust," or "re-lin[e] or abandon[] a perfectly functional chimney." *Id.* at 50a-51a.

The Department's standards thus conflict with EPCA's plain text. These appliances have "performance characteristics" protected by EPCA, and it is undisputed that the challenged standards render these appliances unavailable. The majority below erred in concluding otherwise.

IV. This case is an ideal vehicle to ensure courts do not reinstate *Chevron* deference to agency statutory interpretations.

This case presents an ideal vehicle to prevent lower courts from resurrecting *Chevron* deference to agency statutory interpretations. The facts are undisputed. The question is purely legal. Both the D.C. Circuit majority and dissent acknowledged that the statute's plain text cabining agency power is

"broad." App.15a. And the stakes, both jurisprudential and practical, are high.

All parties agree on the relevant facts. The challenged standards eliminate non-condensing furnaces and water heaters. Non-condensing appliances function in millions of buildings that condensing appliances cannot serve without often substantial modification. And for many consumers, the burdens of retrofit render gas heating practically unavailable. This forces electrification and undermines consumer choice.

The only dispute is legal: Whether an appliance's compatibility with existing infrastructure qualifies as a "performance characteristic" EPCA protects. Resolving that requires no technical expertise. It requires courts to exercise independent judgment. This is precisely what *Loper Bright* demands and what the D.C. Circuit majority refused to do.

This case especially warrants review because the D.C. Circuit handles a significant amount of federal regulatory challenges. Its evasion of *Loper Bright* will shape not only the bevy of agency cases before it, but also how courts nationwide approach agency statutory interpretations. This case is thus the ideal vehicle to ensure lower courts do not resurrect *Chevron* deference to agency statutory interpretations, and to prevent the Department of Energy from requiring millions of Americans to renovate or stop using gas appliances.

CONCLUSION

The Court should grant the petition.

Respectfully submitted,

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JANUARY 2026

APPENDIX

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APPENDIX A — OPINION OF THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT, FILED NOVEMBER 4, 2025

UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

No. 22-1030

AMERICAN GAS ASSOCIATION, *et al.*,

Petitioners,

v.

UNITED STATES DEPARTMENT OF ENERGY AND CHRIS WRIGHT, SECRETARY, U.S. DEPARTMENT OF ENERGY,

Respondents,

CITY OF NEW YORK, *et al.*,

Intervenors.

Consolidated with 23-1285, 23-1337

On Petitions for Review of Final Rules
of the U.S. Department of Energy

Argued November 21, 2024 Decided November 4, 2025

Before: PILLARD, WILKINS, and RAO, *Circuit Judges.*

Opinion for the Court filed by *Circuit Judge* WILKINS.

Dissenting opinion filed by *Circuit Judge* RAO.

Appendix A

WILKINS, *Circuit Judge*: After the Department of Energy ("DOE") promulgated amended energy efficiency standards for consumer furnaces (residential non-weatherized gas furnaces and mobile home gas furnaces) and certain commercial water heaters under the Energy Policy and Conservation Act ("EPCA"), Petitioners—who are a number of trade associations, manufacturers, and energy providers—filed petitions for review in this Court challenging DOE's actions. Energy Conservation Program: Energy Conservation Standards for Consumer Furnaces, 88 Fed. Reg. 87502 (Dec. 18, 2023) ("Consumer Furnaces Rule"); Energy Conservation Program: Energy Conservation Standards for Commercial Water Heating Equipment, 88 Fed. Reg. 69686 (Oct. 6, 2023) ("Commercial Water Heaters Rule"); Energy Conservation Program for Appliance Standards: Energy Conservation Standards for Residential Furnaces and Commercial Water Heaters, 86 Fed. Reg. 73947 (Dec. 29, 2021) ("2021 Interpretive Rule").

In this consolidated case, Petitioners contend that DOE's amended energy efficiency standards will expel non-condensing consumer furnaces and commercial water heaters—which they allege offer consumers unique performance characteristics and features—out of the market because they will be unable to meet the newly amended energy efficiency standards, unlike their condensing counterparts. Petitioners also argue that DOE did not provide adequate economic justification, as is required by EPCA, before promulgating the amended efficiency standards. Lastly, Petitioners allege that DOE failed to adhere to procedural requirements as provided by EPCA when promulgating the Consumer Furnaces

Rule. Because each of Petitioners' arguments fail, we deny the petitions.

I. Background

A.

EPCA, amended in 1992, was enacted in order "to provide for improved energy efficiency[1] of . . . major appliances, and certain other consumer products[,]" among other purposes. 42 U.S.C. § 6201(5). Consumer products such as refrigerators, freezers, air conditioners, water heaters, furnaces, ovens, television sets, etc. are "covered products" under EPCA and are subject to improved energy efficiency standards as authorized by the Secretary of DOE. *Id.* §§ 6292(a), 6295(a). As relevant to this case, DOE was mandated to set energy conservation standards for consumer furnaces and commercial water heaters under subsections 6295(f) and 6313(a), respectively.

EPCA also authorizes DOE to make amendments to energy conservation standards after certain times and triggering events. *Id.* §§ 6295(m), 6313(a)(6). For example, regarding commercial furnaces, subsection 6295(m)(1) provides that "[n]ot later than 6 years after issuance of any final rule . . . amending a standard" DOE will either publish a notice that the standards do not need to be amended, or publish a notice of proposed

1. "The term 'energy efficiency' means the ratio of the useful output of services from a consumer product" or an article of industrial equipment "to the energy use of such product" or article. 42 U.S.C. § 6291(5); 2021 Interpretive Rule, 86 Fed. Reg. at 73955.

rulemaking including the new proposed standards. A later provision of the statute provides that any amended energy conservation standard for consumer furnaces "shall . . . achieve the maximum improvement in energy efficiency . . . [that] is technologically feasible and economically justified." *Id.* § 6295(o)(2)(A). Likewise, for commercial water heaters, subsection 6313(a)(6) provides that DOE will amend efficiency standards to be at least consistent with the standards set by the American Society of Heating, Refrigerating and Air-Conditioning Engineers ("ASHRAE"). 2021 Interpretive Rule, 86 Fed. Reg. at 73948. If DOE chooses to apply a more stringent efficiency standard for commercial water heaters, the standard needs to result in "significant additional conservation of energy," and be "technologically feasible and economically justified" by clear and convincing evidence. *Id.* § 6313(a)(6)(A)(ii)(II).

Congress set out several factors for DOE to consider when determining whether an amended energy standard is economically justified. The statutes ask DOE to consider:

> (I) the economic impact of the standard on the manufacturers and on the consumers of the products subject to the standard;
>
> (II) the savings in operating costs throughout the estimated average life of the product in the type (or class) compared to any increase in the price of, or in the initial charges for, or maintenance expenses of, the products that are likely to result from the imposition of the standard;

(III) the total projected quantity of energy savings likely to result directly from the imposition of the standard;

(IV) any lessening of the utility or the performance of the products likely to result from the imposition of the standard;

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

(VI) the need for national energy conservation; and

(VII) other factors the Secretary considers relevant.

Id. § 6313(a)(6)(B)(ii); *see also id.* § 6295(o)(2)(B)(i) (same)[2]

Importantly, and as relevant to this case, DOE may not prescribe an amended standard if any "interested persons" establish "by a preponderance of the evidence that [an efficiency] standard is likely to result in the unavailability in the United States in any product type (or class) of performance characteristics (including reliability, features, sizes, capacities, and volumes) that

2. Although the language of these subsections varies slightly, the parties agree that they are not materially different for the issues raised in this case. Pet'rs' Br. 9; Resp'ts' Br. 4 n.1.

are substantially the same as those generally available in the United States." *Id.* § 6313(a)(6)(B)(iii)(II)(aa); *see also id.* § 6295(o)(4) ("[DOE] may not prescribe an amended . . . standard . . . if [DOE] finds . . . that interested persons have established by a preponderance of the evidence that the standard is likely to result in the unavailability in the [U.S.] in any covered product type (or class) of performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as those generally available in the [U.S.] at the time of [DOE's] finding.").[3]

B.

Before discussing the procedural history of this case, a brief overview of the mechanics of condensing versus non-condensing consumer furnaces and commercial water heaters is necessary. In a non-condensing consumer furnace or commercial water heater, a heat exchanger burns gas which is used to heat the air (for furnaces) or water (for water heaters). The rest of the heated gas, which is not used for the appliance, is transferred out of a building via an unpowered heat exchanger, like a vertical chimney. The vents for non-condensing appliances are "designed to avoid excessive condensate production in the vent." Consumer Furnaces Rule, 88 Fed. Reg. at 87563 n.111. In a condensing consumer furnace or commercial water heater, on the other hand, a second powered heat

3. Again, although the phrasing of the subsections are not identical, the parties concede that the two sections are materially similar for the issues raised in this case. Pet'rs' Br. 9-10, 45; Resp'ts' Br. 4 n.1.

exchanger is used to capture the excess heat not used to heat air or water. This second heat exchanger turns the excess heat into condensed water vapor, then transfers the cooler air out through a fanned horizontal vent and the liquid condensate out through a drain. This added heat exchanger makes the condensing appliance more efficient overall as compared to its non-condensing counterpart. Additionally, the vents that are used in a condensing appliance are "corrosion-resistant," like plastic, *id.* at 87562-63 & n.111, and therefore non-condensing appliances and condensing appliances are unable to share the same vents. *Id.* at 87536; *see also* Commercial Water Heaters Rule, 88 Fed. Reg. at 69710 (same).

On March 12, 2015, DOE published a notice of proposed rulemaking ("NOPR") to amend energy conservation standards for consumer furnaces. In this March 2015 NOPR, "DOE tentatively concluded that the methods by which a furnace is vented . . . do not provide any separate performance-related impacts," and therefore are not a "unique utility to consumers beyond the basic function of providing heat, which all furnaces perform." 2021 Interpretive Rule, 86 Fed. Reg. at 73949. After publishing a notice of data availability, DOE supplemented its NOPR on September 23, 2016 (referred to as a "SNOPR"), proposing to establish capacity-based product classes, and "reiterated its tentative conclusion that methods of venting do not provide any performance-related utility separate from the basic function of a furnace." *Id.* Separately, DOE published a NOPR to amend energy conservation standards for commercial water heaters on May 31, 2016, in which DOE also tentatively concluded that condensing

and non-condensing commercial water heaters "provide the same hot water" for commercial consumers and therefore do not require separate equipment classes. *Id.* In each of these notices, DOE "proposed amend[ing] energy conservation standards that would effectively require [consumer furnaces and commercial water heaters] . . . to use condensing technology to meet the proposed amended standards," and would "effectively eliminate[] all non-condensing [consumer furnaces and commercial water heaters] . . . currently on the market." *Id.*

On October 18, 2018, Petitioners submitted a petition for rulemaking to DOE. In it they asked DOE to: (1) issue an interpretive rule stating that the agency's proposed energy conservation standards would result in the unavailability of "performance characteristics" in consumer furnaces and commercial water heaters, and (2) withdraw the proposed energy conservation standards because of that finding. DOE published the petition and requested public comment.

On July 11, 2019, after considering public comments, DOE published a notice of a proposed interpretive rule ("NOPIR") that non-condensing technology "constitute[s] a performance-related 'feature' . . . that cannot be eliminated through adoption of an energy conservation standard." *Id.* at 73949-50. This was eventually followed by a final interpretive rule on January 15, 2021, "determining that, in the context of residential furnaces . . . [and] commercial water heaters . . . use of non-condensing technology (and associated venting) constitutes a performance-related 'feature.'" *Id.* at 73950. DOE found that the reasons

non-condensing technology offers unique "feature[s]" is because it "(1) [a]void[s] complex installations in certain locations constrained by space, existing venting, and available drainage; (2) avoid[s] the encroachment on usable space that would occur in certain installations; and (3) do[es] not enhance the level of fuel switching that might accompany standard setting absent a separate product/equipment class for non-condensing appliance[s]." *Id.* Following this final interpretive rule, DOE withdrew its March 12, 2015, NOPR.

Then, about seven months later, on August 27, 2021, DOE published another NOPIR where it "re-examined the conclusions reached in the January 2021" final interpretive rule. In this August 2021 NOPIR, DOE proposed to "re-instate its historical interpretation of" "performance characteristics" and "features" to conclude that "non-condensing technology" for consumer furnaces and commercial water heaters is "not a performance-related 'feature' for the purpose of the EPCA." *Id.* at 73948, 73950.

On the same day, August 27, 2021, DOE requested comment on the NOPIR with the comment period scheduled to close on September 27, 2021. However, after receiving a request from Petitioners, DOE extended the comment period to October 12, 2021.

When the comment period closed DOE issued a Final Interpretive Rule on December 29, 2021. Consistent with its March 2015 NOPR, September 2016 SNOPR, and May 2016 NOPR, DOE concluded that non-condensing technology in consumer furnaces and commercial water

heaters does not offer performance-related "feature[s]" as compared to condensing consumer furnaces and commercial water heaters. *Id.* at 73951. DOE once again found that there was no unique utility to consumers offered by non-condensing technology as both non-condensing and condensing appliance's function is to provide heated air or water. DOE concluded "[u]pon further consideration" that "utility is determined through the benefits and usefulness the feature provides to the consumer while interacting with the product." *Id.* Therefore, differences in cost or complexity of installation "do not make any method of venting a performance-related feature." *Id.* Instead, DOE explained that those considerations were more appropriate under its economic justification analysis under subsections 6295(o)(2)(B)(i) and 6313(a)(6)(B)(ii).

On October 6, 2023, DOE published a Final Rule updating the efficiency standards for commercial water heaters after determining the revised efficiency standards "represent[ed] the maximum improvement in energy efficiency that [was] technologically feasible and economically justified." Commercial Water Heaters Rule, 88 Fed. Reg. at 69687. The amended efficiency standards for commercial water heaters were estimated to save 5.6 percent energy usage relative to the case without amended standards. *Id.* at 69688. Likewise, on December 18, 2023, DOE amended energy conservation standards for consumer furnaces that included residential non-weatherized gas furnaces and mobile home gas furnaces. Consumer Furnaces Rule, 88 Fed. Reg. at 87503. DOE estimated that the amended standards for consumer furnaces would save 4.77 quadrillion British thermal

units ("Btu"), which represented a 3.2 percent savings if compared to a scenario without amended efficiency standards. *Id.* at 87504.

Petitioners ask us to vacate DOE's 2021 Interpretive Rule, the Commercial Water Heaters Rule, and the Consumer Furnaces Rule.

II. Analysis

A. Jurisdiction and Standing

We have jurisdiction to review the petitions under 42 U.S.C. sections 6306(b) and 6316. This Court will "hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" or "without observance of procedure required by law." 5 U.S.C. § 706(2)(A), (D). We will not "substitute [our] judgment for that of the agency," *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43, 103 S. Ct. 2856, 77 L. Ed. 2d 443 (1983), nor will we "supply a reasoned basis for the agency's action that the agency itself has not given." *Id.* (citing *SEC v. Chenery Corp.*, 332 U.S. 194, 196, 67 S. Ct. 1575, 91 L. Ed. 1995 (1947)). If the "agency [has] examine[d] the relevant data and articulate[d] a satisfactory explanation for its action including a 'rational connection between the facts found and the choice made'" we will uphold the decision. *Id.* (quoting *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168, 83 S. Ct. 239, 9 L. Ed. 2d 207 (1962)); *see also Loper Bright Enters. v. Raimondo*, 603

U.S. 369, 395-96, 144 S. Ct. 2244, 219 L. Ed. 2d 832 (2024). The agency must "clearly disclose[]" "the grounds upon which . . . [it] acted" by substantial evidence. *T-Mobile S., LLC v. City of Roswell*, 574 U.S. 293, 301, 135 S. Ct. 808, 190 L. Ed. 2d 679 (2015); 42 U.S.C. § 6306(b)(2) ("No rule under section . . . 6295 of this title may be affirmed unless supported by substantial evidence.").

An association has standing on behalf of its members if at least one member has standing to sue individually. *Sierra Club v. DOE*, 107 F.4th 1012, 1014, 467 U.S. App. D.C. 32 (D.C. Cir. 2024) (citing *Hunt v. Wash. State Apple Advert. Comm'n*, 432 U.S. 333, 343, 97 S. Ct. 2434, 53 L. Ed. 2d 383 (1977)). An association also must show that "the interests it seeks to protect are germane to the organization's purpose" and that "neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit." *Hunt*, 432 U.S. at 343.

Petitioners American Gas Association ("AGA"), American Public Gas Association ("APGA"), and National Propane Gas Association ("NPGA") are trade associations. AGA advocates for natural gas companies and customers; APGA advocates for publicly owned or operated natural gas systems; and, NPGA represents various entities in the propane industry. AGA, APGA, and NPGA have adequately supported their claim of associational standing in their declarations by alleging that their members expect to incur economic loss if the Consumer Furnaces and Commercial Water Heaters Final Rules are not vacated. They allege that without vacatur their members

will be injured when consumers switch from natural gas to electric appliances. Pet'rs' Decl. Addendum at 3-4 ¶¶ 7-9, 6-7 ¶¶ 6-7, 18-19 ¶¶ 6-8, 31-33 ¶¶ 7-9, 36 ¶¶ 6-8; *see Am. Pub. Gas Ass'n. v. DOE*, 72 F.4th 1324, 1336, 461 U.S. App. D.C. 463 (D.C. Cir. 2023) (holding that petitioners "demonstrated standing through declarations attesting to their expectations of economic losses caused by the [f]inal [r]ule that may be remedied by vacatur of the rule").

Petitioner Thermo Products, LLC ("Thermo") is a manufacturer of gas and oil furnaces and claims its standing to challenge the 2021 Interpretive Rule and the Consumer Furnaces Rule is "self-evident." We agree. A petitioner suffers an injury in fact by an agency when the agency promulgates a regulation that prohibits a petitioner from producing or selling a product that they would have otherwise been able to produce or sell. *See Energy Future Coal. v. EPA*, 793 F.3d 141, 144, 417 U.S. App. D.C. 141 (D.C. Cir. 2015) (holding that petitioners faced an injury in fact when they "claim that they face a regulatory impediment . . . that prevents their product from being used as a test fuel"). Thermo alleges that DOE's 2021 Interpretive Rule and Consumer Furnaces Rule will impose standards that its noncondensing residential furnaces will not be able to meet or be redesigned to meet. Pet'rs' Decl. Addendum at 14-15 ¶¶ 5-7. Thermo claims that as a result it will not be able to sell non-condensing furnaces, which will cause it to "face interrupted and possibly lost revenue streams," "abandon" product designs "in which it has invested large amounts of capital," and reverse changes in its operations. *Id.* ¶ 7. We also find that Thermo has demonstrated causation and redressability by alleging that the loss of

sales it may face will be directly caused by the efficiency standards imposed in the Consumer Furnaces Rule, and vacating the rule will redress the alleged injury. *See Energy Future Coal.*, 793 F.3d at 144.[4]

B. Performance Characteristics and Features

Turning to the merits of the petition: We next determine whether DOE was correct to conclude that non-condensing appliances offer performance characteristics or features that are substantially the same as those offered by condensing appliances. 42 U.S.C. §§ 6295(o)(4), 6313(a)(6)(B)(iii)(II)(aa). We note that DOE's interpretation of EPCA does not bind us, but "it may be especially informative 'to the extent it rests on factual premises within . . . [DOE's] expertise.'" *Loper Bright Enters.*, 603 U.S. at 402 (quoting *Bureau of Alcohol, Tobacco and Firearms v. FLRA*, 464 U.S. 89, 98, n.8, 104 S. Ct. 439, 78 L. Ed. 2d 195 (1983)). "Such expertise has always been one of the factors which may give an Executive Branch interpretation particular 'power to persuade, if lacking power to control.'" *Id.* (quoting *Skidmore v. Swift & Co.*, 323 U.S. 134, 140, 65 S. Ct. 161, 89 L. Ed. 124 (1944)).

Congress gave DOE "a degree of discretion" to decide what constitutes a performance characteristic or feature under EPCA. *Id.* at 2263. "The burden of producing

4. Because we conclude that AGA, APGA, NPGA, and Thermo have standing, we need not address Spire Inc., Spire Alabama Inc., and Spire Missouri Inc.'s standing. *See Ams. for Safe Access v. Drug Enf't Admin.*, 706 F.3d 438, 443, 403 U.S. App. D.C. 388 (D.C. Cir. 2013) (holding that if one petitioner "has individual standing, we need not address the issue for the other [p]etitioners").

evidence and proving that a[n efficiency] standard level will result in the unavailability of certain characteristics, etc., rests on interested persons asserting the claim of unavailability." H.R. REP. NO. 100-11, at 23 (1987); 42 U.S.C. §§ 6295(o)(4), 6313(a)(6)(B)(iii)(II)(aa). Petitioners must make this showing before DOE by a preponderance of the evidence.

We begin with the plain text of the statute. *See United States v. Braxtonbrown-Smith*, 278 F.3d 1348, 1352, 349 U.S. App. D.C. 399 (D.C. Cir. 2002) ("In construing a statute, the court begins with the plain language of the statute."). All parties, including the dissent, *see* Dissenting Op. 8-9, agree that the plain meaning of "performance characteristics" is broad. The term "performance" is simply defined as "the execution of an action," *Performance*, MERRIAM-WEBSTER INC. (Ninth New Collegiate 1985), and "characteristic" is defined as "a distinguishing trait, quality, or property." *Characteristic*, MERRIAM-WEBSTER INC. (Ninth New Collegiate 1985). Additionally, "feature" means "the structure, form, or appearance" and "a prominent part or characteristic." *Feature*, MERRIAM-WEBSTER INC. (Ninth New Collegiate 1985).

The parties agree that the plain text of "performance characteristic" means a product attribute that provides utility to consumers desiring to use the product.[5] Pet'rs' Br. 46; Resp'ts' Br. 26 (performance characteristics

5. It seems that the dissent would also agree with this definition. *See* Dissenting Op. 12 ("Under the best meaning of EPCA, a 'performance characteristic' is a distinctive product attribute that provides utility to the consumer.").

"provide a consumer unique utility during the operation of the appliance") (quoting 2021 Interpretive Rule, 86 Fed. Reg. at 73955); Oral Arg. Tr. at 5:11-20 (When asked for his definition of "performance characteristic" at oral argument, Petitioners' counsel stated that it is "a product attribute that provides utility to consumers desiring to use the product."). In other words, a performance characteristic "has to be . . . about using the product," and "doesn't include things unrelated to the performance of the product," Oral Arg. Tr. at 5:23-25. Instead, a performance characteristic is related to "the product['s] . . . useful output." 2021 Interpretive Rule, 86 Fed. Reg. at 73955.

Moreover, because every appliance offers a unique function to consumers, the concept of a feature or performance characteristic is "very case-specific." 2021 Interpretive Rule, 86 Fed. Reg. at 73948. "No single definition could effectively capture the potential for features across the broad array of consumer products and commercial equipment subject to EPCA's regulatory scheme." *Id.* Therefore, because the plain text of the statute does not get us home, we will look beyond it to resolve the specific ambiguity here as it relates to consumer furnaces and commercial water heaters. *See Braxtonbrown-Smith*, 278 F.3d at 1352 ("Where the language is subject to more than one interpretation and the meaning of Congress is not apparent from the language itself, the court may be forced to look to the general purpose of Congress in enacting the statute and to its legislative history for helpful clues.")

The parties' dispute centers around the specific ambiguity of what product attributes of small furnaces

and water heaters Congress concluded had utility to consumers such that they warrant protection against energy conservation standards that could eliminate them from the market. Specifically, the parties dispute whether venting mechanisms, installation factors, or space-related attributes encompass features that Congress meant to treat as providing utility to consumers.

Beginning with venting mechanisms: Petitioners contend that non-condensing appliances, which use unpowered venting like vertical chimneys, offer performance characteristics to consumers that condensing appliances do not. According to Petitioners, condensing appliances are incompatible with venting systems like chimneys because condensing appliances require a fan to generate enough pressure to push or pull gases outside. Pet'rs' Br. 12. Petitioners further contend that condensing appliances require plumbing drains to dispose of condensate and cannot share vents with non-condensing appliances. Pet'rs' Br. 13. Petitioners argue that consumers derive utility from a product by, for example, not "hav[ing] to renovate their homes," "to accommodate the use of [condensing] products for which they were not architecturally designed." Oral Arg. Tr. 6:4; J.A. 324.

Congress was well aware of Petitioners' perspective regarding venting mechanics for small gas furnaces when it amended EPCA in 1987. AGA submitted a statement before the Subcommittee on Energy Conservation and Power in 1986 expressing concern that energy efficiency standards in EPCA "would ban the conventional, atmospherically vented furnace" because it would not be able to meet the prescribed efficiency percentage.

A Bill to Amend the Energy Policy and Conservation Act with Respect to Energy Conservation Standards for Appliances: Hearing on H.R. 5465 Before the H. Subcomm. on Energy Conservation & Power, 99th Cong. 149 (1986). After hearing Petitioners' perspective, the Committee on Energy and Commerce issued the amended EPCA bill the following year. In it, the Committee provided that "[e]xamples of 'performance characteristics' of particular products [were]: safety; cooling; refrigeration and heating; dehumidification; ability to clean or dry without adverse effects; serviceability; and incidence and cost o[f] repair." H.R. REP. NO. 100-11, at 23 (1987). Additionally, "[e]xamples of 'features' [were]: automatic defrost, through the door ice, size of room air conditioners, and noise levels." *Id.* Therefore, despite AGA's comments, the Committee did not state that venting mechanics were examples of performance characteristics or features for consumer furnaces. However, it did specifically provide that heat was a performance characteristic. The dissent does not discuss this part of the legislative history.

We think the Committee on Energy and Commerce's examples make good sense. At a certain level, it is obvious that consumers do not buy small furnaces or commercial water heaters because of how the appliance vents. In fact, venting is a quality that both condensing and non-condensing appliances share. It "is one of the basic components found in every gas-fired furnace." Consumer Furnaces Rule, 88 Fed. Reg. at 87535; *see also* Commercial Water Heaters Rule, 88 Fed. Reg. at 69709 ("[V]enting, like a gas burner or heat exchanger, is one of the basic components found in every gas-fired water

heater (condensing or noncondensing."). The dissent seems to overlook this aspect by arguing, without support, that "some consumers here will be effectively deprived of gas-powered appliances entirely." Dissenting Op 12 n.1. This is simply not true since gas-fired condensing options will still be available to consumers.

Instead, the unique utility a consumer furnace or commercial water heater provides to the consumer is that they either provide hot air or hot water, respectively. If Congress intended particular methods of venting such as unpowered venting to be a performance characteristic, it had an opportunity to clearly state as much—but it did not. *See Mississippi ex rel. Hood v. AU Optronics Corp.*, 571 U.S. 161, 169, 134 S. Ct. 736, 187 L. Ed. 2d 654 (2014) ("Had Congress intended . . . [Petitioners' view of the statute], it easily could have drafted language to that effect.").

This understanding is also consistent with DOE's historical view of whether an appliance provides a unique utility to consumers.[6] Take vented and ventless

6. For example, in the context of dishwashers, "DOE's longstanding view [has been] that performance [means] 'utility accessible to the layperson and based on user operation." *See Louisiana v. DOE*, 90 F.4th 461, 474 (5th Cir. 2024) (discussing DOE's 2020 Final Rule establishing a new product class for residential dishwashers, Energy Conservation Program: Establishment of a New Product Class for Residential Dishwashers, 85 Fed. Reg. 68723, 68727 (2020)) (internal quotation marks omitted). A practical example is cycle times in clothes washers and dryers. Cycle times have been understood as "a valuable consumer utility and performance-related feature" in the context of clothes washers and clothes dryers because consumers value the utility of having an option for a shorter cycle

residential clothes dryers as an example. In 2011, DOE separated ventless and vented residential clothes dryers into two separate classes because DOE recognized that having a ventless clothes dryer was a unique utility for consumers who live in areas where a vented dryer would not be possible to use (like apartments in certain high-rise buildings). *See* Energy Conservation Program: Energy Conservation Standards for Residential Clothes Dryers and Room Air Conditioners, 76 Fed. Reg. 22454, 22485 (Apr. 21, 2011). DOE found that "a substantial subset of consumers . . . would be deprived of the benefits of . . . having [a] clothes-drying appliance in their residence entirely unless DOE established a ventless clothes dryers product class." 2021 Interpretive Rule, 86 Fed. Reg. at 73957. Venting was treated as a performance characteristic in the clothes dryer context because the alternative venting option (non-vented) impacted whether a consumer could use or install the particular appliance at all in a large class of applications.[7]

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time. Energy Conservation Program: Establishment of New Product Classes for Residential Clothes Washers and Consumer Clothes Dryers, 85 Fed. Reg. 81359, 81361 (2020).

7. Instead of acknowledging the reason that ventless and vented clothes dryers were treated as a separate product class, the dissent cites the same rule and contends that "the Department has consistently set distinct efficiency standards for products based on compatibility with venting systems." Dissenting Op. 11. However, this contention overlooks the "case-specific" reason that ventless and vented clothes dryers were separated into two different product classes—ventless clothes dryers are the only available option for those who live in certain high-rise buildings. *See* 2021 Interpretive Rule, 86 Fed. Reg. at 73948; *see also id.* at 73957 ("[I]f a ventless clothes dryer were not available, no clothes dryer would be available

Not so with condensing consumer water heaters or furnaces. When DOE had to determine whether consumer water heaters that utilize heat pump technology versus electric resistance technology should be placed in separate classes, DOE concluded that they did not. *See* Energy Conservation Program: Energy Conservation Standards for Residential Water Heaters, Direct Heating Equipment, and Pool Heaters, 75 Fed. Reg. 20112, 20135 (April 16, 2010). DOE concluded that even though an additional water drain had to be installed if a consumer decides to use a heat pump, that small installation requirement did not change the utility of providing heated water to consumers, and moreover that "heat pump water heaters could replace traditional electric resistance storage water heaters in most residences, although the installation requirements may be quite costly." *Id.* So is the case here. DOE found that "[i]n all cases" "consumers facing the prospect of replacing a non-condensing residential furnace or commercial water heater with a condensing . . . [appliance] do have options available to either modify existing venting or install a new venting system to accommodate a condensing . . . [appliance], or to install a feasible alternative." 2021 Interpretive Rule, 86 Fed. Reg. at 73957.

Next, Petitioners contend that "space-related attributes" are performance characteristics that are "intertwined" with the function of a consumer furnace and a commercial water heater. Pet'rs' Br. 48-50.

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for certain locations"). That is, however, not the case for condensing and non-condensing consumer furnaces and commercial water heaters as we explain.

Recall that Petitioners' burden is a heavy one—they must "establish[] by a preponderance of the evidence that a[n efficiency] standard is likely to result in the unavailability in the United States in any product type (or class) of performance characteristics (including . . . sizes, capacities, and volumes) that are substantially the same as those generally available in the United States." 42 U.S.C. § 6313(a)(6)(B)(iii)(II)(aa); *see also id.* § 6295(o)(4) (same). Substantial evidence in the record before us shows that "interested persons" failed to carry that burden.

In regards to commercial water heaters, DOE explained in the 2021 Interpretive Rule that condensing technology does not "require[] an increase in the overall size of a water heater" and that "a condensing appliance would not result in a loss of useful space for most consumers." 2021 Interpretive Rule, 86 Fed. Reg. at 73955; *see also id.* at 73957 n.13 ("DOE surveyed the dimensions of representative commercial water heaters . . . and found the height and diameter dimensions comparable."). Moreover, after conducting a review of both condensing and non-condensing appliances having similar input ratings and storage volumes from multiple manufactures, DOE found that the "overall dimensions for condensing models were not significantly larger than for non-condensing models." *Id.* at 73955. Specifically, DOE found that "non-condensing residential furnaces and commercial water heaters are not significantly different in overall footprint, size, or heating capacity from their condensing counterparts." *Id.* at 73957.

Petitioners argue that DOE's analysis of the space-related characteristics of consumer furnaces and

commercial water heaters is inconsistent with how it has analyzed other products like residential condensing and non-condensing furnace fans, washing machines, and central air conditioners. Petitioners argue that the reason Congress separated efficiency standards for residential furnace fans used in mobile homes into its own product class, for example, was due to the size constraints that manufactured homes face. Pet'rs' Br. 47-55; *see* Energy Conservation Program for Consumer Products: Energy Conservation Standards for Residential Furnace Fans, 78 Fed. Reg. 64068, 64077 (Oct. 25, 2013). Although Petitioners may be correct that size constraints were one of the factors DOE considered when promulgating efficiency standards for furnace fans used in mobile homes versus those not used in mobile homes, they oversimplify DOE's analysis. DOE separated furnace fans based on characteristics such as whether the furnace fan was weatherized (meaning that it could be used outdoors), the type of energy source the furnace fan used, and whether the furnace fan was condensing or non-condensing. *See* Energy Conservation Program for Consumer Products, 78 Fed. Reg. at 64077. DOE explained that it separated these categories based on "internal structure and application-specific design differences that impact furnace fan energy consumption." *Id.* Specifically for condensing furnaces, DOE explained that the separate fan class structure "allow[ed] for differentiation of products with designs that achieve higher thermal efficiency but may have lower fan performance." *Id.* at 64080. Therefore, unlike space-related attributes of consumer furnaces and commercial water heaters, the design of mobile home furnace fans is directly related to performance requirements of the particular product.

Petitioners also point to front-loading and top-loading washing machines to support their contention that size and installation limits are "performance characteristics." Pet'rs' Br. 48; Energy Conservation Standards for Residential Clothes Washers, 84 Fed. Reg. 37794 (Aug. 2, 2019). However, unlike condensing and non-condensing consumer furnaces and commercial water heaters, washing machine capacity has a direct impact on efficiency levels and "the location of access" to a washing machine "provides distinct consumer utility." Energy Conservation Standards for Residential Clothes Washers, 84 Fed. Reg. at 37797. For example, front-loading washers may be preferable to those with disabilities because the angle may be easier to access, whereas top-loading washers may be preferred by the elderly "because it is easier to reach the laundry without excessive bending" or those who appreciate the ability to add more clothes while the cycle has already begun. 2021 Interpretive Rule, 86 Fed. Reg. at 73953. In contrast, "a consumer's interaction with a furnace or water heater . . . [is] a simple one." *Id.* "After the consumer adjusts the thermostat or faucet, the user receives the requested heated air or water." *Id.*

Likewise, Petitioners' argument regarding Congress's decision to separate "space-constrained central air conditioners" from other central air conditioners misses the point. DOE explained that it separated these two product classes because "space-constrained central air conditioners provide centralized air conditioning in locations with space constraints that would preclude the use of other types of central air conditioners." *Id.* at 73957. "Space-constrained central air conditioners have

an indoor or outdoor unit that is limited in size due to the location in which the unit operates." *Id.* This explanation does not mean that space-related attributes always will dictate whether a product should be separated into its own product class, however.[8] As DOE explained, when it came to analyzing non-condensing consumer furnaces and commercial water heaters, it found that they were "not significantly different in overall footprint, size, or heating capacity from their condensing counterparts." *Id.*

Lastly, as to installation factors: DOE recognized that "installation of condensing products/equipment [sometimes] requires modifications to the installed space . . . and that such modifications may impact the installation cost and/or complexity." *Id.* at 73962. Because DOE found that consumers are able to replace non-condensing

8. Take, for example, packaged terminal air conditioners ("PTACs") and terminal heat pumps ("PTHPs"). In 2008, DOE separated standard size, 16 inches high by 42 inches wide, PTACs and PTHPs in a separate efficiency class from non-standardized PTACs and PTHPs. Energy Conservation Program for Commercial and Industrial Equipment: Packaged Terminal Air Conditioner and Packaged Terminal Heat Pump Energy Conservation Standards, 73 Fed. Reg. 58772 (2008). DOE explained that the industry standardized the wall sleeve dimensions for PTACs and PTHPs built after the mid-1980s. *Id.* at 58782. However, in buildings constructed before the mid-1980s, like "high-rise buildings found in large cities" non-standard size equipment that varies in size is typically used. *Id.* DOE created two different product classes for standard size PTACs and PTHPs versus their non-standard size counterparts because "altering the existing wall sleeve opening to accommodate the more efficient, standard size equipment could include extensive structural changes to the building, which could be very costly, and is, therefore rarely done." *Id.*

appliances with condensing appliances in "all cases," we agree that installation factors are more appropriately addressed in the economic-justification analysis because installation factors will not prevent the replacement of non-condensing appliances, but may financially deter consumers from doing so. *See id.* at 73957. The language of subsections 6295(o)(4) and 6313(a)(6)(B)(iii)(II) bolster this reasoning because neither includes a reference of "installation factors" or "installation costs" as a factor that Congress was concerned about as it relates to the unavailability provisions in EPCA. However, subsections 6295(o)(2)(B)(i)[9] and 6313(a)(6)(B)(ii)[10] more appropriately capture a consideration of the installation costs and factors under the "economic impact" and the "initial charges for" the products on consumers.

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9. Subsections 6295(o)(2)(B)(i)(I) and (II) provide that:

> [i]n determining whether a standard is economically justified, the Secretary shall . . . determine whether the benefits of the standard exceed its burdens by, to the greatest extent practicable, considering—
>
> (I) the economic impact of the standard on the manufacturers and on the consumers of the products subject to such standard; [and]
>
> (II) the savings in operating costs throughout the estimated average life of the covered product in the type (or class) compared to any increase in the price of, or in the initial charges for, or maintenance expenses of, the covered products which are likely to result from the imposition of the standard.

10. Subsections 6313(a)(6)(B)(ii)(I) & (II) are materially the same as subsections 6295(o)(2)(B)(i)(I) and (II).

In sum, the record fails to support Petitioners' claim that condensing consumer furnaces and commercial water heaters are not "substantially the same" as their non-condensing counterparts. We have no reason to second-guess DOE's view, "especially since it 'rests on the agency's evaluations of scientific data within its area of expertise.'" *Actavis Elizabeth LLC v. FDA*, 625 F.3d 760, 766, 393 U.S. App. D.C. 188 (D.C. Cir. 2010) (quoting *Serono Labs., Inc. v. Shalala*, 158 F.3d 1313, 1320, 332 U.S. App. D.C. 407 (D.C. Cir. 1998)). We find that, although not identical, condensing consumer furnaces and commercial water heaters offer substantially the same performance characteristics and features as non-condensing options. 42 U.S.C. §§ 6295(o)(4), 6313(a)(6)(B)(iii)(II)(aa); *see* H.R. REP. NO. 100-11, at 23 (1987) (explaining that "substantially the same" does not mean "identical"). We are satisfied that DOE has "fulfilled its duty to 'examine the relevant data and articulate a satisfactory explanation for its'" conclusion that Petitioners failed to show, by a preponderance of the evidence, that non-condensing consumer furnaces and commercial water heaters offer performance characteristics that are unlike those offered by their condensing counterparts. *Ark Initiative v. Tidwell*, 816 F.3d 119, 127, 421 U.S. App. D.C. 414 (D.C. Cir. 2016) (quoting *State Farm*, 463 U.S. at 43).

C. Economic Justification

We next determine whether DOE acted arbitrarily in concluding that the amended standards for consumer furnaces and commercial water heaters were economically justified. DOE must show that its amended efficiency

standards in the Consumer Furnaces Rule are supported by substantial evidence—a burden common to actions we review under the Administrative Procedure Act. 42 U.S.C. § 6306(b)(2); *see Biestek v. Berryhill*, 587 U.S. 97, 102, 139 S. Ct. 1148, 203 L. Ed. 2d 504 (2019) ("The phrase 'substantial evidence' is a 'term of art' used throughout administrative law to describe how courts are to review agency factfinding." (quoting *T-Mobile S., LLC*, 574 U.S. at 301)). However, the energy efficiency standards in the Commercial Water Heaters Rule must be economically justified "by clear and convincing evidence." 42 U.S.C. § 6313(a)(6)(A)(ii)(II). "[C]lear and convincing evidence requires . . . the Secretary . . . to have an 'abiding conviction' that her findings . . . are 'highly probable' to be true. *APGA v. DOE*, 22 F.4th 1018, 1025, 455 U.S. App. D.C. 268 (D.C. Cir. 2022) ("*APGA I*") (quoting *Colorado v. New Mexico*, 467 U.S. 310, 316, 104 S. Ct. 2433, 81 L. Ed. 2d 247 (1984)). Our review, even under the clear and convincing standard, is to determine whether it was reasonable for the agency to conclude that it met this standard. *Id.* at 1025-26 (citing *Sea Island Broad. Corp. of S.C. v. FCC*, 627 F.2d 240, 244, 200 U.S. App. D.C. 187 (D.C. Cir. 1980)).

1. Random Assignment/Monte Carlo Analysis

Petitioners take issue with the widely used random assignment test (also known as Monte Carlo analysis) that DOE utilized as part of the economic analysis for the amended efficiency standards for both the Consumer Furnace Final Rule and the Commercial Water Heater Final Rule. Petitioners argue that DOE relied on an

assumption that consumers make appliance purchases randomly without weighing economic benefits, and that DOE failed to give a reasoned explanation for doing so.

The random assignment test or Monte Carlo analysis is used across industries ranging from physical sciences to high finance. *Lyondell Chem. Co. v. Occidental Chem. Corp.*, 608 F.3d 284, 293 (5th Cir. 2010). It was first used a little under a century ago by physicists conducting nuclear weapons research. *Id.; see also AT&T Svs., Inc. v. FCC*, 21 F.4th 841, 847, 455 U.S. App. D.C. 181 (D.C. Cir. 2021) (noting that Monte Carlo analysis was "[d]eveloped by scientists working on the Manhattan Project"). This methodology is "particularly useful when reaching an exact numerical result is impossible or infeasible and the data provide[s] a known range—a minimum and a maximum, for example—but leave[s] the exact answer uncertain." *Lyondell Chem. Co.*, 608 F.3d at 293. A random assignment test or Monte Carlo analysis "runs hundreds of simulations, and produces a range of possible outcomes." *AT&T Svs., Inc.*, 21 F.4th at 847. This type of analysis "can provide a 'more complete view of potential outcomes and their associated likelihoods.'" *Id.* (quoting FED. JUDICIAL CTR. & NAT'L RSCH. COUNCIL, REFERENCE MANUAL ON SCI. EVIDENCE 469 (3d ed. 2011)). The Environmental Protection Agency has explained that Monte Carlo analysis can be a "viable statistical tool[] for analyzing variability and uncertainty in risk assessments." *Lyondell Chem. Co.*, 608 F.3d at 293 (quotation omitted) (citing EPA, GUIDING PRINCIPLES FOR MONTE CARLO ANALYSIS, EPA/630/R-97/001, at 1 (1997)).

The random assignment test is not new to either AGA or DOE. This Court recently considered the issue of whether DOE arbitrarily conducted its life-cycle cost ("LCC") analysis when it randomly assigned commercial packaged boilers to buildings without weighing the kind of building the boiler was being assigned to. *APGA I*, 22 F.4th at 1027. When DOE conducted its no-new-standards case analysis, it assumed that "the distribution of efficiencies among shipped boilers [was] the same as the distribution of efficiencies across the models listed in the [Air-Conditioning, Heating, and Refrigeration Institute ("AHRI")] data base." *Id.* APGA and other petitioners contended that DOE "failed to recognize that a purchaser of commercial packaged boilers would rationally consider the costs and benefits of its investment and is likely to buy the boiler that produces the best economic performance for its building." *Id.*

Instead of explaining its analysis, DOE "rather dismissively" explained that it did not have the data that would be necessary to run an alternative analysis to the one it conducted. *Id.* Additionally, DOE listed possible market failures that its LCC analysis addressed, but did not provide evidence to show that the market failures it listed affected the market for commercial packaged boilers. *Id.* We remanded the case back to DOE, without vacatur, and ordered DOE to provide a "more complete response" since the "assignment of efficiencies to the buildings in the sample was a crucial part of the analysis supporting the DOE's conclusion that a more stringent [energy efficiency] standard was warranted." *Id.* We held that DOE's response that it "essentially . . . did the best

it could with the data it had" was "not enough to justify [an] assum[ption that] a purchaser's decisions w[ould] not align with its economic interests in purchasing a boiler." *Id.* Therefore, we could not conclude that DOE's amended efficiency standards were supported by clear and convincing evidence under subsection 6313(a)(6)(A)(ii)(II). *Id.* at 1028.

This Court did not discredit, nor decide, that the random assignment test should not have been used in DOE's LCC analysis in *APGA I*. Instead, we merely ordered DOE to go back and provide more reasoned explanations for its analysis and respond to the petitioners' concerns. The case before us is unlike what we considered in *APGA I*. DOE's LCC here was "the sum of the purchase price of a piece of equipment (including its installation and sales tax) and the operating expense (including energy, maintenance, and repair expenditures) discounted over the lifetime of the equipment." Commercial Water Heaters Rule, 88 Fed. Reg. at 69704; Consumer Furnaces Rule, 88 Fed Reg. at 87528 (same). To calculate the LLC, DOE needed a "variety of inputs, such as product prices, product energy consumption, energy prices, maintenance and repair costs, product lifetime, and discount rates appropriate for consumers." Commercial Water Heaters Rule, 88 Fed. Reg. at 69704; Consumer Furnaces Rule, 88 Fed Reg. at 87528 (same).

DOE used real-world historical data for its inputs which included the highest quality summary statistics submitted by interested persons as well as data submitted by individual households. Consumer Furnaces Rule, 88

Fed. Reg. at 87555. The data used correlated inputs to "individual building characteristics" such as "heating load, building shell indices, installation costs, and no-new-standards case efficiency probability." *Id.; see also* Commercial Water Heaters Rule, 88 Fed. Reg. at 69731 (explaining that in relation to commercial water heaters DOE's analysis captured the average hot water loads on equipment, but did not necessarily capture extremes). "DOE develop[ed] probabilities for as many inputs to the LCC analysis as possible, to reflect the distribution of impacts as comprehensively as possible." Consumer Furnaces Rule, 88 Fed. Reg. at 87555; *see also* Commercial Water Heaters Rule, 88 Fed. Reg. at 69731 (same). It also developed sensitivity scenarios "to specifically address the potential uncertainty in some key input parameters." Consumer Furnaces Rule, 88 Fed. Reg. at 87555. Contrary to Petitioners' argument, DOE included "an increasing penetration of condensing furnaces" into its analysis based on the trend that consumers are progressively purchasing condensing furnaces and water heaters even without new standards. Consumer Furnaces Rule, 88 Fed. Reg. at 87556; Pet'rs' Br. 75-77. DOE then responded to comments from interested persons and provided "additional sensitivity scenarios to demonstrate that its conclusions of economic justification [were] robust." Consumer Furnaces Rule, 88 Fed. Reg. at 87555.[11]

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11. Despite the inputs DOE used and the analysis it performed, the dissent believes that we somehow found solace in DOE's analysis because it was "longer," *see* Dissenting Op. 20, but no where do we conclude that DOE's reasoning was sound based on the length—instead we base our holding on the reasoned explanation DOE provided and its calculus based on the entirety of the data in the record before it.

Petitioners' argument—that DOE did not provide a reasoned explanation for assuming that consumers sometimes do not act in their best economic interest—is not supported by the record before us. The dissent seems to take this even farther by contending that DOE "assumed consumers *never* consider costs when choosing between gas-fired appliances." Dissenting Op. 15 (emphasis in original). But this is once again simply not true. *See e.g.*, Consumer Furnaces Rule, 88 Fed. at 87584 ("DOE [did] not mak[e] an assumption that consumers never consider the economics of their purchasing decision.").

Although DOE's burden for the Commercial Water Heaters Final Rule was a high one—clear and convincing evidence—there is substantial evidence in the record to show that they met the mark. In order "[t]o accurately estimate the share of consumers that would be affected by a potential energy conservation standard," DOE analyzed the LCC of commercial water heaters "under the no-new standards case (*i.e.*, the case without amended or new energy conservation standards)." Commercial Water Heaters Rule, 88 Fed. Reg. at 69757 . "DOE developed the no-new-standards distribution of equipment using data from DOE's Compliance Certification database and data submitted by AHRI regarding condensing versus non-condensing equipment." *Id.* DOE then assigned a commercial water heater to each building it had in its sample based "on the forecasted efficiency distribution (which is constrained by the shipment and model data collected by DOE and submitted by AHRI) and accounts for consumers that [we]re already purchasing efficient" commercial water heaters. *Id.*

Specifically, regarding Petitioners' concern that DOE used data which suggests that consumers do not act in their best economic interest—DOE explained that disregarding that data "would not be representative of the [commercial water heater] market. Commercial Water Heaters Rule, 88 Fed. Reg. at 69760. DOE "took into account all of the available data concerning the market implementation of condensing natural gas-fired [commercial water heater] equipment." *Id.* at 69757. From this data, DOE projected commercial water heater shipments by efficiency level over the analysis period. *Id.* "[B]ased on the presence of well-understood market failures and a corresponding lack of data showing a correlation between [commercial water heater] efficiency and building hot water load," DOE concluded that "a random assignment of efficiencies best accounts for consumer behavior in the" commercial water heater market. *Id.* at 69758. DOE explained that it "is aware of multiple market failures that prevent [] purely economic decision making[,]" and random assignment "reflect[s] the full range of consumer behaviors, including those consumers who make purely economic decisions." *Id.* Therefore, the dissent's argument that the random assignment test never accounts for costs is simply not supported by the record and misunderstands the inputs to the analysis.

Even for large economic purchases, like the purchase of a commercial water heater, DOE "acknowledge[d] that economic factors play a role" but that an analysis "based solely on economic measures . . . most likely would not fully and accurately reflect actual real-world installations." *Id.* DOE reasoned that consumers make decisions based on

factors like the timing of the purchase, competing demands for the funds, loss aversion, sensitivity to information salience, and other forms of bounded rationality. *Id.* (citing Richard H. Thaler & Shlomo Bernartzi, *Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving*, 112 J. OF POL. ECON. S164, S164-S187 (2004) (Nobel laureate Richard H. Thaler's work on behavioral economics)). These factors are amplified when the decisions involved are complex and infrequent—like purchasing water heaters for commercial buildings. *Id.* at 69758-60.[12]

We also find that DOE's explanation regarding why consumers may not always act in their best economic interest when purchasing consumer furnaces was also reasonably explained and supported by substantial evidence in the record. First, DOE explained that Petitioners' contention is a "significant[] mischaracteriz[ation]" of DOE's analysis. Consumer Furnaces Rule, 88 Fed. Reg. at 87580. DOE similarly analyzed the LCC of consumer furnaces under the "no-new-standards case." *Id.*. at 87574-80. DOE "estimate[d] not only the expected market share of products at varying efficiencies, but also estimate[d] how such products will be used." *Id.* at 87574. DOE used a base case that "reflect[ed] three analytical steps: (1) an estimate of the buildings likely to use furnaces, (2) an estimate of the efficiency of the furnaces that would be

12. Despite these explanations, the dissent somehow contends that DOE did not provide evidence that market failures affect the market, *see* Dissenting Op. 20, while at the same time providing no evidence that consumers make economically sound decisions 100% of the time.

sold absent the rule; and (3) the matching of particular furnace efficiencies with particular building types." *Id.* Each building in the sample was then assigned a furnace at a state level and a building specific level. *Id.* at 87576. DOE once again concluded that "[r]andom assignment of efficiencies reflects the full range of consumer behaviors in th[e] market, including consumers who make economically beneficial decisions and consumers that, due to market failures, do not." *Id.* at 87574. The random assignment method "simulate[d] behavior in the furnace market, where market failures result in purchasing decisions not being perfectly aligned with economic interests, and it d[id] so more realistically than relying only on apparent cost-effectiveness[.]" *Id.* at 87576. In other words, the random assignment method accounts for the fact that consumers do sometimes base decisions on cost-effectiveness. DOE considered available data to determine whether any modifications needed to be made. *Id.* at 87574-75. This data included historical information about shipments of condensing and non-condensing furnaces in various regions around the country, and accounted for the fact that consumers are already purchasing furnaces at higher efficiency levels. *Id.* at 87575.

Petitioners contend that DOE "assum[ed] rationality is not the typical behavior" for consumers, Pet'rs' Br. 74 (emphasis omitted), but the record shows that DOE once again acknowledged that economic factors "play a role" when consumers purchase furnaces, but that an economic analysis "based solely" on life-cycle costs or payback periods "would not fully and accurately reflect actual real-world installations." Consumer Furnaces

Rule, 88 Fed. Reg. at 87576. Instead, DOE took market failures into account because it could not "assume that all purchasers of furnaces make economically rational or irrational decisions one-hundred percent of the time." *Id.* For example, DOE responded that Petitioners' approach "depends on the assumption . . . that homeowners [always] know . . . the efficiency of their homes' insulation and windows, such that they always make heating investments accordingly." *Id.* at 87580. DOE explained that that assumption would not be realistic and is "unsupported by the available evidence." *Id.* at 87576. Therefore, the random assignment "methodology is not an assertion of economic irrationality, but instead, it is a methodological approximation of complex consumer behavior." *Id.* at 87580.

Petitioners also contend that DOE assumed that "new homebuilders routinely act against their own economic interest" and that consumers do not purchase furnaces depending on the type of climate they are in. Pet'rs' Br. 78, 82-83. Both contentions are contradicted by the record before us. DOE's analysis did "incorporate and reflect regional market share data." Consumer Furnaces Rule, 88 Fed. Reg. at 87581. DOE explained that "[f]or States with a large majority of consumers already purchasing more-efficient furnaces[,] . . . the analysis assign[ed] a correspondingly large majority of households with an efficient furnace at or above the adopted efficiency level in the no-new-standards case." *Id.* For example, states with colder weather have a higher market share of condensing furnaces because they are more efficient, and therefore less costly to run. Further, DOE's analysis also included

"a greater probability that new construction is assigned higher-efficiency furnaces in the no-new-standards case, given the typically lower installation costs in new construction." *Id.*

The dissent responds with two contentions: (1) DOE provided no explanation on why its model reflected that, in some cases, consumers would choose to install a condensing furnace in a building where it would have been cheaper to install a non-condensing furnace; and (2) DOE "provide[d] no rebuttal to petitioners' expert" who argued that the random assignment model "assigned a more expensive option to new buildings . . . and to existing homeowners" most of the time. Dissenting Op. 18-19. But, DOE did address the dissent's concerns and adjusted its model based on new construction vs. replacement installations. Consumer Furnaces Rule, 88 Fed. Reg. at 87582. As noted *supra*, DOE explained its model reflected real-world data which included "the State-level shipments market share data." *Id.* at 87584. "For example, in States with a low current market share of condensing furnaces, the [model was] constrained to assign mostly non-condensing furnaces in the no-new-standards case, reflecting the current market[.]" *Id.* Therefore, instead of making assumptions devoid of data, DOE used the entirety of the data at its disposal to conduct its analysis. Further, to respond to commenters who argued that DOE's analysis produced an illogical outcome, DOE reiterated that the analysis "simply reflect[ed] the reality of the current market." *Id.* And even so, DOE explained that this outcome was "limited to only a few percent [of cases predominately] in new construction." *Id.* Further,

"[e]ven if DOE were to exclude these . . . outcomes as extreme outlier results, the LCC analysis would [still] demonstrate economic justification[.]" *Id.*

Another reason the present case is unlike the random assignment analysis conducted by DOE in *APGA I* is that DOE considered all the scientific literature relevant to its LCC analysis, and all data submitted in the course of the rulemaking for both the Consumer Furnaces Final Rule and the Commercial Water Heaters Final Rule. *Id.* at 87580; Commercial Water Heaters Rule, 88 Fed. Reg at 69758-59. DOE cited the available literature it was aware of, and repeatedly requested more data from interested persons. Consumer Furnaces Rule, 88 Fed. Reg. at 87580-81. Despite Petitioners' disagreement, they provided DOE with no alternative "specific external data, information, or studies that could be incorporated into [DOE's] analysis." *Id.* at 87581; *see also* Consumer Water Heaters Rule, 88 Fed. Reg. at 69699. Further, regarding installation costs, DOE responded to comments by interested persons by "enhanc[ing]" its estimates "a number of times" to address the comments. Consumer Furnaces Rule, 88 Fed. Reg. at 87555.

Overall, we find that DOE's economic justification analysis and conclusions were robust. The economic justification analysis independently and sufficiently supported DOE's conclusion that the amended efficiency standards were economically justified, and we need not address the impacts of fuel switching in DOE's analysis. This is so for two main reasons: (1) "[t]he amended standards plainly do not compel fuel switching" since the

Final Rules do "not ban gas" appliances; and (2) DOE concluded that even if the impacts of fuel switching were not included in its economic justification analysis, the amended standards would still be economically justified. *Id.* at 87590, 87595; Commercial Water Heaters Rule, 88 Fed. Reg. at 69771-72.

D. Consumer Furnaces Rule Comment Period

Lastly, Petitioners contend that DOE did not provide a meaningful opportunity for stakeholders to comment on the Consumer Furnaces Rule, and therefore the Rule is procedurally flawed.

On July 7, 2022, DOE published a NOPR and request for comment on the proposed energy conservation standards for consumer furnaces. Energy Conservation Program: Energy Conservation Standards for Consumer Furnaces, 87 Fed. Reg. 40590 (July 7, 2022). DOE asked that any "comments, data, and information regarding th[e] NOPR" be submitted "no later than September 6, 2022." *Id.* at 40590. In its analysis of the impact that the amended or new efficiency standards would have, DOE used "Monte Carlo simulations to incorporate uncertainty and variability into the analysis" by "randomly sampl[ing] input values from probability distributions" and gas furnace "user samples." *Id.* at 40627. To implement this, DOE used an add-on tool in Microsoft Excel called Crystal Ball TM, which is a "commercially-available software tool" that can "facilitate the creation of" randomized models "by generating probability distributions and summarizing results within Excel." *Id.* n.86. Each time that Excel is

opened with the Crystal Ball TM add-on, it produces a slight variation in the data generated. So, when DOE published its LCC spreadsheet accompanying the NOPR, it "inadvertently" used a version of the LCC spreadsheet that showed a slight variation of what was included in the published NOPR and an accompanying Technical Support Document ("TSD"), although the results shown in the spreadsheet were similar to those included in the NOPR and TSD. Energy Conservation Standards for Consumer Furnaces, 87 Fed. Reg. 52861, 52862 (Aug. 30, 2022).

After interested parties, including Petitioners, alerted DOE that the spreadsheet varied from the table results included in the NOPR and TSD, DOE issued a Notification of Data Availability ("NODA") in which DOE published a revised version of the LCC spreadsheet that was static and supported the NOPR. DOE also extended the NOPR comment period an extra thirty-days to October 6, 2022, and announced that it would hold—at Petitioners' request—a public meeting webinar workshop where it would "provide instruction on the operation of the LCC spreadsheet." *Id.* In total, DOE provided interested parties ninety-days to comment on the Consumer Furnaces Rule.

Nonetheless, Petitioners contend that the ninety-days was a "break-neck" comment period. Pet'rs' Br. 104. We cannot agree. 42 U.S.C. subsection 6295(p)(2) provides that DOE shall "afford interested persons an opportunity, during a period of not less than 60 days, to present oral and written comments . . . on matters relating to" proposed new or amended energy conservation standards. Petitioners acknowledge this sixty-day statutory requirement, but

contend that DOE "promise[d] that stakeholders w[ould] have at least 75 days to comment on proposed rulemaking" as was provided in DOE regulations at the time.[13] Pet'rs' Br. 102; *see* 10 C.F.R. pt. 430, subpt. C, app. A(6)(b)(2) (2022). But as Petitioners acknowledge in their briefing, the seventy-five-day allotment provided in the appendix to the regulation did "not intend[] to, and [did] not, create any right or benefit, substantive or procedural" that DOE was required to adhere to. 10 C.F.R. pt. 430, subpt. C, app. A(3)(c) (2022). It was only required to provide at least sixty days for interested parties to comment—which it did. Moreover, the regulation expressly authorized DOE to "deviate" from the 75-day period for comments if DOE found it "necessary or appropriate" and provided "notice of the deviation and an explanation." *Id.* pt. 430, subpt. C, app. A(3)(a) (2022). DOE explained in the NOPR that it was "necessary and appropriate" to only provide the statutory minimum for comments in this NOPR because DOE was facing "an overdue statutory deadline" and the "analytical methods used . . . [in the] NOPR [were] similar to those used in previous rulemaking notices." Energy Conservation Standards for Consumer Furnaces, 87 Fed. Reg. at 40607.

Moreover, because the static spreadsheet DOE provided the public on August 30, 2022, did not amount to "critical factual material," it was not necessary to extend the comment period past the thirty-days it already provided. *See Chamber of Com. v. SEC*, 443 F.3d 890, 900, 370 U.S.

13. 10 C.F.R. pt. 430, subpt. C, app. A(6)(b)(2) (2024) was amended, effective June 24, 2024, and presently provides that "[t]here will be not less than 60 days for public comment on the NOPR."

App. D.C. 249 (D.C. Cir. 2006) ("[F]urther notice and comment are not required when additional fact gathering merely supplements information in the rulemaking record by checking or confirming prior assessments without changing methodology, [or] by confirming or corroborating data in the rulemaking record." (citations omitted)). This is because, as DOE explained, its Monte Carlo analysis utilized random number generation, where the sequence of random numbers was expected to change, but "[t]he relative comparison of the various proposed energy conservation standard levels in the published LCC spreadsheet remain[ed] similar to the comparison presented in the NOPR." Energy Conservation Standards for Consumer Furnaces, 87 Fed. Reg. at 52862. Therefore, DOE's "conclusions of the analysis, the policy decision, and associated rationale [we]re not impacted by [the] sampling variability" in the two different LCC spreadsheets. *Id.*

III.

Because each of Petitioners' arguments fail for the reasons explained, the petitions are denied.

So ordered.

Appendix A

RAO, *Circuit Judge*, dissenting: This case concerns Department of Energy regulations that effectively ban a class of common and affordable gas-powered appliances. Millions of homes and commercial buildings are equipped with traditional, "non-condensing" gas furnaces and water heaters. These reliable appliances vent their exhaust up a standard chimney. A more efficient "condensing" technology exists, but it is incompatible with traditional chimneys. Instead, it requires a different venting mechanism. In its quest for greater efficiency, the Department has issued new efficiency standards that effectively ban the sale of non-condensing appliances. As a result, any consumer seeking to replace a traditional gas furnace or commercial water heater will be forced to install a condensing model, a switch that often requires disruptive and expensive renovations to a building's venting and plumbing systems.

These standards run afoul of the careful balance Congress struck in the Energy Policy and Conservation Act ("EPCA") between improving energy efficiency and preserving consumer choice. While EPCA empowers the Department to set efficiency standards, the statute also imposes a critical limit on that authority. The agency is prohibited from imposing an efficiency standard that will result in the "unavailability" of a product with a "performance characteristic" that consumers value.

No one doubts that the challenged regulations make non-condensing appliances unavailable. The central question in this case is whether a non-condensing appliance's venting mechanism is a protected "performance characteristic." Because these appliances utilize a chimney

common to many older homes and buildings, installing a condensing appliance will often require complex and costly renovations that may reduce a building's useable space. The ability to vent through a traditional chimney is exactly the kind of real-world feature Congress protected from elimination in the marketplace. The Department's efficiency standards, which make non-condensing appliances unavailable, are therefore contrary to law.

Independent of this legal error, the Department failed to demonstrate that the regulations are "economically justified," as mandated by EPCA, by showing their "benefits ... exceed [their] burdens." 42 U.S.C. § 6295(o)(2)(B)(i); *see also id.* § 6313(a)(6)(B)(ii). The Department utilized an economic model that we have previously held to be irrational and inconsistent with EPCA's requirements. The flawed model fares no better here. Because the regulations are contrary to law and predicated on an arbitrary economic analysis, I respectfully dissent.

I.

A.

Congress enacted EPCA in 1975 to increase energy production and supply while reducing energy demand. Pub. L. 94-163, 89 Stat. 871, 874 (1975). EPCA authorizes the Department to promulgate energy efficiency standards for consumer appliances such as refrigerators, dishwashers, air conditioners, water heaters, and furnaces, as well as commercial industrial equipment, like walk-in freezers and commercial water heaters. 42 U.S.C. §§ 6292(a), 6311(1).

Congress did not, however, write the Department a blank check to pursue efficiency at all costs. Instead, the statute repeatedly tempers the agency's authority by requiring it to balance efficiency gains with the preservation of consumer choice and product utility. While EPCA instructs the Department to set standards that "achieve the maximum improvement in energy efficiency," those standards must be both "technologically feasible and economically justified." *Id.* § 6295(o)(2)(A) (consumer appliances); *see also id.* § 6313(a)(6)(A)(ii)(II) (commercial equipment). As part of this analysis, the agency "shall" consider whether an efficiency standard would "lessen[] ... the utility or the performance of the" covered products. *Id.* §§ 6295(o)(2)(B)(i)(IV), 6313(a)(6)(B)(ii)(IV).

At issue here, EPCA also contains an "unavailability" provision that prohibits the Department from prescribing a standard that "is likely to result in the unavailability in the United States in any covered product type (or class) of performance characteristics (including reliability), features, sizes, capacities, and volumes." *Id.* § 6295(o)(4); *see also id.* § 6313(a)(6)(B)(iii)(II)(aa). This limitation balances the regulatory promotion of greater energy efficiency with the preservation of products that have features that provide utility to consumers. *See* H.R. Rep. No. 100-11, at 22-23 (1987) (explaining the unavailability provision "ensures that energy savings are not achieved through the loss of significant consumer features" and prevents a standard from making a product with a particular feature "prohibitively expensive").

For consumer products, the unavailability provision is paired with the requirement that the Secretary "shall

specify" separate efficiency standards if a type of the covered product either "consume[s] a different kind of energy" or possesses a "performance-related feature" that other products in the group lack. 42 U.S.C. § 6295 (q)(1). In determining whether a feature justifies a separate standard, the Secretary must consider "utility to the consumer" and any other factors he "deems appropriate." *Id.*

B.

The challenged efficiency standards apply to two classes of products: gas-fired consumer furnaces and gas-fired commercial water heaters. These appliances can be further divided into two classes: non-condensing and condensing. Both types of appliances produce hot exhaust gases that require exterior venting; however, they employ different venting methods.

Non-condensing appliances are the traditional design and are currently used in millions of homes and commercial buildings. These units use unpowered venting systems that keep exhaust gases hot enough to rise naturally through a vertical chimney. Because some usable heat is lost in the exhaust, non-condensing appliances typically achieve an efficiency of around 80 percent. Furthermore, if a building lacks a suitable vertical chimney, installing a non-condensing appliance requires constructing one, which adds to initial costs.

Condensing appliances use a different ventilation method that captures some of the lost heat and can achieve efficiency levels of over 90 percent. The exhaust

from condensing appliances cannot be vented through a traditional chimney without significant modification. Instead, condensing appliances use a powered ventilation method and exhaust through vents that are generally installed horizontally. While a new horizontal vent is typically cheaper to install than a new vertical chimney, it can be difficult to retrofit into some existing homes and buildings.

The Department's approach to these appliances has flip-flopped across administrations. In 2016, the agency proposed rules that would set minimum efficiency standards for certain consumer furnaces and commercial water heaters to levels above 90 percent. *See* Energy Conservation Program: Energy Conservation Standards for Residential Furnaces, 81 Fed. Reg. 65720, 65722 (Sept. 23, 2016); Energy Conservation Program: Energy Conservation Standards for Commercial Water Heating Equipment, 81 Fed. Reg. 34440, 34443 (May 31, 2016). Because only condensing appliances can meet these efficiency levels, the proposed rules would have effectively banned the sale of new non-condensing models.

In January 2021, the Department switched course in an interpretive rule, which determined that, for consumer furnaces and commercial water heaters, non-condensing technology provides a unique "performance characteristic" and eliminating it from the market would violate EPCA's "unavailability" provision. *See* Energy Conservation Program for Appliance Standards: Energy Conservation Standards for Residential Furnaces and Commercial Water Heaters, 86 Fed. Reg. 4776, 4816

(Jan. 15, 2021). The agency explained that non-condensing technology allows consumers to: (1) avoid complex or costly installations where space, venting, or drainage is constrained; (2) prevent the loss of usable space that installing a condensing unit might require; and (3) maintain a meaningful choice of fuel type by preserving an affordable gas-powered option, as the alternative would cause significant "fuel switching" from gas to electric appliances. *See id.* Following this interpretation, the agency withdrew the 2016 proposed standards.

Later that year, the Department again reversed course. In a new interpretive rule, the agency concluded that non-condensing technology is not a "performance characteristic" because it "does not provide unique utility to consumers separate from an appliance's function of providing heated air or water." *See* Energy Conservation Program for Appliance Standards: Energy Conservation Standards for Residential Furnaces and Commercial Water Heaters, 86 Fed. Reg. 73947, 73951 (Dec. 29, 2021) ("December 2021 Interpretive Rule"). The Department explained that consumer utility arises from interacting with a product's primary function, "not through design parameters impacting installation complexity[] or costs." *Id.* Because consumers do not directly interact with vents, the agency reasoned that differences in venting methods or installation costs are not a unique performance characteristic of non-condensing appliances. *Id.* at 73953.

Relying on this interpretation, the Department set minimum efficiency standards for gas-fired consumer furnaces and commercial water heaters at 95 percent, a

level that non-condensing appliances cannot achieve. *See* Energy Conservation Program: Energy Conservation Standards for Consumer Furnaces, 88 Fed. Reg. 87502, 87503 (Dec. 18, 2023) ("Consumer Furnace Rule"); Energy Conservation Program: Energy Conservation Standards for Commercial Water Heating Equipment, 88 Fed. Reg. 69686, 69687 (Oct. 6, 2023) ("Commercial Water Heater Rule").

A coalition of gas industry associations, manufacturers, and utilities petitions for review of these regulations. We have jurisdiction under 42 U.S.C. §§ 6306(b) and 6316, which provide for judicial review under the Administrative Procedure Act.

II.

Petitioners first argue the efficiency standards are contrary to law because they violate EPCA's unavailability provision. EPCA prohibits the Department from setting standards that make unavailable products with distinct "performance characteristics"—that is, with attributes that provide utility to the consumer. Non-condensing appliances plainly provide such utility: a venting method that is compatible with the conventional chimneys found in millions of older homes and buildings. For these consumers, replacing a non-condensing appliance with a condensing one may require cumbersome and costly retrofits. These modifications often include punching new holes through exterior walls for plastic vents, sacrificing closets or other living space to run new piping, giving up windows or balconies that are too close to a new vent's

exhaust, and re-lining or abandoning a perfectly functional chimney.

Because non-condensing appliances can integrate directly into an existing exhaust system, they have a protected "performance characteristic" under the plain meaning of EPCA. And because it is undisputed that the efficiency standards make these appliances unavailable, the standards are contrary to law.

A.

Under EPCA, the Department of Energy

> may not prescribe an amended or new standard under this section if ... interested persons have established by a preponderance of the evidence that the standard is likely to result in the unavailability in the United States in any covered product type (or class) of performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as those generally available in the United States at the time of the Secretary's finding.

42 U.S.C. § 6295(o)(4); *see also id.* § 6313(a)(6)(B)(iii)(II)(aa).

No one questions that the challenged efficiency standards will make non-condensing appliances unavailable. The question in this case is therefore a

legal one: Is a non-condensing appliance's compatibility with existing, standard chimney vents a protected "performance characteristic" under EPCA?

The parties agree that a "performance characteristic" is one that provides utility to the consumer, but they disagree about what type of utility counts. The Department claims a "performance characteristic" only includes features a consumer interacts with during the product's operation and excludes "design parameters impacting installation complexity[] or costs." December 2021 Interpretive Rule, 86 Fed. Reg. at 73951. Petitioners counter that the term encompasses other utility conferring features, and that "noncondensing technology provides obvious utility—functioning in the purchaser's existing building and vents."

To determine whether non-condensing appliances have a "performance characteristic," this court must identify the "best meaning" of the statute and "exercise [its] independent judgment in deciding whether [the Department] has acted within its statutory authority." *Loper Bright Enters. v. Raimondo*, 603 U.S. 369, 144 S. Ct. 2244, 2266, 2273, 219 L. Ed. 2d 832 (2024). The term "performance characteristic" is not defined in EPCA, so we must give it its "ordinary, contemporary, common meaning." *Sandifer v. U.S. Steel Corp.*, 571 U.S. 220, 227, 134 S. Ct. 870, 187 L. Ed. 2d 729 (2014) (cleaned up). The ordinary meaning of a term is informed by the context of the "overall statutory scheme." *Sturgeon v. Frost*, 577 U.S. 424, 438, 136 S. Ct. 1061, 194 L. Ed. 2d 108 (2016) (cleaned up).

The text and structure of EPCA demonstrate that petitioners' broader understanding of "performance characteristic"—any product attribute that provides "utility" to the consumer—is correct. EPCA is a highly detailed statute in which Congress created a framework for balancing energy efficiency with consumer utility. The statute repeatedly uses "utility" and "performance" in tandem, treating them as related concepts that capture a product's overall value and usefulness to the consumer. For example, when determining if a new efficiency standard is "economically justified," the agency must consider the "lessening of the utility or the performance of the covered products likely to result from the imposition of the standard." 42 U.S.C. §§ 6295(o)(2)(B)(i)(IV), 6313(a)(6)(B)(ii)(IV). Likewise, the unavailability provision, which ensures products with valued characteristics remain on the market, is paired for consumer appliances with a requirement that the Secretary "shall specify" a separate efficiency standard for any product with a "performance-related feature" that provides "utility to the consumer." *Id.* § 6295(q)(1).

The plain meaning of these terms is exceptionally broad. "Utility" simply means "usefulness" or "fitness for some desirable purpose." *See Utility*, Oxford English Dictionary (2nd ed. 1989). A "performance characteristic," in turn, is a "distinctive" or "essential quality," *see Characteristic*, Oxford English Dictionary (2nd ed. 1989), that relates to the "execution ... of any action or work," *see Performance*, Oxford English Dictionary (2nd ed. 1989). By repeating these terms in several provisions preserving

consumer choice, Congress enacted comprehensive protections for consumer utility.

EPCA protects the availability of products that provide utility broadly understood, an interpretation that is confirmed by the list of terms Congress included with "performance characteristics": "reliability, features, sizes, capacities, and volumes." 42 U.S.C. § 6313(a)(6)(B)(iii)(II)(aa); *see also id.* § 6295(o)(4). "Under the ... interpretive canon *noscitur a sociis*, a word is known by the company it keeps." *McDonnell v. United States*, 579 U.S. 550, 569, 136 S. Ct. 2355, 195 L. Ed. 2d 639 (2016) (cleaned up). The fact that "several items in a list share an attribute counsels in favor of interpreting the other items as possessing that attribute as well." *Beecham v. United States*, 511 U.S. 368, 371, 114 S. Ct. 1669, 128 L. Ed. 2d 383 (1994). Here, the list is expansive and practical. It includes intangible qualities like "reliability" and "features," as well as concrete attributes like "sizes, capacities, and volumes." These terms reflect multiple ways in which a product may provide real world utility and reinforce that the term "performance characteristic" has an expansive meaning that protects consumer choice.

The Department's cramped interpretation of "performance characteristic" cannot be reconciled with the text and structure of EPCA. The agency asserts that a "performance characteristic" is limited to features that provide utility during operation, "not through design parameters impacting installation complexity[] or costs." *See* December 2021 Interpretive Rule, 86 Fed. Reg. at 73951. Nothing in EPCA suggests such a

limitation. To the contrary, Congress explicitly protected the availability of "sizes, capacities, and volumes," terms that plainly encompass an appliance's physical dimensions and compatibility with a building's existing infrastructure. And "reliability" similarly refers to a performance characteristic that goes beyond operation to consider a product's long-term effectiveness. There is no reason to think that consumers derive utility only from operational features like "through the door ice" and not from the ability to install a product in their home without cumbersome (and costly) renovations that change the use of their interior space. *Cf.* Majority Op. 19.

EPCA's broad protection for the availability of consumer products demonstrates that a "performance characteristic" may include a product's physical dimensions, its functional output, and how it integrates into a home or building.

The Department's regulations also cannot be squared with its long-standing practice. The agency has frequently invoked its authority to create separate efficiency standards to preserve a "performance-related feature" based on installation-related features. For example, the Department established a separate standard for air conditioners that fit into smaller wall openings to ensure consumers would not "be forced to invest in costly building modifications." *See* Energy Conservation Program for Commercial and Industrial Equipment: Packaged Terminal Air Conditioner and Packaged Terminal Heat Pump Energy Conservation Standards, 73 Fed. Reg. 58772, 58782 (Oct. 7, 2008).

In addition, the Department has consistently set distinct efficiency standards for products based on compatibility with venting systems, installation location, and availability of power sources. *See, e.g.*, Energy Conservation Program: Energy Conservation Standards for Residential Clothes Dryers and Room Air Conditioners, 76 Fed. Reg. 22454, 22485 n.28 (Apr. 21, 2011) (specifying separate standards for ventless clothes dryers because they offer utility to consumers in homes that cannot accommodate an external vent); 10 C.F.R. § 430.32(c), (e) (specifying separate standards for air conditioners, heat pumps, and furnaces based on installation constraints). In these prior rules, the agency correctly recognized that features related to installation provide significant utility and set separate standards to preserve them. The Department's refusal to do so here for non-condensing furnaces—which likewise provide utility related to installation—is an unexplained and arbitrary departure from the agency's long-standing practice.[1]

Under the best meaning of EPCA, a "performance characteristic" is a distinctive product attribute that provides utility to the consumer. Non-condensing appliances plainly provide such utility through their

1. The majority's attempt to distinguish these previous regulations is unpersuasive. It claims ventless dryers are different because some consumers would be deprived of a dryer entirely, yet it ignores that the Department projects some consumers here *will* be effectively deprived of gas-powered appliances entirely. *See* Majority Op. 19-22. It claims size-based distinctions are permitted, yet it ignores that "sizes" naturally includes the dimensional constraints associated with venting, which make non-condensing appliances the only viable option for many consumers who prefer to have a gas-powered appliance. *See* Majority Op. 22-27.

unique venting method, which allows for direct integration into many existing exhaust systems without cumbersome and costly retrofits. This integration capability is a "performance characteristic" of non-condensing appliances that EPCA protects from regulatory elimination.

B.

Relying on the Department's "scientific data," the majority concludes that petitioners have failed to meet their burden of proving that non-condensing appliances have a protected "performance characteristic." Majority Op. 27-28. But this is not the burden EPCA imposes. The evidentiary burden applies only to the *factual* question of whether a standard will cause a protected product to become unavailable, not to the *legal* question of what qualifies as a protected "performance characteristic." *See* 42 U.S.C. §§ 6295(o)(4), 6313(a)(6)(B)(iii)(II)(aa). The facts of unavailability are not in dispute here. The Department's new standards demand efficiency levels of 95 percent, which will eliminate non-condensing appliances from the market.[2]

The central disagreement turns on the legal question of what counts as a "performance characteristic" under EPCA. The majority largely ducks this question by

2. *See* Technical Support Document, Consumer Furnace Rule 8D-3-4 ("Almost all of the non-condensing [gas furnaces] have an annual fuel utilization efficiency (AFUE) of 80 percent. ... Condensing [gas furnaces] have an AFUE of 90 percent or greater."); *id.* 8I-1 n.b ("The market share of furnaces with AFUE between 80 and 90 percent is well below 1 percent due to the very high installed cost of 81-percent AFUE furnaces, compared with condensing designs.").

declaring that EPCA is ambiguous as to the meaning of "performance characteristic" and "utility." Majority Op. 16-18. The majority takes this ambiguity as a license to defer to the Department. But this *Loper Bright* avoidance is inconsistent with the Supreme Court's directive that a court must "use every tool at [its] disposal to determine the best reading of the statute and resolve the ambiguity." 144 S. Ct. at 2266.

The majority also relies on the Department's conclusion that non-condensing appliances lack a distinct "performance characteristic" because "venting is a quality that both condensing and non-condensing appliances share." Majority Op. 19-20; *see also* Consumer Furnaces Rule, 88 Fed. Reg. at 87535; Commercial Water Heaters Rule, 88 Fed. Reg. at 69709-10. This framing misses the point. The issue is not the generic existence of venting, but whether the specific *type* of venting provides utility to consumers. And on this question, the Department does not contest that non-condensing and condensing appliances use different types of venting, such that replacements may require awkward retrofits and costly renovations.

The Department attempts to minimize the loss of consumer utility, claiming only "5 percent or fewer of condensing gas appliance installations were challenging." December 2021 Interpretive Rule, 86 Fed. Reg. at 73960. But this only supports the conclusion that non-condensing appliances in fact have a performance characteristic that provides utility to consumers. For such ubiquitous appliances, 5 percent of installations may easily impact millions of consumers. In any event, nothing in EPCA

suggests that the unavailability provision applies only when a large percentage of consumers are harmed.

The majority also relies on the Department's reassurance that consumers have other options available. Majority Op. 22. But the Department's elaboration of these so-called options reveals the true nature of the rules: consumers can either undertake undesirable and costly building modifications or they can switch to an electric appliance. *See* December 2021 Interpretive Rule, 86 Fed. Reg. at 73957. EPCA's unavailability provision protects consumer choice for products with performance characteristics—it would be rendered a dead letter if the mere existence of other options (no matter how different) allowed the Department to set standards that made products unavailable.

The distinctive venting mechanism of non-condensing appliances is precisely the kind of "performance characteristic" that condensing appliances lack and that EPCA protects from regulatory elimination.

* * *

In sum, the Department's interpretation of EPCA contradicts the statute's text, context, and the agency's regulatory practice. The ability of non-condensing appliances to integrate into a building's existing ventilation without disruptive renovations is a protected "performance characteristic." Because the Consumer Furnace Rule and Commercial Water Heater Rule make appliances with this characteristic unavailable, the Department's standards are contrary to law.

III.

Petitioners separately maintain that the Department has failed to demonstrate these efficiency standards are "economically justified." I agree. The agency relied on an irrational economic model that assumed consumers *never* consider costs when choosing between gas-fired appliances, but *always* consider costs when deciding whether to switch from a gas-fired appliance to an electric one. With no support for these contradictory assumptions, the Department's Monte Carlo model is arbitrary and capricious and cannot justify imposing these efficiency standards on consumers.

A.

EPCA requires the Department to demonstrate that a new efficiency standard is "economically justified," by "substantial evidence" for consumer appliances and "clear and convincing evidence" for commercial equipment. 42 U.S.C. §§ 6306(b)(2), 6313(a)(6)(A)(ii)(II). A standard is economically justified only if its "benefits ... exceed its burdens." *Id.* § 6295(o)(2)(B)(i); *see also id.* § 6313(a)(6)(B)(ii). As we have previously held on very similar facts, when the Department's economic model rests on a false or unexplained premise about consumer behavior, the justification falls short of EPCA's evidentiary requirements. *Am. Pub. Gas Ass'n v. Dep't of Energy ("APGA I")*, 22 F.4th 1018, 1022-28, 455 U.S. App. D.C. 268 (D.C. Cir. 2022).

To determine whether an efficiency standard results in net benefits, the Department must consider, among

other things, "the savings in operating costs throughout the estimated average life of the covered product ... compared to any increase in the price of, or in the initial charges for, or maintenance expenses of," the covered product. 42 U.S.C. § 6295(o)(2)(B)(i); *see also id.* § 6313(a)(6)(B)(ii)(II). To satisfy this statutory mandate, the agency generally conducts a life-cycle cost analysis that compares two hypothetical scenarios: one without the new standards and one with the new standards in effect. *APGA I*, 22 F.4th at 1023. These calculations are complicated because consumer costs vary tremendously across the country depending on local labor rates, energy prices, and building characteristics. Costs will also differ based on a consumer's individual building and construction type and on a consumer's priorities and projected use of the new appliance. As a result, there is not one life-cycle cost, but many.

To account for this variability, the Department employed a Monte Carlo model. The model's name refers to how casinos predict earnings—while the outcome of a single roll of the dice is random, the average outcome over thousands of repeated plays is predictable. In its analysis, the agency simulated ten thousand buildings with randomly assigned appliances and then calculated the life-cycle costs in two scenarios. First, in the scenario without the new standards, the life-cycle costs were based on the randomly assigned appliance. Second, in the scenario with the new standards, every consumer assigned a non-condensing appliance would be required to purchase a condensing appliance. To estimate the rules' net economic impact, the Department averaged the cost difference between the two scenarios for each building.

I agree with the majority that a Monte Carlo analysis could be used to model the economic impacts of an efficiency standard. The reliability and validity of the resulting predictions, however, depend on the inputs. Like all models, the Monte Carlo method "adhere[s] to the inviolable law of data analysis, 'garbage in; garbage out.'" *Mississippi v. EPA*, 744 F.3d 1334, 1352, 408 U.S. App. D.C. 397 (D.C. Cir. 2013).

The inputs here were fundamentally flawed. The Department properly used real-world data for energy prices and building types, but it excluded the most salient factor influencing appliance selection: cost. On the grounds that consumers are *sometimes* irrational or myopic in choosing appliances, the model assumed that consumers choose among available appliances completely at random, with no regard for costs.[3]

This assumption defies both reality and basic economics. As the Department has documented, installation costs for condensing and non-condensing appliances differ substantially and predictably depending on construction scenario. For example, in new construction, a condensing furnace is significantly cheaper to install ($1,796 on average) than a non-condensing one ($2,467).

3. The Department concedes that "[t]he efficiency assignment is a methodological simplification that takes into account existing market trends ... and acknowledges a range of consumer behaviors and market failures." Consumer Furnaces Rule, 88 Fed. Reg. at 87534. That is to say, the Department's model did not consider costs. The majority glosses over the actual inputs used by the Department and simply relies on the Department's self-serving assertion that "DOE [did] not mak[e] an assumption that consumers never consider the economics of their purchasing decision." Majority Op. 33.

Technical Support Document, Consumer Furnace Rule 8D-32. But when replacing a non-condensing furnace, it costs significantly more to install a condensing furnace ($1,345 versus $801). *Id.* 8D-31. Given these stark cost differences, the Department must provide a "cogent and reasoned" explanation for its assumption that "a purchaser's decisions will not align with its economic interests in purchasing" an appliance. *APGA I*, 22 F.4th at 1027-28. But the Department provided no such explanation here, and instead merely assumed consumers ignored these costs and selected appliances at random.[4]

This unsound assumption of a total market failure stacked the deck in favor of the rules by manufacturing artificial savings. Because the model ignored consumer costs and assigned appliances at random, it frequently assigned consumers an economically irrational appliance. For example, it sometimes assigned a non-condensing appliance in new construction even though that would require constructing an expensive vertical chimney. The model then credited the new standards with the "savings" realized when it banned non-condensing appliances and prevented a consumer from incurring those construction costs—a choice no rational consumer would have made in the first place.

This economic sleight of hand undermines the Department's justification for its rules. The Department

4. Perhaps recognizing that the market failure is not complete, the Department defends its model on the grounds that it predicted approximately 45 percent of consumers will choose the most cost-effective furnace. But this is merely a byproduct of chance and not a "prediction" in any meaningful sense. A coin flip will be correct half the time, but it is hardly a predictive model for economic behavior.

provides no rebuttal to petitioners' expert, who explains that the model randomly assigned a more expensive option to new buildings 80 percent of the time and to existing homeowners 60 percent of the time.[5] Meyer Declaration 3-5. If the Department had assumed that consumers rationally choose the lowest cost appliance, the Consumer Furnace Rule would impose a $2.5 million *net cost* on the public, rather than the projected net savings of $1.4 million. *Id.* at 6. That is, the benefits of the standards would not exceed the costs, and under EPCA the standards could not be promulgated. *See* 42 U.S.C. §§ 6295(o)(2)(B)(i), 6313(a)(6)(B)(ii).

In *APGA I*, we rejected a similar economic analysis in which the Department used a Monte Carlo model to project the costs of an efficiency standard for boilers but "failed to recognize that a purchaser ... would rationally consider the costs and benefits of its investment and is likely to buy the [appliance] that produces the best economic performance for its building." 22 F.4th at 1027. The assumption of consumer irrationality "inflated the economic value of a more stringent standard by attributing to a new regulation economic benefits that would be realized even without a new regulation." *Id.* Relying on a model that presumes widespread consumer irrationality without supporting evidence "bespeaks a failure to consider an important

5. The analysis by petitioners' expert, Richard Meyer, focuses on the Consumer Furnace Rule because the Department did not make the raw data for the Commercial Water Heater Rule available. Petitioners assert, and the Department does not contest, that the same flawed modeling assumptions were made in both rules.

aspect of the problem." *Id.* at 1027-28 (cleaned up); *see also Chem. Mfrs. Ass'n v. EPA*, 28 F.3d 1259, 1265, 307 U.S. App. D.C. 392 (D.C. Cir. 1994) (explaining "we must reverse" agency action "as arbitrary and capricious if there is simply no rational relationship between the model and the known behavior ... to which it is applied").

The majority suggests *APGA I* is distinguishable because here the Department provided a more detailed explanation for its model and included additional inputs. Majority Op. 30-33. But a longer explanation of an erroneous premise does not cure the defect. Nor does adding additional inputs that fail to address the core shortcoming. The central error in *APGA I* was not a lack of explanation, but a failure of proof. 22 F.4th at 1027-28 (explaining the Department bears the burden of "provid[ing] actual evidence that ... market failures affect the market" and "justify[ing] the assumptions that underly its analysis").

While consumers may not be perfect estimators of lifecycle costs, that fact cannot explain a *wholesale* disregard for stark differences in initial costs.[6] For these regulations, the Department lacked evidence to justify its assumption of widespread market failure, and therefore its economic model does not substantially or clearly support the new efficiency standards.

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6. Contrary to the majority, consumers do not need to "make economically sound decisions 100% of the time" for cost to be a relevant consideration. Majority Op. 35 n.12.

B.

The Consumer Furnace Rule's economic analysis is also flawed because of its reliance on rational fuel switching—the prediction that higher costs under the new standard would cause consumers to shift from gas-fired to electric furnaces.[7] The Department modeled two scenarios: one with no fuel switching and one in which consumers always switched to electric when it was economically advantageous. Consumer Furnace Rule, 88 Fed. Reg. at 87587. While the agency predicted cost savings in both scenarios, the savings in the scenario with fuel switching were more than double the scenario without.

The majority does not address the Department's fuel switching analysis because it upholds the agency's Monte Carlo analysis. Majority Op. 38-39. But because I reject that analysis, I explain why the Department's fuel switching analysis also fails to justify the rule.

There are two fundamental problems with the Department's analysis. First, it is in tension with EPCA, which requires the agency to weigh the "savings in operating costs" against any "increase in the price of ... the covered products." 42 U.S.C. § 6295(o)(2)(B)(i). The most natural reading of this provision is that it requires a comparison of costs and benefits related to the covered product, not savings generated because the rule forces consumers to switch to an entirely different type of

7. The Department did not include benefits from forced fuel switching as part of its analysis in the Commercial Water Heater Rule. 88 Fed. Reg. at 69771.

appliance. Moreover, EPCA explicitly preserves products that "consume a different kind of energy" and requires different standards for them. *See id.* § 6295(q)(1)(A); *cf. id.* § 6295(f)(1)(B)(iii) (prohibiting standards likely to cause "a significant shift from gas heating to electric resistance heating with respect to either residential construction or furnace replacement"). These provisions strongly suggest that the Department cannot count as an economic "benefit" the fact that an efficiency standard makes a regulated product so costly that consumers are forced to abandon it.

The Department's justification for this approach does not withstand scrutiny. The agency argues that the statute's broad instruction to consider "the total projected amount of energy[] ... savings" allows it to count savings from fuel switching. *See* Respondents' Br. 70 (citing 42 U.S.C. § 6295(o)(2)(B)(i)(III)). But this general provision must be read in harmony with the specific instruction to analyze the costs and savings of the "covered product." When a standard for gas furnaces causes a consumer to buy an electric heat pump, the resulting savings are not savings from efficiency improvements to the gas furnace (the covered product); they are savings from a different product in a different product class. Justifying a standard for one product class based on its projected demise in the marketplace creates a perverse incentive that runs contrary to EPCA's protection of distinct product classes and consumer choice. *See* 42 U.S.C. § 6295(q)(1).

Second, the Department's fuel-switching analysis is starkly inconsistent with its primary economic model. When analyzing the choice between gas furnaces, the

model assumed consumers are wholly indifferent to cost. Yet when analyzing the choice between a gas and an electric furnace, the model suddenly presumed a perfectly rational consumer who carefully weighs all costs to make an economically optimal decision. The efficiency standards depend on a schizophrenic view of the consumer.

A rule built on two diametrically opposed assumptions about consumer behavior is the antithesis of reasoned decisionmaking. The Department provides no explanation, let alone evidence, to support its approach. Because the Consumer Furnace Rule fails to explain this internal inconsistency, it is arbitrary and capricious. *ANR Storage Co. v. FERC*, 904 F.3d 1020, 1028, 438 U.S. App. D.C. 360 (D.C. Cir. 2018); *see also Engine Mfrs. Ass'n v. EPA*, 20 F.3d 1177, 1182, 305 U.S. App. D.C. 313 (D.C. Cir. 1994) (concluding that "unexplained inconsistency" in final rule was "not reasonable").

In sum, the Department's economic justification for the challenged standards is fundamentally flawed. The agency propped up its cost-benefit analysis by relying on a model that first assumed consumer irrationality to manufacture benefits from the new standards and then assumed perfect consumer rationality to claim additional savings from fuel switching. This analysis is the epitome of arbitrary and capricious decisionmaking. The Department's economic justifications are not supported by substantial evidence, much less by the clear and convincing evidence required for commercial products.

* * *

Congress prohibited the Department of Energy from setting efficiency standards in a way that would eliminate product features and characteristics that provide substantial utility to consumers. But the challenged rules do just that by banning a class of useful gas-fired appliances. Moreover, the agency's economic analysis defies reality and runs headlong into this circuit's precedents. Because these standards are contrary to law and predicated on an arbitrary and capricious economic justification, I would grant the petitions and vacate the rules.

APPENDIX B — RELEVANT STATUTORY PROVISIONS

5 U.S.C. § 706

§ 706. Scope of Review

To the extent necessary to decision and when presented, the reviewing court shall decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or applicability of the terms of an agency action. The reviewing court shall--

(1) compel agency action unlawfully withheld or unreasonably delayed; and

(2) hold unlawful and set aside agency action, findings, and conclusions found to be—

(A) arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law;

(B) contrary to constitutional right, power, privilege, or immunity;

(C) in excess of statutory jurisdiction, authority, or limitations, or short of statutory right;

(D) without observance of procedure required by law;

(E) unsupported by substantial evidence in a case subject to sections 556 and 557 of this title

> or otherwise reviewed on the record of an agency hearing provided by statute; or
>
> **(F)** unwarranted by the facts to the extent that the facts are subject to trial de novo by the reviewing court.

In making the foregoing determinations, the court shall review the whole record or those parts of it cited by a party, and due account shall be taken of the rule of prejudicial error.

Appendix B

42 U.S.C. § 6313

§ 6313. Standards

(a) Small, large, and very large commercial package air conditioning and heating equipment, packaged terminal air conditioners and heat pumps, warm-air furnaces, packaged boilers, storage water heaters, instantaneous water heaters, and unfired hot water storage tanks

. . .

(6) Amended energy efficiency standards

(A) In general

(i) Analysis of potential energy savings

If ASHRAE/IES Standard 90.1 is amended with respect to the standard levels or design requirements applicable under that standard to any small commercial package air conditioning and heating equipment, large commercial package air conditioning and heating equipment, very large commercial package air conditioning and heating equipment, packaged terminal air conditioners, packaged terminal heat pumps, warm-air furnaces, packaged boilers, storage water heaters, instantaneous water heaters, or unfired hot water storage tanks, not later than 180 days after the amendment of the standard, the

Secretary shall publish in the Federal Register for public comment an analysis of the energy savings potential of amended energy efficiency standards.

(ii) Amended uniform national standard for products

(I) In general

Except as provided in subclause (II), not later than 18 months after the date of publication of the amendment to the ASHRAE/IES Standard 90.1 for a product described in clause (i), the Secretary shall establish an amended uniform national standard for the product at the minimum level specified in the amended ASHRAE/IES Standard 90.1.

(II) More stringent standard

Subclause (I) shall not apply if the Secretary determines, by rule published in the Federal Register, and supported by clear and convincing evidence, that adoption of a uniform national standard more stringent than the amended ASHRAE/IES Standard 90.1 for the product would result in significant additional conservation of energy and is technologically feasible and economically justified.

Appendix B

(B) Rule

(i) In general

If the Secretary makes a determination described in subparagraph (A)(ii)(II) for a product described in subparagraph (A)(i), not later than 30 months after the date of publication of the amendment to the ASHRAE/IES Standard 90.1 for the product, the Secretary shall issue the rule establishing the amended standard.

(ii) Factors

In determining whether a standard is economically justified for the purposes of subparagraph (A)(ii)(II), the Secretary shall, after receiving views and comments furnished with respect to the proposed standard, determine whether the benefits of the standard exceed the burden of the proposed standard by, to the maximum extent practicable, considering--

(I) the economic impact of the standard on the manufacturers and on the consumers of the products subject to the standard;

(II) the savings in operating costs throughout the estimated average life of the product in the type (or class) compared to any increase in the price of, or in the initial charges for, or maintenance expenses of, the products that

are likely to result from the imposition of the standard;

(III) the total projected quantity of energy savings likely to result directly from the imposition of the standard;

(IV) any lessening of the utility or the performance of the products likely to result from the imposition of the standard;

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

(VI) the need for national energy conservation; and

(VII) other factors the Secretary considers relevant.

(iii) Administration

(I) Energy use and efficiency

The Secretary may not prescribe any amended standard under this paragraph that increases the maximum allowable energy use, or decreases the minimum required energy efficiency, of a covered product.

Appendix B

(II) Unavailability

(aa) In general

The Secretary may not prescribe an amended standard under this subparagraph if the Secretary finds (and publishes the finding) that interested persons have established by a preponderance of the evidence that a standard is likely to result in the unavailability in the United States in any product type (or class) of performance characteristics (including reliability, features, sizes, capacities, and volumes) that are substantially the same as those generally available in the United States at the time of the finding of the Secretary.

(bb) Other types or classes

The failure of some types (or classes) to meet the criterion established under this subclause shall not affect the determination of the Secretary on whether to prescribe a standard for the other types or classes.

. . .

Appendix B

42 U.S.C. § 6295

§ 6295. Energy conservation standards

(a) Purposes

The purposes of this section are to--

(1) provide Federal energy conservation standards applicable to covered products; and

(2) authorize the Secretary to prescribe amended or new energy conservation standards for each type (or class) of covered product.

. . .

(o) Criteria for prescribing new or amended standards

(1) The Secretary may not prescribe any amended standard which increases the maximum allowable energy use, or, in the case of showerheads, faucets, water closets, or urinals, water use, or decreases the minimum required energy efficiency, of a covered product.

(2)(A) Any new or amended energy conservation standard prescribed by the Secretary under this section for any type (or class) of covered product shall be designed to achieve the maximum improvement in energy efficiency, or, in the case of showerheads, faucets, water closets, or urinals, water efficiency, which the

Secretary determines is technologically feasible and economically justified.

(B)(i) In determining whether a standard is economically justified, the Secretary shall, after receiving views and comments furnished with respect to the proposed standard, determine whether the benefits of the standard exceed its burdens by, to the greatest extent practicable, considering--

(I) the economic impact of the standard on the manufacturers and on the consumers of the products subject to such standard;

(II) the savings in operating costs throughout the estimated average life of the covered product in the type (or class) compared to any increase in the price of, or in the initial charges for, or maintenance expenses of, the covered products which are likely to result from the imposition of the standard;

(III) the total projected amount of energy, or as applicable, water, savings likely to result directly from the imposition of the standard;

(IV) any lessening of the utility or the performance of the covered products likely to result from the imposition of the standard;

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

(VI) the need for national energy and water conservation; and

(VII) other factors the Secretary considers relevant.

(ii) For purposes of clause (i)(V), the Attorney General shall make a determination of the impact, if any, of any lessening of competition likely to result from such standard and shall transmit such determination, not later than 60 days after the publication of a proposed rule prescribing or amending an energy conservation standard, in writing to the Secretary, together with an analysis of the nature and extent of such impact. Any such determination and analysis shall be published by the Secretary in the Federal Register.

(iii) If the Secretary finds that the additional cost to the consumer of purchasing a product complying with an energy conservation standard level will be less than three times the value of the energy, and as applicable, water, savings during the first year that the consumer will receive as a result of the standard, as calculated under the applicable test procedure, there shall be a rebuttable presumption that such standard level is economically justified. A determination by the Secretary that such criterion is not met shall not be taken into consideration in the Secretary's determination of whether a standard is economically justified.

(3) The Secretary may not prescribe an amended or new standard under this section for a type (or class) of covered product if--

(A) for products other than dishwashers, clothes washers, clothes dryers, and kitchen ranges and ovens, a test procedure has not been prescribed pursuant to section 6293 of this title with respect to that type (or class) of product; or

(B) the Secretary determines, by rule, that the establishment of such standard will not result in significant conservation of energy or, in the case of showerheads, faucets, water closets, or urinals, water, or that the establishment of such standard is not technologically feasible or economically justified.

For purposes of section 6297 of this title, a determination under subparagraph (B) with respect to any type (or class) of covered products shall have the same effect as would a standard prescribed for such type (or class).

(4) The Secretary may not prescribe an amended or new standard under this section if the Secretary finds (and publishes such finding) that interested persons have established by a preponderance of the evidence that the standard is likely to result in the unavailability in the United States in any covered product type (or class) of performance characteristics (including reliability), features, sizes, capacities, and volumes that are substantially the same as those generally available in the United States at the time of the Secretary's finding. The failure of some types (or classes) to meet this criterion shall not affect the Secretary's determination of whether to prescribe a standard for other types (or classes).

(5) The Secretary may set more than 1 energy conservation standard for products that serve more than 1 major function by setting 1 energy conservation standard for each major function.

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(p) Procedure for prescribing new or amended standards

Any new or amended energy conservation standard shall be prescribed in accordance with the following procedure:

(1) A proposed rule which prescribes an amended or new energy conservation standard or prescribes no amendment or no new standard for a type (or class) of covered products shall be published in the Federal Register. In prescribing any such proposed rule with respect to a standard, the Secretary shall determine the maximum improvement in energy efficiency or maximum reduction in energy use that is technologically feasible for each type (or class) of covered products. If such standard is not designed to achieve such efficiency or use, the Secretary shall state in the proposed rule the reasons therefor.

(2) After the publication of such proposed rulemaking, the Secretary shall, in accordance with section 6306 of this title, afford interested persons an opportunity, during a period of not less than 60 days, to present oral and written comments (including an opportunity to question those who make such presentations, as

provided in such section) on matters relating to such proposed rule, including--

(A) whether the standard to be prescribed is economically justified (taking into account those factors which the Secretary must consider under subsection (o)(2)) or will result in the effects described in subsection (o)(4);

(B) whether the standard will achieve the maximum improvement in energy efficiency which is technologically feasible;

(C) if the standard will not achieve such improvement, whether the reasons for not achieving such improvement are adequate; and

(D) whether such rule should prescribe a level of energy use or efficiency which is higher or lower than that which would otherwise apply in the case of any group of products within the type (or class) that will be subject to such standard.

(3) A final rule prescribing an amended or new energy conservation standard or prescribing no amended or new standard for a type (or class) of covered products shall be published as soon as is practicable, but not less than 90 days, after publication of the proposed rule in the Federal Register.

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Appendix B

(q) Special rule for certain types or classes of products

(1) A rule prescribing an energy conservation standard for a type (or class) of covered products shall specify a level of energy use or efficiency higher or lower than that which applies (or would apply) for such type (or class) for any group of covered products which have the same function or intended use, if the Secretary determines that covered products within such group--

(A) consume a different kind of energy from that consumed by other covered products within such type (or class); or

(B) have a capacity or other performance-related feature which other products within such type (or class) do not have and such feature justifies a higher or lower standard from that which applies (or will apply) to other products within such type (or class).

In making a determination under this paragraph concerning whether a performance-related feature justifies the establishment of a higher or lower standard, the Secretary shall consider such factors as the utility to the consumer of such a feature, and such other factors as the Secretary deems appropriate.

(2) Any rule prescribing a higher or lower level of energy use or efficiency under paragraph (1) shall include an explanation of the basis on which such higher or lower level was established.

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