

United States Court of Appeals
FOR THE DISTRICT OF COLUMBIA CIRCUIT

Argued January 28, 2021

Decided August 27, 2021

No. 15-1056

HEARTH, PATIO & BARBECUE ASSOCIATION,
PETITIONER

v.

ENVIRONMENTAL PROTECTION AGENCY,
RESPONDENT

AMERICAN LUNG ASSOCIATION, ET AL.,
INTERVENORS

On Petition for Review of a Final Agency Action
of the Environmental Protection Agency

David Y. Chung argued the cause for petitioner. With him on the briefs was *Amanda Shafer Berman*. *David E. Menotti* entered an appearance.

Simi Bhat, Senior Trial Attorney, U.S. Department of Justice, argued the cause for respondent. With her on the brief were *Jonathan Brightbill*, Principal Deputy Assistant Attorney General, *Eric Grant*, Deputy Assistant Attorney General, and *Scott Jordan*, Counsel, U.S. Environmental Protection Agency.

Timothy D. Ballo was on the brief for intervenor American Lung Association, et al. in support of respondent.

Letitia James, Attorney General, Office of the Attorney General for the State of New York, *Barbara D. Underwood*, Solicitor General, *Anisha S. Dasgupta*, Deputy Solicitor General, *Philip J. Levitz*, Assistant Solicitor General, *Michael J. Myers*, Senior Counsel, *Nicholas C. Buttino*, Assistant Attorney General, *Clyde "Ed" Sniffen, Jr.*, Acting Attorney General, Office of the Attorney General for the State of Alaska, *William Tong*, Attorney General, Office of the Attorney General for the State of Connecticut, *Kwame Raoul*, Attorney General, Office of the Attorney General for the State of Illinois, *Brian E. Frosh*, Attorney General, Office of the Attorney General for the State of Maryland, *Keith Ellison*, Attorney General, Office of the Attorney General for the State of Minnesota, *Gurbir S. Grewal*, Attorney General, Office of the Attorney General for the State of New Jersey, *Ellen F. Rosenblum*, Attorney General, Office of the Attorney General for the State of Oregon, *Peter F. Neronha*, Attorney General, Office of the Attorney General for the State of Rhode Island, *Thomas J. Donovan, Jr.*, Attorney General, Office of the Attorney General for the State of Vermont, *Robert W. Ferguson*, Attorney General, Office of the Attorney General for the State of Washington, and *Jennifer A. Dold*, General Counsel, were on the brief for *amici curiae* States of New York, et al. in support of respondent. *Paul A. Garrahan*, Attorney-in-Charge, Office of the Attorney General for the State of Oregon, *Carol A. Iancu*, Assistant Attorney General, Office of the Attorney General for the Commonwealth of Massachusetts, *Scott N. Koschwitz*, Assistant Attorney General, Office of the Attorney General for the State of Connecticut, *Gregory S. Schultz*, Special Assistant Attorney General, Office of the Attorney General for the State of Rhode Island, and *Nicholas F. Persampieri* and *William H. Sorrell*, Assistant Attorneys General, Office of the Attorney General for the State of Vermont, entered appearances.

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

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

PILLARD, *Circuit Judge*: Petitioner Hearth, Patio & Barbecue Association (HPBA) challenges the portion of the Environmental Protection Agency's (EPA) 2015 rule updating the standards under which EPA audits wood-burning heaters' compliance with emissions limits required by the Clean Air Act (the Act). *See* Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces, 80 Fed. Reg. 13,672, 13,708-09, 13,721 (Mar. 16, 2015) (hereinafter 2015 Rule). Based on the danger wood smoke poses to human health, the Act requires EPA to regulate emissions from residential wood heaters. Such devices heat many American homes—hundreds of thousands in the amici states alone—and produce pollution across the country, which transcends geographic borders and exposes major portions of the population to grave health consequences.

Unlike industrial and commercial facilities regulated by EPA under the Act, residential wood heaters are mass-produced consumer items typically purchased by individuals and installed and operated in private homes. To account for differences between residential and industrial or commercial-scale sources, and in recognition that residential wood heater manufacturers are often small businesses, EPA regulates those heaters through a certification program. Instead of requiring the testing of every heater, the program allows manufacturers to obtain certification to sell an entire model line based on satisfactory emissions testing of a single representative heater in the model line. As support for a certification application, the Agency accepts test results from private, EPA-approved laboratories that the manufacturers hire to test their heaters.

To guard against errors at the certification stage and assure continued compliance, the Agency may randomly select heaters from model lines certified under the program for audit testing by an EPA-approved laboratory at the manufacturer's expense. All audit laboratories are required to use the same test method. Under its original rule, EPA called on the same laboratory that had done the certification testing to do any audit testing. *See* Standards of Performance for New Stationary Sources; New Residential Wood Heaters, 53 Fed. Reg. 5,860, 5,871, 5,878 (Feb. 26, 1988) (hereinafter 1988 Rule). In the first update to the rule in more than 25 years, the 2015 Rule authorizes audit testing by any accredited and EPA-approved laboratory.

Petitioner HPBA asserts that the audit provision of the 2015 Rule is invalid because, unlike the 1988 Rule, it authorizes testing at other labs and neither accounts specifically for interlaboratory variability in emissions testing nor adequately acknowledges and explains the change. The petition highlights that wood heaters' emissions of particulate matter fluctuate, posing persistent regulatory challenges. HPBA and EPA agree that some variability in test results arises from natural variations inherent in wood that affect how it burns. And HPBA does not dispute the validity of the 2015 Rule's amended emissions limits for initial certification of wood-stove room heaters, 40 C.F.R. § 60.532, or central heaters, 40 C.F.R. § 60.5474—two subcategories of wood heaters regulated under the Act. It takes issue here only with the amended compliance auditing provisions for those heater categories. *See id.* §§ 60.533(n), 60.5475(n).

The challenge to the audit provision hinges on the assertion that the use of different labs raises a distinct problem: variable results of the same test on the same model heater, which HPBA asserts derive in significant part from running the

test at a different laboratory from the one used for initial certification. HPBA claims the 2015 Rule's allowance for audit testing by any EPA-certified laboratory is arbitrary and capricious insofar as it does not provide more leeway specifically to account for interlaboratory test variability. In other words, HPBA argues that, when a laboratory other than the one that did the certification-stage test performs an audit, EPA must allow worse test results, and that it has failed to explain why it does not.

There is little question that, if it were starting from a clean slate, EPA has provided substantial evidence and rational explanation that would suffice to sustain the audit provisions of the 2015 Rule. The crux of HPBA's claim is what it treats as EPA's promise in the original rule it promulgated in 1988 to continue "restricting where and how audit testing could occur, at least until EPA studied and better understood interlaboratory variability." HPBA Br. 3. HPBA hangs more weight on two sentences in the preamble to the 1988 Rule than they can bear. And in fact, when EPA proposed the current Rule, it explained the evolution of its understanding of test variability. It described how, based on analyses of testing proficiency data and improved testing methods developed since 1988, concerns about interlaboratory audit testing as a distinct source of variability were shown to have been overstated. And it refined the audit procedures to address identified causes of variability.

Because we conclude that EPA acknowledged and adequately explained the changes in the 2015 Rule, and substantial evidence in the record supports those changes, we deny the petition for review.

I. BACKGROUND

A. EPA's prior regulation of wood heaters

Residential wood heaters are enclosed, wood-burning devices such as wood stoves. They are most often installed in homes for ambiance or to heat the space immediately surrounding the device. Such heaters emit many pollutants harmful to human health. EPA promulgated its first residential wood heater rule under Section 111(b) of the Clean Air Act in 1988, *see* 1988 Rule, 53 Fed. Reg. at 5,860, and first revisited the standards in the 2015 Rule at issue here, *see* 2015 Rule, 80 Fed. Reg. at 13,672-73.

“Congress enacted the Clean Air Act . . . ‘to protect and enhance the quality of the Nation’s air resources so as to promote the public health and welfare and the productive capacity of its population.’” *Clean Wis. v. EPA*, 964 F.3d 1145, 1153 (D.C. Cir. 2020) (per curiam) (citation omitted) (quoting *Miss. Comm’n on Env’t Quality v. EPA*, 790 F.3d 138, 144 (D.C. Cir. 2015) (per curiam), *judgment entered*, 812 F. App’x 4 (D.C. Cir. 2020)). Section 111 of the Act, which Congress added in 1970, directs EPA to regulate any new stationary sources of air pollutants that “cause[], or contribute[] significantly to, air pollution” and that “may reasonably be anticipated to endanger public health or welfare.” *Am. Lung Ass’n v. EPA*, 985 F.3d 914, 930 (D.C. Cir. 2021) (alterations in original) (citing 42 U.S.C. § 7411(b)(1)(A)). Pursuant to Section 111(b), once EPA has identified a pollutant that endangers the public health or welfare and a category of source that emits that pollutant, the Agency must issue mandatory standards of performance for new and newly modified sources in the category. 42 U.S.C. § 7411(b)(1)(B); *see also id.* § 7411(a)(1), (e). EPA is required to set standards that “reflect[] the degree of emission limitation achievable through

the application of the best system of emission reduction.” *Id.* § 7411(a)(1). In setting those standards, the Agency must also account for “the cost of achieving” emissions reductions, as well as health, environmental, and energy considerations. *Id.* The Act requires that the Agency review those standards “at least every 8 years” insofar as “appropriate in light of readily available information on the efficacy of [the] standard[s],” and that it revise the standards as necessary. *Id.* § 7411(b)(1)(B).

EPA promulgated new-source performance standards to regulate emissions from residential wood heaters under Section 111(b)(1) of the Clean Air Act for the first time in 1988. *See* 1988 Rule, 53 Fed. Reg. 5,860. Wood heaters emit what EPA refers to as residential wood smoke, which includes particulate matter. Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces, and New Residential Masonry Heaters, 79 Fed. Reg. 6,330, 6,332, 6,337 (Feb. 3, 2014) (hereinafter 2014 Proposed Rule). Particulate matter—essentially small particles of pollutants—has a variety of negative human health effects, including shortness of breath, heart problems, and premature death. Likewise, negative health effects from harmful chemicals in wood smoke, such as carbon monoxide, formaldehyde, nitrogen oxide, and polycyclic aromatic hydrocarbons, range in severity from allergic reactions to lower birthweights and increased risk of death for newborns of mothers exposed to wood smoke. Formaldehyde interferes with proper lung function and can cause cancer in humans and animals. Nitrogen oxide affects the lungs and impairs the body’s ability to fight respiratory infections. Each year, “residential wood combustion accounts for 44 percent of total stationary and mobile polycyclic organic matter . . . emissions, which account for nearly 25 percent of all area source air toxics cancer risks and 15 percent of noncancer respiratory effects.”

2015 Rule, 80 Fed. Reg. at 13,673 (footnote omitted). EPA has noted that the most harmful health effects from residential wood smoke tend to be felt by older adults, children, and people with preexisting heart or lung disease, and that its harms are disproportionately borne by low-income populations and people of color. Because standards controlling particulate matter also effectively limit accompanying chemical pollutants, EPA has chosen to establish a particulate matter limit. 1988 Rule, 53 Fed. Reg. at 5,861. In the 2015 Rule, EPA concluded that “the public health benefits of this rule outweigh the costs by more than 100 times.” 80 Fed. Reg. at 13,673.

In the 1988 Rule, the Agency chose a certification-and-audit approach to regulate residential wood heaters, which differs substantially from how the Agency regulates industrial and commercial-scale sources. EPA’s regulation of commercial and industrial sources typically imposes new source performance standards on every new industrial source and requires compliance testing and monitoring to verify each source’s adherence to those standards. *See* Standards of Performance for New Stationary Sources; Standards of Performance for New Sources; Residential Wood Heaters, 52 Fed. Reg. 4,994, 5,010 (Feb. 18, 1987) (hereinafter 1987 Proposed Rule). In the proposed version of the original wood-heater rule, EPA noted that, because “[t]he cost of a test series is several times the cost of a typical wood heater,” and wood heaters are mass-produced consumer items, “a compliance scheme requiring that each facility be tested would be very costly.” *Id.* at 4,995. To avoid imposing costs that could prove prohibitive for the small businesses manufacturing wood stoves for residential use, EPA instead provided for categorical certification of an entire model line based on testing of a representative heater, backstopped by a program of random audit testing to deter and correct for errors at certification and to ensure continued compliance. That regulatory approach

minimizes the costs of both certification and audit testing and spreads the audit-testing costs evenly among manufacturers. *See* 1988 Rule, 53 Fed. Reg. at 5,861; 1987 Proposed Rule, 52 Fed. Reg. at 4,995, 5,010.

A manufacturer seeking certification of its residential wood heaters under the 1988 Rule could elect to test a representative heater for a model line and submit the results in support of its application to EPA for the certification needed to sell that model line. 1988 Rule, 53 Fed. Reg. at 5,861. The 1988 Rule required certification-stage emissions testing to be conducted in an EPA-accredited laboratory using one of four EPA-approved emissions sampling methods. *Id.* at 5,860. The regulations specified procedures for each step of the emissions testing, including how to set up the heater, load test fuel into the heater, and operate the heater. *Id.* at 5,861. Tests were to be done using a “crib” wood configuration as fuel, with spacers and lumber of specified size. *Id.* at 5,901; *see also id.* at 5,911; 2015 Rule, 80 Fed. Reg. at 13,677-78. EPA phased in the emissions limits over two years, resulting in emissions limits by 1990 of 4.1 grams of particulate matter per hour (g/hr) for catalytic wood heaters, and 7.5 g/hr for noncatalytic wood heaters. 1988 Rule, 53 Fed. Reg. at 5,860.

The 1988 Rule authorized EPA to conduct random compliance audits. It provided that EPA would direct the laboratory that had done the certification-stage testing to retest a heater from any model line at the manufacturer’s expense, using the same test method and procedure used during certification testing for that model line; in response to manufacturer concerns, EPA conditionally deferred authorizing audit testing at any laboratory other than the certifying laboratory. *Id.* at 5,878. If a wood heater failed to meet the applicable emissions limit during audit testing, EPA would propose revocation of the certificate of compliance for

that model line. *Id.* A manufacturer could then seek a hearing to present its rebuttal case against the proposed revocation before EPA would suspend the certification. *Id.* at 5,878-79.

In promulgating the 1988 Rule, EPA recognized that emissions testing of wood-burning heaters could be imprecise. The Agency acknowledged a commenter's concerns about variability in the results of both tests of a single appliance conducted at the same laboratory (intralaboratory variability) and tests of a single appliance across different labs (interlaboratory variability). *See id.* at 5,870-71. EPA noted:

The Agency is collecting additional data to determine the expected precision before enforcement audits are conducted on an interlaboratory basis. Analyses of these data will be conducted in a statistically sound manner and the results will be published when available. As described in the preamble to the proposal, the interlaboratory precision value assumed during the negotiations was 1 g/hr. If the results of the interlaboratory analysis show a value greater than this is appropriate, the interlaboratory component of precision will be used in evaluating audit data.

Id. at 5,871.

The "limited amount of data available" to EPA when it promulgated the 1988 Rule reflected variability in repeated testing by the same laboratory "within 1 g/hr for a four test run average." *See id.* Citing unresolved concerns about "intralaboratory precision," *id.*, among others, EPA set the permissible emissions rate to be significantly more lenient than rates many existing heaters had achieved, *see id.* at 5,870-71. Given manufacturers' concerns and the scant data available, EPA added a 1 g/hr margin to the emissions limits to account

for the *intralaboratory* precision value and deferred authorizing enforcement audits at laboratories other than the certification-test lab. *Id.* at 5,871. Referring to negotiations with manufacturers in the rulemaking process, EPA’s statement that “the *interlaboratory* precision value assumed during the negotiations was 1 g/hr,” *id.* (emphasis added), suggests the shared assumption at the time was that variation among results of tests conducted in the same way on the same model heater by a different laboratory was the same as variation of results from the same laboratory. Noting that it was “collecting additional data to determine the expected precision before enforcement audits are conducted on an interlaboratory basis,” EPA anticipated that *if* further analysis demonstrated variability greater than 1 g/hr it would consider the “interlaboratory component of precision . . . in evaluating audit data,” *id.*, and presumably account for it in any authorization of testing by different labs.

B. History of the 2015 Rule

In 2014, EPA proposed updating the performance standards for residential wood heaters. It did so in light of the proliferation of cleaner and more efficient designs and technology for such devices, and in response to lawsuits by several states and environmental groups seeking to force the Agency to fulfill its statutory duty to update its residential wood heater standard pursuant to Section 111(b)(1)(B) of the Clean Air Act. *See* 2014 Proposed Rule, 79 Fed. Reg. at 6,338; *see also* State Amici Br. 6-7. After notice and comment, EPA finalized revised standards in 2015. 2015 Rule, 80 Fed. Reg. 13,672. The 2015 Rule applies prospectively to heaters manufactured after its effective date. *Id.* at 13,676.

The 2015 Rule maintains the certification-and-audit regulatory framework established in the 1988 Rule. It expands

the applicability of the standard, which under the 1988 Rule had only applied to “room heaters” that heat an area immediately surrounding the device, to also cover “central heaters” used to warm larger areas with air or liquid heated in the device and distributed via ducts or pipes throughout the residence. *See id.*; 40 C.F.R. § 60.5473.

Commenting on the proposed rule, petitioner HPBA urged EPA to abandon audit testing altogether, or at least to authorize audit tests by a laboratory other than the one that did the certification testing only if it employed less stringent emissions limits to account for what HPBA asserted was greater inter-laboratory variability. Comments of Hearth, Patio & Barbeque Association on EPA’s Proposed Standards, 79 Fed. Reg. 6,330 (Feb. 3, 2014) at 30 (hereinafter HPBA Comment). HPBA pointed to a 2010 study by Rick Curkeet and Robert Ferguson. *Id.* (citing Rick Curkeet & Robert Ferguson, EPA Wood Heater Test Method Variability Study (Oct. 6, 2010) (hereinafter Curkeet-Ferguson Study)). That study generally concluded that “[v]ariability in wood heater emission testing results for any given appliance is most likely a function of the random nature of burning wood, no matter how tightly you try to control the process.” Curkeet-Ferguson Study 19. The authors acknowledged that testing is “certainly capable of reliably distinguishing between good and bad performance,” but nonetheless concluded that “it cannot reliably distinguish between ‘good, better and best’ performance.” *Id.* In urging EPA to restrict audit testing to the certification-test lab, HPBA highlighted the study’s conclusion that variability could range from 4.9 to 9.8 grams per hour higher or lower “if the appliance were tested again at a different laboratory” from the certifying lab. *Id.* at 8; *see also* HPBA Comment 69 n.179.

EPA chose not to restrict audit testing to the certification test lab. In its response to comments on the 2014 Proposed

Rule, EPA explained that inherent methodological and computational flaws in the study on which HPBA relied seriously undermined that study's conclusions regarding the poor reproducibility of proficiency testing. EPA pointed to other data showing that testing variability could be sufficiently addressed by using only the test method shown to be the most reliable and adding regulatory incentives for laboratories to report accurate results. EPA Response to Comment on Proposed Rule (Feb. 2015) 236 (hereinafter Response to Comments). Remaining open to the prospect there might nonetheless be some degree of interlaboratory variability not addressed by those measures, EPA included in the audit provisions an opportunity for manufacturers to submit evidence to rebut a proposed certification-revocation decision, thereby allowing a manufacturer to present evidence that, for example, a finding of excess emissions should be discredited due to test variability. The 2015 Rule also accounted for potential residual testing variability by adding a compliance margin to the emissions limit announced in the proposed rule.

In HPBA's view, EPA failed adequately to respond to its comments, adopting audit provisions in the 2015 Rule that are unsupported by the record. Three changes effected by the 2015 Rule provide relevant context for HPBA's challenge.

First, the 2015 Rule refines how emissions testing of wood heaters is to be conducted. Whereas the 1988 Rule approved four different test methods, EPA recognized by 2015 that better-controlled methods decreased the variability of results. EPA thus limited its approval to a single method, Method 28, an improved version of the most repeatable (by the same lab) and reproducible (by different labs) of the four testing methods allowed under the 1988 Rule. *See* 2015 Rule, 80 Fed. Reg. at 13,682, 13,709. Even the study on which HPBA principally bases its challenge concluded that the variability of the best of

the previously approved methods (Method 5G-3) is ten times lower than that of other previously approved methods. Curkeet-Ferguson Study 15 n.8, 19. The 2015 Rule also authorizes an alternative configuration of the wood that may be used in emissions testing, expanding fuel choice beyond the “crib wood” previously required to also allow testing with “cord wood,” which more closely resembles what a typical homeowner might use. EPA authorized use of either crib wood or cord wood and set different emissions limits for tests using each wood type. *See* 2015 Rule, 80 Fed. Reg. at 13,684; 2014 Proposed Rule, 79 Fed. Reg at 6,340.

Second, the final audit provisions in the 2015 Rule eliminate the requirement that the same laboratory that conducted the original certification test for a model line also conduct any audit testing, instead allowing audit testing under the EPA-approved method by any accredited, EPA-approved laboratory. EPA has also imposed a conflict-of-interest requirement for laboratories, stating that test labs may not receive any financial benefit from the outcome of emissions tests. 2015 Rule, 80 Fed. Reg. at 13,710.

Third, the 2015 Rule adopts more stringent emissions limits, to be phased in over five years. But, in response to comments calling for the standards to incorporate a compliance margin to accommodate testing variability, the final rule includes less stringent emissions limits than the 2014 proposal. *Id.* at 13,686-87. Whereas the 1988 Rule had set limits of 4.1 to 7.5 g/hr for room heaters, EPA set the final limits for room heaters tested with crib wood at 2 g/hr, and for those tested with cord wood at 2.5 g/hr. For all central heaters, which the prior rule had not reached, EPA set the emissions limit at 0.15 pounds per million British thermal units (lb/mmBtu). *Id.*

In view of the evidence before it and the other measures it promulgated, EPA deemed it unnecessary to adopt the manufacturers' proposal to add more leeway to the audit provision for any imprecision specifically associated with interlaboratory testing. *See id.* In both the 2014 Proposed Rule and its Response to Comments on that proposal, EPA explained that imprecision attributable to testing being done by a different lab had not been demonstrated. The Agency stated that requiring better testing methodology and controlling for conflicts of interest on the part of certification-test labs sufficed to ensure emissions would be measured accurately, whether by the same or a different EPA-approved laboratory. *See* 2014 Proposed Rule, 79 Fed. Reg. at 6,356; Response to Comments 236.

C. Procedural history

On March 16, 2015, petitioner HPBA and four other trade association and manufacturer petitioners sought review of the 2015 Rule in this court. This case was held in abeyance after EPA published an advance notice of proposed rulemaking in 2018, which did not suggest any changes to the 2015 Rule but solicited comments on specified issues to inform future rulemaking, including the compliance date for the final phased-in emissions standard and the question whether the audit provisions should more specifically address variability. *Standards of Performance for New Residential Wood Heaters, New Residential Hydronic Heaters and Forced-Air Furnaces (Advance Notice of Proposed Rulemaking)*, 83 Fed. Reg. 61,585, 61,592 (Nov. 30, 2018). Once EPA responded to the comments it had solicited, *see Standards of Performance for New Residential Wood Heaters (Final Rule)*, 85 Fed. Reg. 18,448, 18,453 (Apr. 2, 2020), all petitioners other than HPBA voluntarily dismissed their petitions.

The current petition challenges only EPA’s decision to allow audit testing—included in the rule since it was promulgated in 1988—to be conducted by laboratories other than the same one that did the certification testing on the heater in question. HPBA does not challenge the more demanding emissions limits set by EPA in the 2015 Rule. Rather, it claims only that authorization of testing by any accredited, EPA-approved lab is invalid for failure to account for what HPBA claims is testing variability that occurs when audit tests are done by a lab other than the one the manufacturer hired at the certification stage. HPBA argues that EPA arbitrarily reversed course from the 1988 Rule without acknowledging its change of course or supporting and explaining the 2015 Rule’s approach to interlaboratory variability, all of which HPBA contends renders the rule arbitrary and capricious.

II. JURISDICTION

Before reaching the merits, we must determine whether we have jurisdiction. Neither EPA nor the intervenors or amici in its support questioned HPBA’s standing, but the court has an independent obligation to satisfy itself of its own jurisdiction. EPA does, however, raise a ripeness challenge to the petition. So we first confirm that HPBA has standing and that its petition is ripe. *See Ctr. for Sustainable Econ. v. Jewell*, 779 F.3d 588, 596 (D.C. Cir. 2015).

A. Petitioner HPBA has demonstrated its standing

Petitioner HPBA claims “associational” or “representational” standing to challenge the audit-testing provision of the 2015 Rule on behalf of its member businesses—as distinct from “organizational” standing on its own behalf. *See Hunt v. Wash. State Apple Advert. Comm’n*, 432 U.S. 333, 343 (1977). “An organization has associational standing to bring suit on its members’ behalf when: (1) at least

one of its members would have standing to sue in his or her own right; (2) ‘the interests it seeks to protect are germane to the organization’s purpose’; and (3) ‘neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.’” *Sierra Club v. FERC*, 827 F.3d 59, 65 (D.C. Cir. 2016) (quoting *WildEarth Guardians v. Jewell*, 738 F.3d 298, 305 (D.C. Cir. 2013)).

It is HPBA’s burden as the party invoking federal jurisdiction to demonstrate standing, “which must be supported in the same way as any other matter on which the party bears the burden of proof.” *Twin Rivers Paper Co. v. SEC*, 934 F.3d 607, 613 (D.C. Cir. 2019) (formatting modified). We review agency action on the administrative record—akin to our review of a district court’s decision on cross motions for summary judgment in a case in which the factual record is uncontested and the parties’ dispute is over legal implications. *See CTS Corp. v. EPA*, 759 F.3d 52, 64 (D.C. Cir. 2014). “It is ‘black-letter administrative law that in an [Administrative Procedure Act] case, a reviewing court should have before it neither more nor less information than did the agency when it made its decision.’” *Id.* (quoting *Hill Dermaceuticals, Inc. v. FDA*, 709 F.3d 44, 47 (D.C. Cir. 2013)).

Because Article III’s constraints apply to courts and not executive agencies, the obligation to establish standing in a case that originates in an agency arises with the first court filing. Regarding challenges to agency action that may be filed directly in this court, we have noted that

[i]n many if not most cases the petitioner’s standing to seek review of administrative action is self-evident; no evidence outside the administrative record is necessary for the court to be sure of it. In particular, if the complainant is “an object of the

action (or forgone action) at issue”—as is the case usually in review of a rulemaking and nearly always in review of an adjudication—there should be “little question that the action or inaction has caused him injury, and that a judgment preventing or requiring the action will redress it.”

Sierra Club v. EPA, 292 F.3d 895, 899-900 (D.C. Cir. 2002) (quoting *Lujan v. Defs. of Wildlife*, 504 U.S. 555, 561-62 (1992)).

But sometimes the evidence supporting standing is absent from or not readily identified in the administrative record. Our circuit rules provide that “[w]hen the appellant’s or petitioner’s standing is not apparent from the administrative record, the brief must include arguments and evidence establishing the claim of standing.” D.C. Cir. R. 28(a)(7) (concerning contents of briefs and requirements related to standing). We have held that, “[w]hen the petitioner’s standing is not self-evident . . . the petitioner must supplement the record to the extent necessary to explain and substantiate its entitlement to judicial review.” *Sierra Club*, 292 F.3d at 900.

Petitioner HPBA’s standing statement in its brief was conclusory. The briefing did not point to anything in the administrative record establishing that it has one or more members that manufacture heaters regulated by the challenged provisions of the 2015 Rule, nor did HPBA submit to us declarations or other competent evidence to that effect. HPBA’s counsel was unable at oral argument to name any of HPBA’s members that are manufacturers of wood heaters subject to the Rule. *See* Transcript of Oral Argument at 35-36. The question, then, is whether it was reasonable for HPBA, whose members appeared to include some businesses manufacturing wood stoves, perhaps including residential

wood heaters subject to the challenged rule, to have assumed that its standing was “self-evident” based on the administrative record.

We have acknowledged that the language of the circuit rule explaining when a petitioner must make factual submissions supplemental to the record “is hardly free from ambiguity because what may be apparent from the administrative record to one reasonable person may seem less clear to another.” *Ams. for Safe Access v. DEA*, 706 F.3d 438, 445 (D.C. Cir. 2013) (internal quotations omitted). This court takes care to eschew any “‘gotcha’ construction” that “would have the undesirable effect of causing parties to include long jurisdictional statements in practically all opening briefs for fear that the court might find their standing less than self-evident.” *Am. Library Ass’n v. FCC*, 401 F.3d 489, 494 (D.C. Cir. 2005). After all, “[t]his would waste, rather than conserve, judicial resources and place an unnecessary burden on litigants.” *Id.*

That said, because “[t]here may be a disjunction between what a petitioner assumes that the court knows about its organization and operation and what the court actually knows,” *id.* at 494-95, and because we cannot simply “accept[] [an] organization[’s] self-description[] of [its] membership,” *Summers v. Earth Island Inst.*, 555 U.S. 488, 499 (2009), “[w]hen a petitioner claims associational standing, it is not enough to aver that unidentified members have been injured.” *Chamber of Com. of U.S. v. EPA*, 642 F.3d 192, 199 (D.C. Cir. 2011). Instead, a petitioner relying upon associational standing should explain in its opening brief how each of the challenged agency action affects or injures one or more of its members, identify those members, and point to evidence in the administrative record or in a declaration that shows those persons or entities are actually members of petitioner’s

association and how the challenged agency action affects them. *Id.*; see also *Sierra Club v. EPA*, 754 F.3d 995, 1001 (D.C. Cir. 2014) (standing not shown where petitioner failed to present evidence one of its members actually suffered an injury in fact).

Nonetheless, “under the law of this circuit, the members of a panel retain discretion to seek supplemental submissions on standing to fulfill the obligation of the court to determine whether the requirements of Article III have been met.” *Ams. for Safe Access*, 706 F.3d at 444. We have invited supplemental submissions in cases where, as here, the nature of the business of a petitioner’s individual members or the specific products they might manufacture, or some other pertinent characteristic, was not sufficiently clear from the administrative record to allow us to discern a claim of Article III injury. See *Am. Library Ass’n*, 401 F.3d at 496. See also generally *McNary v. Fed. Mine Safety & Health Rev. Comm’n*, 989 F.3d 21, 23 (D.C. Cir. 2021) (supplemental submission invited on redressability); *Sissel v. U.S. Dep’t of Health & Hum. Servs.*, 760 F.3d 1, 5 (D.C. Cir. 2014) (same on plaintiff’s employment and income); *Pub. Citizen, Inc. v. Nat’l Highway Traffic Safety Admin.*, 489 F.3d 1279, 1296-97 (D.C. Cir. 2007) (same on risk of harm to organization’s members); *Ctr. for Sustainable Econ.*, 779 F.3d at 598-99 (same on organization’s mission and bylaws); *Am. Chemistry Council v. Dep’t of Transp.*, 468 F.3d 810, 815, 819 (D.C. Cir. 2006) (same on nature and imminence of harm to organization’s members).

Following oral argument, we invited HPBA to submit information not included in the Joint Appendix to point out to the court the support they referenced at argument for their very general assertions that they have members directly regulated by the 2015 Rule. HPBA by letter submitted the full text of its comment to EPA, which identified Jotul and Pacific Energy as member manufacturers of room wood heaters and central wood

heaters. *See* Pet'r Letter Providing Information Requested by the Court During January 28, 2021 Oral Argument, ECF No. 1882541, at 168-78 (Jotul); *id.* at 179-81 (Pacific Energy). Those are the two types of heaters covered by the other-lab audit authorization HPBA challenges. HPBA should have included those parts of the administrative record in the Joint Appendix and should have specifically explained and referenced them in its opening brief. *See* D.C. Cir. R. 28(a)(7). Nonetheless, we are satisfied that HPBA's post-argument submission suffices to establish standing to challenge the 2015 Rule's audit provisions as they apply to both room heaters and central heaters.

Having established that at least one HPBA member has standing to challenge the audit provisions for each heater type, we turn to a second threshold question: whether that challenge is ripe.

B. Petitioner HPBA's claims are ripe for review

EPA argues that HPBA's challenge to the 2015 audit provisions is unripe because "EPA has not yet audited a single device under the 2015 Rule," and "HPBA's hypothetical concerns of revocation following a failed audit test may never come to pass." EPA Br. 37. In the event the Agency issues a notice of revocation of a device's certification as the result of a failed audit, EPA points out that it may consider "any relevant information" at a rebuttal hearing, including evidence of the variability HPBA claims must be taken into account at the audit stage. 40 C.F.R. § 60.533(n)(3)(v).

Those arguments characterize the petition too narrowly. "Determining whether administrative action is ripe for judicial review requires us to evaluate (1) the fitness of the issues for judicial decision and (2) the hardship to the parties of withholding court consideration." *Cement Kiln Recycling*

Coal. v. EPA, 493 F.3d 207, 214 (D.C. Cir. 2007) (quoting *Nat'l Park Hosp. Ass'n v. Dep't of Interior*, 538 U.S. 803, 808 (2003)). It is well established that “a purely legal claim in the context of a facial challenge . . . is presumptively reviewable.” *Id.* at 215 (quoting *Nat'l Ass'n of Home Builders v. U.S. Army Corps of Eng'rs*, 417 F.3d 1272, 1282 (D.C. Cir. 2005)); see *Nat'l Ass'n of Home Builders*, 417 F.3d at 1282 (“We have repeatedly held that claims that an agency’s action is arbitrary and capricious or contrary to law present purely legal issues.” (formatting modified)). HPBA facially challenges “EPA’s authority to require audits to be performed at a laboratory of EPA’s choosing, without accounting for interlaboratory variability . . . *not* whether any individual manufacturer might somehow avoid revocation despite failing an audit.” Reply Br. 3. That claim “presents purely legal issues that must be decided based on the administrative record.” *Id.* “And because ‘Congress has emphatically declared a preference for immediate review’ with respect to Clean Air Act rulemaking, we have no need to consider the ripeness test’s second element, namely, the hardship to the parties of withholding review.” *Nat. Res. Def. Council v. EPA*, 643 F.3d 311, 320 (D.C. Cir. 2011) (quoting *Cement Kiln Recycling Coal.*, 493 F.3d at 215).

Petitioner HPBA has standing and its challenge to the 2015 Rule’s audit provisions is ripe, so we turn to the merits of its claim that those provisions are arbitrary and capricious.

III. MERITS

We review the 2015 Rule pursuant to 42 U.S.C. § 7607(b)(1). Under that section, agency action may be reversed if it is arbitrary, capricious, an abuse of discretion, not in accordance with law, or in excess of statutory authority. *Id.* § 7607(d)(9)(A), (C); see *Am. Petrol. Inst. v. EPA*, 684 F.3d 1342, 1347 (D.C. Cir. 2012). To withstand review, an agency must have examined all relevant facts and data and articulated a rational explanation for its decision, including a reasonable connection between the facts and ultimate outcome. *Am. Petrol. Inst.*, 684 F.3d at 1347-48. “We cannot look at EPA’s decision as would a scientist, but instead must exercise our ‘narrowly defined duty of holding agencies to certain minimal standards of rationality.’” *Murray Energy Corp. v. EPA*, 936 F.3d 597, 608 (D.C. Cir. 2019) (quoting *Mississippi v. EPA*, 744 F.3d 1334, 1342 (D.C. Cir. 2013)).

HPBA argues that EPA arbitrarily reversed course from the 1988 Rule in the 2015 Rule’s audit provisions. In HPBA’s view, the 1988 Rule appropriately addressed both interlaboratory and intralaboratory variability in test results by (1) setting emissions limits at levels that assume variability in test results if a device is tested in the same laboratory and (2) accounting for imprecision of tests done by different laboratories by prohibiting audit testing at a laboratory other than the one that did the testing on which the model-line certification was based. HPBA Br. 8-11. HPBA claims EPA acted arbitrarily and without record support in the 2015 Rule by no longer restricting audit testing to the same lab that did the certification-stage testing and, in particular, that it could not lawfully do so without first making specific findings that interlaboratory variability is no greater than intralaboratory variability, or at least explaining why it would not. *See id.* 15-16, 24-26; Reply Br. 16.

We conclude that the Agency adequately explained the changes in the 2015 Rule’s audit provisions and that the changes are supported by the record. In proposing those changes in 2014, EPA first explained the refinement of its understanding. The Agency described how it was amending its approach to concerns about variability of test results based on more recent testing proficiency data and analyses, and improved testing methods. The 2015 Rule does account for potential variability in several ways. Although EPA did not adopt the approach HPBA favored, the challenged regulatory choices are supported by substantial evidence and neither arbitrary nor capricious.

A. EPA considered the data that HPBA submitted

HPBA’s disagreement with EPA’s interpretation of the available testing proficiency data is the crux of its challenge to the 2015 Rule’s audit provisions, so we begin by reviewing how EPA considered and explained the data. HPBA had commissioned studies in 2010 that reported a high level of variability in test results. *See generally* Curkeet-Ferguson Study. HPBA contends that EPA failed to account for its data, instead simply “ignoring the Curkeet Ferguson Study in the record.” HPBA Br. 31. That argument is squarely contradicted by the Agency’s direct engagement with the Curkeet-Ferguson Study in its 2014 Proposed Rule, Response to Comments, and the measures adopted in the final 2015 Rule.

First, in the 2014 Proposed Rule, EPA anticipated HPBA’s concern about reproducibility of test results. EPA’s proposal expressly disagreed that “repeatability [by the same lab] and reproducibility [by a different lab] of the current test method for wood heater emissions . . . may be poor.” 2014 Proposed Rule, 79 Fed. Reg. at 6,356; *see id.* at n.46 (citing Robert Ferguson, Final Report: EPA Wood Heater Emission Test

Method Comparison Study (Dec. 1, 2010)). The Agency explained that the reported variability likely derived from “the lack of regulatory requirements or incentives for the test laboratories to achieve highly reproducible results in proficiency testing.” *Id.* at 6,356. EPA addressed that lacuna not only with a margin for variability in the emissions limits themselves, but also with more rigorous testing requirements and a conflict-of-interest provision. And it observed that the results of the tests HPBA identified, which were conducted under the 1988 Rule, “do not reflect the proposed changes to improve the repeatability and reproducibility of the test method.” *Id.*

Second, EPA published a study of testing variability it commissioned from Brookhaven National Laboratory (Brookhaven), which, the Agency explained, showed that the “[r]epeatability of cord wood test method” for room heaters can be “very good.” Notice of Data Availability in Support of the 2014 Proposed Rule, 79 Fed. Reg. 37,259, 37,261 (July 1, 2014) (hereinafter Notice of Data Availability). Brookhaven conducted emissions testing of a “popular non-catalytic EPA-certified wood stove using cord wood,” *id.*, at three of the four burn rates required by EPA Method 28, *see* Butcher, T. et al., Brookhaven Nat’l Lab., Cord Wood Testing in a Non-Catalytic Wood Stove 6 (June 30, 2014) (hereinafter Brookhaven). Results for three tests that Brookhaven ran at the highest burn rate were within fifteen percent of each other. *Id.*; *see also* Notice of Data Availability, 79 Fed. Reg. at 37,261. At the two other, lower burn rates tested, the results were within three and ten percent of each other. Brookhaven 7, 17. EPA thus gathered and described record evidence directly relevant to the issue on which HPBA claims the Agency lacked support.

Following publication of the 2014 Proposed Rule, HPBA submitted a comment pressing its interlaboratory-variability

concern. The comment asserted that test results under the 1988 Rule were highly variable and argued that EPA in the 1988 Rule “expressly *obligated* itself to evaluate interlab precision and account for it by adjusting the stringency of the standards, if necessary, by amending them through a rulemaking proceeding.” HPBA Comment 10. Asserting that data showed interlaboratory variability preventing EPA from allowing audits by different laboratories, HPBA characterized the Curkeet-Ferguson Study as providing confirmation of “the variable nature of wood heater emissions testing” and establishing that “the major contributor to variability was the random nature of burning wood.” *Id.* at 30; *see* Curkeet-Ferguson Study 7-8. Of course, as EPA has consistently acknowledged, variability caused by “the random nature of burning wood” affects all testing, whether by the same or a different lab; but the Curkeet-Ferguson Study drew conclusions it ascribed to the use of different labs. Curkeet and Ferguson tested three wood heaters in different laboratories under the 1988 standards and calculated that the average emissions results for the tested heaters were 3.91, 14.01, and 6.35 g/hr. They concluded that “for any emissions rate measured using the EPA test methods, the result could be 4.9 to 9.8 grams per hour higher or lower if the appliance were tested again at a different laboratory.” Curkeet-Ferguson Study 8.

Third, EPA further considered HPBA’s position when, in its Response to Comments on the 2014 Proposed Rule, EPA explained that a statistical analysis by Washington State’s Puget Sound Clean Air Agency (Puget Sound) challenged the Curkeet-Ferguson Study’s conclusions regarding the magnitude of testing variability. Response to Comments 236. Puget Sound evaluated that study and its underlying data and identified several deficiencies that together showed the study’s data set was neither representative nor reliable, and that any

real testing variability was far less than Curkeet and Ferguson calculated. *See* Craig Kenworthy, Puget Sound Clean Air Agency, Preliminary Review and Critique of Analyses of NSPS Test Method Variability (Curkeet, 2010) and the Relationship of EPA Certified Values to “In-Home Use” (Houck, 2012) (Dec. 5, 2012) 1, 4-5. Puget Sound identified three main deficiencies in the Curkeet-Ferguson Study. First, the study incorrectly applied statistics appropriate for a normal distribution to “non-normal data.” *Id.* at 5. Second, it improperly divided up its data set to draw conclusions from a subset of the data that was not representative of the data set as a whole, thereby allowing particularly extreme values to be highlighted and taken out of context. *Id.* And third, it conflated absolute difference in values with a confidence interval, leading to a dramatic overestimation of uncertainty. *Id.* EPA’s consideration of Puget Sound’s detailed critique of the Curkeet-Ferguson Study supports the Agency’s decision to discount the latter and the conclusions HPBA draws from it.

A fourth way that EPA engaged with HPBA’s comment and the study it proffered was by describing and crediting yet another critical assessment of the Curkeet-Ferguson Study, conducted by a wood heater manufacturer, the Woodstock Soapstone Company (Woodstock Soapstone). The Woodstock Soapstone study further supported EPA’s conclusion that the Curkeet-Ferguson Study misattributed variable testing results to interlaboratory variability rather than the inefficiency of outmoded test methods the 2015 Rule abandoned, and the conflicted interests of the laboratories conducting the tests. Woodstock Soapstone submitted comments on the 2014 Proposed Rule that included a comparison of the data used in the Curkeet-Ferguson Study to Woodstock Soapstone’s more recent data for three room heaters. *See* Morrissey, Woodstock Soapstone Company, Comment (Aug. 15, 2014).

Woodstock Soapstone found variability in test results for its own heaters ranging from 0.17 to 0.61 g/hr—far less variability than reported by Curkeet and Ferguson. Woodstock Soapstone attributed the large difference between the two studies' reported variability to “deep[] flaw[s]” in the Curkeet-Ferguson analysis. *Id.* 1. The Curkeet-Ferguson data set was “very small” and some of the “data [wa]s up to 27 years old.” *Id.* 3. And, strikingly, Woodstock Soapstone observed in Curkeet and Ferguson’s data that initial certification tests of heaters almost always yielded results showing lower levels of relevant pollutants than subsequent tests. That skew did not seem to reflect random chance. Woodstock Soapstone calculated that, all else being equal, there was only a 0.52% chance that the pattern of audit test results so much higher than certification test results could be attributed to random chance. *Id.* 1. The most reasonable interpretation of the variability in the Curkeet-Ferguson data set, Woodstock Soapstone concluded, was that the certification tests were conducted in a different manner than the subsequent tests. *Id.*

In all these ways, the Agency explained how it based its current thinking on additional data and critical analysis of the study HPBA had presented as substantiating its original concerns. We conclude that EPA has “adequately explained its reasons for rejecting the data” HPBA highlighted. *City of Waukesha v. EPA*, 320 F.3d 228, 248 (D.C. Cir. 2003). The Agency “specifically analyzed and responded to” the Curkeet-Ferguson Study, permissibly concluding that additional analyses showed testing variability to be a less fundamental problem than HPBA asserted. *Int’l Fabricare Inst. v. EPA*, 972 F.2d 384, 394 (D.C. Cir. 1992). The Agency acted responsibly by taking account of the more recent analysis of the older data used in the Curkeet-Ferguson Study, and by considering the newer data used by Brookhaven and in the comment from Woodstock Soapstone. *See Dist. Hosp. Partners, L.P. v.*

Burwell, 786 F.3d 46, 57 (D.C. Cir. 2015) (“[A]n agency cannot ignore new and better data.”); *Catawba County v. EPA*, 571 F.3d 20, 45 (D.C. Cir. 2009) (noting that agencies “have an obligation to deal with newly acquired evidence in some reasonable fashion”). While “[r]easonable people might disagree with EPA’s interpretations of the scientific evidence,” relative institutional competencies generally mean that “any such disagreements must come from those who are qualified to evaluate the science, not [this court].” *Mississippi v. EPA*, 744 F.3d at 1345. We see no grounds to hold that EPA acted arbitrarily or without substantial evidentiary support in relying on new data and expert analyses of the Curkeet-Ferguson Study to reassess the significance of testing variability.

B. EPA explained its changed position

There is also no reason to conclude that EPA made an unexplained about-face. The Agency spelled out in the 2014 Proposed Rule and the Response to Comments how and why its understanding had developed. In the 2014 Proposed Rule, EPA made clear that it had further considered any potential variability in emissions testing results and did not interpret the available data to show that emissions from room heaters could not be accurately measured. *See* 79 Fed. Reg. at 6,356. At the same time, contrary to HPBA’s assertion, the 2014 Proposed Rule did not deny all variability in testing. Rather, based in part on evidence of successful implementation of more stringent emissions limits in some states, EPA explained that it “believe[d] that previous [testing] results” appearing to demonstrate substantial variability, while meriting consideration, “d[id] not mean that lower emissions standards cannot be measured accurately.” *Id.* The Agency reiterated that position in the Response to Comments, where it further explained that methodological and computational flaws in the Curkeet-Ferguson Study undermined that study’s conclusions

regarding the poor reproducibility of proficiency testing. Response to Comments 236. In view of the intervening analyses and new data, the Agency concluded, improved test methods and the addition of regulatory incentives for laboratories to report accurate results would more appropriately address testing variability than would HPBA's preferred response of abandonment or further relaxation of standards for audit testing at other labs.

In the 1988 Rule, EPA had set emissions limits based on "the achievable level of wood heater performance, taking into account several sources of variability," and declined at that time to authorize audit testing at different labs. 53 Fed. Reg. at 5,870. The Agency referred to the "limited . . . data available" indicating that intralaboratory precision "was within 1 g/hr for a four test run average." *Id.* at 5,871. The key passage in the 1988 Rule that HPBA asserts created for the Agency a "longstanding obligation to analyze imprecision/variability in detail," HPBA Br. 27, in fact presumptively did not distinguish between the degrees of variability within and between testing laboratories. EPA expressed readiness to use a different precision value if data so indicated, and conditionally undertook to further investigate the interlaboratory variability that, without the benefit of evidence, it assumed might exist. 1988 Rule, 53 Fed. Reg. at 5,871. But the referenced need to gather data on interlaboratory variability and perhaps to adjust the precision value for audits at other labs rested on the Agency's understanding that there were no other adequate explanations of the testing imprecision EPA provisionally assigned to intra- and interlaboratory variability.

What HPBA frames as a broken promise on the part of EPA is nothing of the sort. HPBA had long asserted that results of the same test of the same stove model would somehow vary wildly if a different EPA-approved lab conducted the test. But

once EPA had data and analyses debunking the very basis for that suggestion, any reason for EPA to gather and publish further data on the point before updating the rule had evaporated. In other words, the assumptions the Agency made in 1988 when it referred to additional investigation of interlaboratory precision no longer made sense by the time it promulgated the 2015 Rule. Contrary to HPBA's position, nothing in the 1988 Rule precluded EPA from amending its view of the interlaboratory variability issue upon further consideration of potential causes of testing imprecision and revising the audit provisions as it did in the 2015 Rule.

C. EPA accounted for testing variability

HPBA contends that the Agency “effectively assumes there is no variability by failing to build imprecision into the emissions limits themselves and by placing no limitations on audit testing.” HPBA Br. 34. To the contrary, EPA accounted for potential variability of test results in the 2015 Rule in at least four ways. First, in the final version of the Rule, EPA changed the substantive standard from the proposed rule to add a 100% compliance margin to the emissions limit for room heaters, and a margin of approximately 140% to the limit for central heaters. 2015 Rule, 80 Fed. Reg. at 13,683. Second, EPA improved the repeatability and reproducibility of emissions testing by confining approved test methods to those shown to be most accurate, and requiring improved methods for cord wood testing as supported by the results of the Brookhaven study. *Id.* at 13,677, 13,685; *see also* 2014 Proposed Rule, 79 Fed. Reg. at 6,356. Third, the Agency included a conflict-of-interest provision to blunt apparent bias in certification testing by prohibiting laboratories from receiving any financial benefit keyed to the outcome of tests. 2015 Rule, 80 Fed. Reg. at 13,710. Fourth, EPA included in the audit provisions an opportunity for manufacturers to rebut

a decision revoking certification with any relevant information—including proof that what the audit lab measured as excess emissions in fact resulted from test variability. *Id.* at 13,709, 13,721.

EPA reasonably determined and explained that the measures it adopted to address potential testing variability for wood heaters were sufficient, and its decisions are supported by substantial evidence. The Agency permissibly decided not to adopt a more lenient emissions level for audit testing by labs other than the certifying laboratory, and to instead rely on what it concluded were more appropriate measures to ensure effective and fair audit testing.

* * *

For the foregoing reasons, we deny the petition for review.

So ordered.