

In the Supreme Court of the United States

No. 24A95

STATE OF WEST VIRGINIA, *et al.*,
Applicants,

v.

ENVIRONMENTAL PROTECTION AGENCY, *et al.*,
Respondents.

(Additional Captions Listed on Following Pages)

**ENVIRONMENTAL & PUBLIC HEALTH RESPONDENTS' RESPONSE IN
OPPOSITION TO APPLICATIONS FOR STAY OF FINAL AGENCY
ACTION DURING PENDENCY OF PETITIONS FOR REVIEW**

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No. 24A96

NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION,
Applicants,

v.

ENVIRONMENTAL PROTECTION AGENCY, *et al.*,
Respondents.

No. 24A97

NATIONAL MINING ASSOCIATION & AMERICA'S POWER,
Applicants,

v.

ENVIRONMENTAL PROTECTION AGENCY, *et al.*,
Respondents.

No. 24A98

NACCO NATURAL RESOURCES CORPORATION,
Applicants,

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No. 24A105

MIDWEST OZONE GROUP,
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v.

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ELECTRIC GENERATORS FOR A SENSIBLE TRANSITION,
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OHIO & KANSAS,
Applicants,

v.

ENVIRONMENTAL PROTECTION AGENCY, *et al.*,
Respondents.

RULE 29.6 STATEMENT

American Lung Association, Clean Air Council, American Public Health Association, Clean Wisconsin, and Natural Resources Defense Council are non-profit environmental and public health organizations. None of the organizations has any parent corporation or any publicly held company that owns 10% or more of its stock.

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The Environmental and Public Health Respondents (Intervenor-Respondents in the Court of Appeals) respectfully submit this consolidated response in opposition to the eight emergency applications for a stay of the U.S. Environmental Protection Agency’s (EPA’s) “New Source Performance Standards for Greenhouse Gas Emissions From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule,” 89 Fed. Reg. 39,798 (May 9, 2024) (hereafter, “the Rule”).

ARGUMENT

The stay applications present no significant question of law. In the guise of statutory interpretation disputes, the applicants criticize EPA’s factual findings on the feasibility, cost, and installation time needed for various aspects of carbon capture pollution control. This disagreement with EPA’s technical conclusions and policy determinations is subject to arbitrary and capricious review. Because EPA’s findings are thoroughly supported in an extensive record, applicants are unlikely to succeed on their claims.

The applicants also fail to show they will be harmed by the Rule during the pendency of litigation, especially given the Rule’s extended compliance deadlines, which are still years in the future. However, further delaying those compliance deadlines now—as applicants ask this Court to do—will severely injure the public. It would allow millions of additional tons of carbon dioxide into the atmosphere,

where they would accumulate and remain for centuries, further worsening climate change and its pernicious effects.

The D.C. Circuit is prepared to hear and decide the merits of this case expeditiously. It asked the parties to “ensure this case can be argued and considered as early as possible in the court’s 2024 term,” and ordered merits briefing to be completed by November 1, 2024. *See* Order, D.C. Cir. No. 24-1120, ECF No. 2065493 (filed July 19, 2024); Order, D.C. Cir. No. 24-1120, ECF No. 2069206 (filed Aug. 9, 2024). There is no need for this Court to preliminarily resolve the merits of the parties’ technical, record-based disagreements on an emergency basis. *See Moyle v. United States*, 144 S. Ct. 2015, 2022 (2024) (Barrett, J., concurring in vacatur of stay) (“We should not jump ahead of the lower courts . . .”).

I. Applicants challenge the Rule’s technical, record-based findings, as to which EPA has discretionary authority

Section 111 of the Clean Air Act authorizes EPA to set “standards of performance” for the emission of pollutants from power plants. *West Virginia v. EPA*, 597 U.S. 697, 706 (2022); 42 U.S.C. § 7411(a)(1), (b)(1), (d). The standards must reflect a pollution limit that is “achievable” through use of the “best system of emission reduction” that the agency determines to have been “adequately demonstrated.” 42 U.S.C. § 7411(a)(1). The Rule sets traditional, technology-based standards that will “caus[e] plants to operate more cleanly.” *West Virginia*, 597 U.S. at 706. Specifically, EPA found that installing carbon capture equipment with a 90 percent capture rate was the “best system of emission reduction” for long-lived coal-fired power plants and for new, baseload gas plants. 89 Fed. Reg. at 39,801-02.

Carbon capture equipment is a type of pollution scrubber that has been in use for decades. *Id.* at 39,813, 39,846. The agency found that both the technology and capture rate were adequately demonstrated and achievable, and that regulated plants could deploy the needed infrastructure by 2032. *Id.* at 39,801-02, 39,878.

Stay applicants paint this dispute as one of statutory interpretation, focusing on the phrase “adequately demonstrated.” *See, e.g.,* State of West Virginia et al. Appl. for Stay (“WV”) 25; Nat’l Rural Elec. Coop. Ass’n Appl. for Stay (“NRECA”) 20; NACCO Nat. Res. Corp. Appl. for Stay (“NACCO”) 19; Edison Elec. Inst. et al. Appl. for Stay (“EEI”) 8-9. But their briefing reveals broad agreement with EPA about the meaning of “adequately demonstrated.” The parties agree that adequately demonstrated technology is “reasonably reliable, reasonably efficient,” and not “exorbitantly costly.” *Compare* WV 9 (quoting *Essex Chem. Corp. v. Ruckelshaus*, 486 F.2d 427, 433 (D.C. Cir. 1973)), *and* Elec. Generators for a Sensible Transition Appl. for Stay (“EGST”) 15 (same), *and* Ohio et al. Appl. for Stay (“Ohio”) 9 (same), *with* EPA Resp. Br. 4, D.C. Cir. No. 24-1120, ECF No. 2059170 (filed June 11, 2024) (same). The parties agree that it must be “proven technology, not aspiration.” *Compare* WV 9, *with* 89 Fed. Reg. at 39,851 (finding that 90 percent carbon capture rates “have been proven”). Applicants contend that Section 111 does not allow “experimental technology,” but EPA agrees, and determined that carbon capture is *not* “experimental.” *Compare* EGST 19 (claiming the necessary technology is “still at the experimental stage”), *with* 89 Fed. Reg. at 39,831 (agreeing standard cannot be based on “experimental” technology), *id.* at 39,813 (explaining that carbon capture

has been used for decades). And there is no disagreement about the past or “present perfect” tense of the phrase “has been adequately demonstrated.” *Contra* EEI 8-9, Ohio 8, NRECA 12. EPA found that carbon capture and storage *has been* adequately demonstrated. 89 Fed. Reg. at 39,830 (noting that Section 111 requires selected technology to be “in existence” and “*currently*” demonstrated).

In short, EPA has done what the applicants claim Section 111 requires: “provide concrete examples of [EPA’s] chosen [best system of emission reduction] achieving the standard of performance and ‘show clearly’ that it can do so in all of the settings to which the regulation extends.” EEI 9; *see* 89 Fed. Reg. at 39,848-50, 39,853-54 (providing concrete examples of projects achieving 90 percent or greater capture and explaining how capture rates can be achieved across variable load rates); *see also infra* Section II (discussing the record).

Because stay applicants’ criticisms of the Rule amount to a disagreement with EPA’s technical determinations, they warrant arbitrary and capricious review. In Section 111, Congress expressly delegated fact-finding and policymaking authority to EPA by instructing the agency to “determine[]” the “best” system of pollution control that has been “adequately” demonstrated. 42 U.S.C § 7411(a)(1), (b)(1)(B); *see also Loper Bright Enters. v. Raimondo*, 144 S. Ct. 2244, 2263 (2024) (describing similar statutes that “empower an agency” to regulate “subject to the limits imposed by a term or phrase that leaves agencies with flexibility, such as ‘appropriate’ or ‘reasonable’” (cleaned up)); *Kisor v. Wilkie*, 588 U.S. 558, 632 (2019) (Kavanaugh, J., concurring in the judgment) (describing regulations “that employ

broad and open-ended terms like ‘reasonable,’ ‘appropriate,’ ‘feasible,’ or ‘practicable,’” and noting those “kinds of terms afford agencies broad policy discretion”). A court reviewing the exercise of such regulatory discretion must “recogniz[e] constitutional delegations, fix[] the boundaries of the delegated authority, and ensur[e] the agency has engaged in reasoned decisionmaking within those boundaries.” *Loper Bright*, 144 S. Ct. at 2263 (cleaned up); *see also Am. Elec. Power Co. v. Connecticut*, 564 U.S. 410, 427, 429 (2011) (explaining that Congress entrusted the “complex balancing” of Section 111 factors to EPA in the first instance, “subject to judicial review only to ensure against action ‘arbitrary, capricious, . . . or otherwise not in accordance with law’” (citing 42 U.S.C. §§ 7411(a)(1), (b)(1)(B), (d)(1), 7607(d)(9))). As this Court recently confirmed, the Administrative Procedure Act “does mandate that judicial review of agency policymaking and factfinding be deferential.” *Loper Bright*, 144 S. Ct. at 2261; *see also Marsh v. Or. Nat. Res. Council*, 490 U.S. 360, 376 (1989) (finding the issue in that case “a classic example of a factual dispute the resolution of which implicates substantial agency expertise”).

There is no legitimate disagreement about the “boundaries” of EPA’s legal authority under Section 111 as it relates to this Rule. Stay applicants try to generate such disagreement—and mask the factual, record-based nature of this dispute—by claiming that Section 111 does not allow the agency to “project” the development of new technology or to “extrapolate” from existing data. *E.g.*, EEI 8;

NACCO 18; NRECA 20-21. As explained below, these arguments either misconstrue the Rule, or are so implausible that they present no genuine statutory question.

First, several applicants conflate “projecting” the need for major technological developments (which EPA did not do) with providing reasonable lead time to deploy existing technology (which EPA properly did). One applicant claims that because EPA set future deadlines for the completion of technology installation, this shows such technology is “non-existent.” EGST 23; *see also* EEI 10-11 (arguing that EPA allowed “lead time” to accommodate the development of technology). However, allowing lead time for parties to design, permit, and install existing technology, *see* 89 Fed. Reg. at 39,832, 39,878, is not the same as a “projection” about time needed to *innovate* new technology.

Second, several applicants criticize EPA’s statements that it has authority to “make a projection regarding the way in which a particular system [of emission reduction] will develop.” 89 Fed. Reg. at 39,830 n.202; *see* EEI 8; Ohio 4 (claiming that EPA “predicted that the technology would become adequately demonstrated”); NACCO 24 (arguing that Section 111 does not “allow EPA to force the *development* of new technology entirely”). However, EPA made clear that it was not *exercising* such authority in this Rule. It expressly described the agency’s authority to project future technological development as “not relevant here, because CCS is already in existence.” 89 Fed. Reg. at 39,830 n.202; *see also id.* at 39,832 n.223 (“EPA is not relying on this point for purposes of these rules”). EPA did acknowledge that minor, readily-available improvements to existing technology may improve performance.

But again, the agency did not rely on that fact to find the technology adequately demonstrated. *Id.* at 39,889 (noting that existing data “is enough, by itself” for adequate demonstration, but “[i]n addition,” there are available improvements). Applicants’ argument that Section 111 does not permit the “projection” of major technological advancements—something EPA did not do here—is a red herring.

Finally, some applicants go so far as to suggest that EPA cannot make reasonable, evidence-based extrapolations from existing data to conclude that the Rule’s technology-based limits are adequately demonstrated and achievable. They suggest that Section 111 demands examples of the technology already operating to the precise specifications and in the precise manner the Rule would require: “capturing, transporting, and storing 90% of the annual CO₂ emissions from each entire unit covered.” NRECA 3; *see also* NACCO 10 (similar), EGST 16 (similar), Nat’l Mining Ass’n et al. Appl. for Stay (“NMA”) 12 (similar). But it is not credible to suggest that Section 111 requires EPA to have this level of specificity in its data—*i.e.*, examples that are identical in every respect to what the Rule would require. That would turn “achievable” limits into “achieved” limits, and “adequately” demonstrated technology into “in every single aspect” demonstrated. *See* 42 U.S.C. § 7411(a)(1). To serve any purpose, an emission standard must apply to sources that are not already meeting that standard. Common sense therefore dictates that *some* extrapolation—from data that may not perfectly match the exact circumstance of every application of the standard—is required. Applicants may dispute the

reasonableness of EPA’s extrapolations, but they cannot seriously contend that all “extrapolation” is legally prohibited.

Several applicants reasonably concede as much. *See* EEI 12 (acknowledging that, absent an example of a facility that “has . . . achieved” the exact standard, EPA could also “explain[] why that [absent example] does not matter”); WV 10 (“some ‘projection[s] based on existing technology’ are allowed” (citation omitted)); *id.* at 17 (in the absence of “full scale” examples, EPA must show how its data can “predict performance in full scale plants” (citation omitted)). The agency’s understanding that it may make reasonable extrapolations has also been constant for decades. *E.g., Essex Chem. Corp.*, 486 F.2d at 440 (upholding EPA standard where test results indicated that “a presently installed unit approaches rather than achieves” the standard, given other record evidence); *New Stationary Sources Performance Standards; Electric Utility Steam Generating Units*, 44 Fed. Reg. 33,580, 33,600 (June 11, 1979) (disagreeing with commenters’ suggestion that “extrapolation of test data” from small scale to full-size utility applications was unreasonable, and confirming that “there should be no technological barriers to designing and constructing utility-sized facilities”); *Revision of Standards of Performance for Nitrogen Oxide Emissions From New Fossil-Fuel Fired Steam Generating Units*, 63 Fed. Reg. 49,442, 49,444-45 (Sept. 16, 1998) (finding that technology that had been installed only on utility boilers could also be used on industrial boilers); *see also Loper Bright*, 144 S. Ct. at 2258, 2262 (Court has often respected consistent, longstanding agency interpretations); *id.* at 2267 (agency

interpretations may be especially informative if they rest on facts within the agency’s expertise).

In short, there is no legitimate disagreement about the “boundaries” of Section 111 as it applies to the Rule. Applicants simply dispute the reasonableness of EPA’s technical, evidence-based conclusions—for instance, the conclusion that demonstrating 90 percent capture on part of a power plant unit’s exhaust adequately demonstrates that standard for the full unit’s exhaust. These are technical disputes, and EPA’s findings on these matters are reviewed under an arbitrary and capricious standard. As explained below, because EPA’s conclusions are well supported and explained, they should easily survive such review.

II. A strong technical record supports EPA’s determinations

As the D.C. Circuit panel unanimously found, the stay applicants are unlikely to show that EPA’s determinations are arbitrary and capricious given the record evidence. Order, D.C. Cir. No. 24-1120, ECF No. 2065493 (filed July 19, 2024). Applicants’ arguments misstate the record, are unsupported, and are unlikely to succeed.

A. Carbon capture and storage has been adequately demonstrated

Thirteen years ago, the head of one of the nation’s largest electric generation companies stated that it had “demonstrated to a certainty” that “carbon capture and storage is in fact viable technology.” 80 Fed. Reg. 64,510, 64,556 (Oct. 23, 2015) (quoting quarterly earnings call transcript); Env’t Def. Fund Comments 81 n.399,

EPA-HQ-OAR-2023-0072-0764 (quoting same transcript).¹ That company, American Electric Power (AEP)—a member of three applicants here (EEI, EGST, and Midwest Ozone Group)—recently acknowledged that a demonstration project it operated from 2009 to 2011 “successfully proved” the technology “could capture CO₂ at a coal-fired power plant.” AEP Comment 8-9, EPA-HQ-OAR-2023-0072-0823. AEP stressed in its comments on the proposed Rule that this demonstration project was not “full-scale” or “commercial.” *Id.* But at the time, AEP forthrightly acknowledged that the *reason* it did not deploy carbon capture technology at commercial scale was because the company could not gain regulatory approval to recover its costs “without federal requirements to reduce greenhouse gas emissions already in place.” Press Release, *AEP places carbon capture commercialization on hold, citing uncertain status of climate policy, weak economy* (July 14, 2011), EPA-HQ-OAR-2023-0072-8951; *accord* AEP Comment 9, EPA-HQ-OAR-2023-0072-0823 (“[A]fter being unable to obtain the necessary cost-recovery approval from state regulators, the [commercial-scale] project was cancelled.”).

Now that such federal regulation is in place, however, and Congress has provided significant, cost-reducing tax incentives for carbon capture, 26 U.S.C. § 45Q, the same company claims that EPA’s carbon capture standards are “impossible” to meet. EGST 2; Midwest Ozone Group Appl. for Stay (“MOG”) 4. This Court is thus being asked to embrace a catch-22: Only federal regulation would

¹ Record documents for the rulemaking may be found by searching for the ID number at [regulations.gov](https://www.regulations.gov), and clicking on the “Documents” or “Comments” tab.

justify a full-unit, commercial-scale deployment of carbon capture, but a full-unit, commercial-scale deployment is also required before the agency can regulate.

Like AEP, other applicants recognize that “CCS does indeed exist.” EEI 10; WV 10 (“We know we can capture carbon, move it through pipelines, and put it in the ground.”). In fact, there are at least fifteen carbon capture and storage projects operating in the U.S. today, with another 121 in construction or advanced stages of development. 89 Fed. Reg. at 39,813-14. There have been successful deployments across both industrial applications and commercial-scale power plants, which even applicants acknowledge as “legitimate examples,” WV 11 (while also claiming the examples do not “get[] the job done”).

These concessions about the viability of carbon capture and storage are warranted. Each component of carbon capture, transport, and storage has been successfully deployed for decades. 89 Fed. Reg. at 39,813. The way the capture process works is similar to a traditional exhaust scrubber for other pollutants: the plant’s exhaust passes through a chemical solution that absorbs the carbon dioxide. *Id.* at 39,846. The solution is then heated up to separate and purify the carbon dioxide, preparing it for transport to a storage site. *Id.* This capture process was first patented in the 1930s. *Id.* at 39,813. Since then, it has been applied across industries, demonstrated at power plants, tested for thousands of hours, and analyzed in dozens of engineering studies on a variety of designs. *Id.* at 39,846-54. Commercial vendors offer guarantees that their solvents and equipment will remove more than 90 percent of the carbon dioxide from a power plant’s exhaust. *Id.*

at 39,851-52. Carbon dioxide pipelines have been in use for more than half a century, and thousands of miles of pipelines are currently in operation. *Id.* at 39,855. Similarly, tens of millions of tons of carbon dioxide have already been stored underground, *id.* at 39,847, and dozens of sequestration projects are ongoing, some in applicants' own states, *id.* at 39,864.

B. A unit-wide 90 percent capture rate has been adequately demonstrated and is achievable

While implicitly conceding that carbon capture and storage is adequately demonstrated in general, applicants focus their dispute on whether EPA properly determined that a *90 percent capture rate* was adequately demonstrated. Importantly, applicants do not appear to dispute that a 90 percent capture rate has been achieved for part of a power plant unit's exhaust (a so-called "slipstream") for some periods of time. They argue only that the capture rate has not been adequately shown for an entire power plant's exhaust, throughout a year. However, applicants fail to identify genuine impediments to treating the exhaust of an entire unit rather than a slipstream. Nor have they rebutted EPA's evidence that technical problems experienced at some projects in the record, which occasionally disrupted those operations, have now been overcome.

Significant support for EPA's determination that a 90 percent capture rate is adequately demonstrated comes from the experience of the Boundary Dam plant. 89 Fed. Reg. at 39,855. Boundary Dam Unit 3, which is a commercial-scale, coal-fired power plant, "consistently captured 90 percent or more" of the carbon dioxide in a processed emissions stream over a three-year period. *Id.* at 39,888-89; *see id.* at

39,888 (even now, the plant captures 83 percent of its total emissions). As EPA found, the data regarding Boundary Dam “is enough by itself to support the EPA’s adequate demonstration finding for a 90 percent standard.” *Id.* at 39,889. That data is further corroborated by the Petra Nova plant, which “successfully captured 92.4 percent” from its processed emissions stream during operation, and the gas-fired Bellingham Energy Center, which had an 85 to 95 percent capture rate from 1991 to 2005. *Id.* at 39,848, 39,850, 39,925.

In an attempt to discount this evidence, applicants claim that high capture rates on slipstreams do not demonstrate that the technology also works on a full unit’s exhaust. *See, e.g.*, NRECA 13-15; WV 11-12; EGST 16; NMA 12; EEI 14-15. Applicants thus recast the 90 percent capture rates as smaller percentages, by comparing what was captured to the full unit’s exhaust, including exhaust the capture system was never designed to treat. *See, e.g.*, EEI 14-15 (recasting more than 90 percent as 10 percent); NRECA 18 (recasting 98 percent as 5 percent).

But the equipment and process used to treat slipstreams is the same as that used to treat a unit’s full exhaust: scaling up just requires more or larger carbon capture units holding more of the same solvent. Carbon capture has already been scaled up in this manner. A capture unit that demonstrated 90 percent reduction at the 25-megawatt project at Plant Barry in 2011 was scaled up tenfold, six years later, to capture 90 percent of the emissions from the 240-megawatt project at Petra Nova, using the same solvent. 89 Fed. Reg. at 39,849-50, 39,852. The same vendor is now planning for 95 percent removal from a 530-megawatt project at Project

Tundra (double the size of Petra Nova), *id.* at 39,850-51, and is performing an engineering design study for the full exhaust of two units totaling approximately 1,500 megawatts, at Four Corners (nearly triple the size of Project Tundra), *see* EPA, Greenhouse Gas Mitigation Measures for Steam Generating Units (Technical Support Document), EPA-HQ-OAR-2023-0072-9095 (Apr. 2024) (“Coal TSD”) at 30-31; Navajo Transitional Energy Company Comments 2, 10 n.39, EPA-HQ-OAR-2023-0072-0819 (citing front end engineering design study announcement). There has been no technical impediment to this continuous scaling-up.

Applicants seem to want this Court to infer that a 90 percent carbon capture rate for a full plant’s exhaust is infeasible because an example has not already been in place for years. But it is not surprising that operators have limited the scale of their *voluntary* pollution control projects, by treating only a slipstream of their exhaust, since there is no regulation requiring more. *See* 89 Fed. Reg. at 39,848 (explaining that an operator targeted capture rates based on “economic incentives and regulatory requirements of the project”); Coal TSD at 25-26 (explaining that economics and regulatory requirements affected the choice of how to operate the capture system at Boundary Dam); *id.* at 25 (noting that, during tests, Boundary Dam was able to capture about 90 percent (~89.7 percent) of the full unit’s emissions). Only one applicant even attempts to assert any *technical* difference between capturing carbon from a unit’s full exhaust and a slipstream, by pointing to the variable loads of full exhaust versus the static loads of slipstreams. *See* NRECA 14-15. However, EPA expressly considered variability in the Rule, and the record

supports the agency’s conclusion that capture systems can operate effectively at a range of loads. *See* 89 Fed. Reg. at 39,853 (“CO₂ capture is, in general, able to meet the variable load of coal-fired steam generating units without any adverse impact on the CO₂ capture rate.”); *id.* at 39,929 (finding 90 percent capture achievable over long periods for baseload combustion turbines and “variable load” conditions).

In addition, the technical problems that occasionally disrupted carbon capture at large, commercial-scale power plants have been overcome, and thus are no impediment to “adequate demonstration.” *Id.* at 39,848-49. Past problems have known solutions—such as redundancies and isolations for key equipment, and spray systems to limit fly ash carryover. *Id.* at 39,889. Announced projects already include these improvements in their design. *See id.* Applicants seize on a recent communication from Boundary Dam’s operators to claim that it shows various technical problems. *See* NMA 13; EGST 16; NACCO 15; NRECA 15; EEI 14. In fact, that communication shows how the operators have addressed those problems: after eight years of modifications to “stabilize operations, improve reliability and maximize capacity,” “[r]ecent performance has shown that the CCS facility can capture at least 90% of the CO₂ from the partial flue gas stream it processes.” *See* SaskPower Comment (email dated Aug. 4, 2023), EPA-HQ-OAR-2023-0072-0687; *see also* 89 Fed. Reg. at 39,848 (describing EPA’s review of capture at Boundary Dam, including technical issues and resolutions). The plant’s operators have already incorporated these design improvements—at a lower overall cost—into their next project. 89 Fed. Reg. at 39,849 (describing Shand plant design study).

Applicants are also incorrect to assert that EPA, in determining that the record for coal-fired plants was relevant to gas-fired plants, failed to account for differences between the two. *Contra* EEI 16; EGST 17 n.4. In fact, EPA identified the primary differences between these types of power plants, especially the different concentrations of carbon dioxide in their exhaust, and reasonably explained how system design can address those differences. *See* 89 Fed. Reg. at 39,924-25. The record also includes, as noted above, demonstrations of 90 percent carbon capture accomplished at gas-fired plants. *Id.* at 39,925.

C. The transportation and storage components of carbon capture and storage have been deployed for decades

No applicant challenges the viability of carbon dioxide transportation or storage generally, nor could they, given the decades-long history of these processes. Instead, applicants exaggerate the difficulty of building the pipelines and storage facilities that will be needed to dispose of captured carbon dioxide. *E.g.*, EEI 18-19. However, EPA analyzed the Rule's transport and storage needs based on multiple conservative assumptions, and its conclusions—that the needed transport and storage will be available—are manifestly reasonable. *See* 89 Fed. Reg. at 39,855-56.

EPA analyzed the Rule's potential carbon-transport needs using multiple conservative assumptions. First, EPA assumed that pipelines would be constructed for *all* coal units that have not already announced they will retire before 2039, even though nearly half of those remaining plants will also have reached the historical average age of retirement by then. *Id.* at 39,856, 39,876. Second, EPA assumed each plant would build its own pipeline, even though pipelines generally serve multiple

customers. *See id.* at 39,856. Third, EPA assumed regulated plants would not tap into existing or proposed pipelines, even though more than five thousand miles of pipelines already exist. *Id.* Under these highly conservative assumptions, EPA concluded that only approximately 5,000 miles of pipelines would need to be constructed by 2032. *Id.* That build rate is well within recent build rates for gas pipelines of 1,000 to 2,500 miles per year. *See id.*

Applicants' attacks on this record evidence fail. For instance, they wrongly portray EPA's conservative assumption of 5,000 miles of pipeline—which should be seen as a *maximum* amount—as though it were the *minimum* necessary buildout. *See* EGST 19 (claiming, incorrectly, that EPA “concedes” that CCS would require “*at least*” 5,000 miles of pipelines); *see also* WV 15 (alleging that EPA “calls for” this amount). Similarly, applicants criticize the agency for “anticipat[ing] that in the coming years, a large-scale interstate pipeline network may develop.” 89 Fed. Reg. at 39,855; NRECA 26 (deriding this opinion). But EPA has expressly noted that “[f]or purposes of” this Rule, it did *not* “base its analysis” “on the projected existence of a large-scale interstate pipeline network.” 89 Fed. Reg. at 39,855.

Although carbon dioxide has been successfully injected underground for decades, applicants raise supposed concerns about the pace of permitting for additional storage sites. *E.g.*, EEI 18-19. These concerns have no basis in the record. For instance, although EPA has recently added permitting staff and has improved storage site permit processing, 89 Fed. Reg. at 39,870, applicants baselessly discount these improvements as “speculation,” *see* EEI 19. EPA also explained there

will be more states—including stay applicants North Dakota, Wyoming, Louisiana, and likely also Texas—with delegated authority to issue permits themselves, further reducing the number of permits requiring EPA review and allowing states to support “effective and efficient permit application reviews.” 89 Fed. Reg. at 39,871. In addition, Congress recently created a \$50 million grant program to assist states and Tribes with developing and implementing these programs. *See id.* at 39,870; Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, § 40306 (2021). In short, EPA has shown that permitting for storage sites will not be a hindrance, 89 Fed. Reg. at 39,870-71, 39,873, and applicants’ weak attacks on this record evidence should not succeed.

D. EPA reasonably considered cost

In formulating the Rule, EPA gave detailed and careful consideration to cost. *See* 42 U.S.C. § 7411(a)(1) (requiring EPA to “tak[e] into account the cost,” among other factors, of selecting a system of emission reduction). In particular, EPA properly considered Congress’s provision of billions of dollars in tax incentives for captured and stored carbon—which intentionally and dramatically lowered the cost of the technology—as well as the millions of dollars in grants for technical assistance to help power companies reduce greenhouse gas emissions. *See* 89 Fed. Reg. at 39,881, 39,818-20 (noting the 2022 passage of the Inflation Reduction Act “demonstrate[s] an intent to support development and deployment of low-GHG emitting technologies in the power sector through a broad array of additional tax credits, loan guarantees, and public investment programs”); 26 U.S.C. § 45Q (tax

credit for capture and sequestration); 42 U.S.C. § 7435(a) (grants for technical assistance to reduce greenhouse gas emissions from electricity generation). Indeed, Congress extended the availability of, and increased the dollar amount for, the carbon capture and storage tax credit in 2022, shortly after this Court’s decision in *West Virginia*. See Inflation Reduction Act (IRA), Pub. L. No. 117-169, § 13104 (2022). At the same time, Congress amended the Clean Air Act to instruct EPA to “assess” the emission reductions that will result from anticipated changes in electricity generation, which should reflect both market forces and the IRA’s tax incentives, and to issue new standards that “ensure” emission reductions by incorporating that assessment. 42 U.S.C. § 7435(a)(5)-(6). In other words, Congress instructed EPA to assess the effect of Congress’s significant tax incentives for carbon capture and storage, and to regulate with those incentives in mind. EPA thus appropriately considered the tax credit in evaluating the cost of carbon capture. See 89 Fed. Reg. at 39,881.

EPA also found that, even without congressional incentives, the cost of carbon capture has dropped in recent years. *Id.* at 39,800 (noting the cost has declined in part due to process improvements and advances in technology); *id.* at 39,882 (data showing that the “incremental levelized cost of CCS” dropped from \$74/megawatt hour, estimated in 2015, to \$44/megawatt hour, estimated in 2022). These declining costs, especially paired with congressional incentives, materially changed the facts underpinning EPA’s earlier carbon capture and storage cost calculations—as EPA reasonably explained. See *id.* at 39,838 (citing *FCC v. Fox*

Television Stations, Inc., 556 U.S. 502 (2009)). Applicants’ assertions that in the past, EPA “consistently rejected CCS as too costly,” NACCO 26, are therefore misleading. And in fact, EPA determined almost a decade ago, even considering the costs at that time, that a partial carbon capture and storage-based standard was the best system of emission reduction for *new* coal-fired power plants. 89 Fed. Reg. at 39,825.

Finally, no full-scale carbon capture and storage project would fail to qualify for this cost-reducing tax credit. Despite applicants’ claims, there is no “substantial risk” that plants “may not achieve” the modest requirement to capture 18,750 metric tons annually. *Contra* EGST 20 (citing Pub. L. No. 117-169, § 13104(a) (codified at 26 U.S.C. § 45Q(d)(2)(B)(i)). A unit operating at Boundary Dam’s design rate of capture of 3,240 metric tons per day would clear the minimum annual hurdle for a tax credit in less than a week. 89 Fed. Reg. at 39,848. Similarly, Project Tundra is designed to capture a projected *4 million* metric tons per year. *Id.* at 39,850. Capturing 18,750 metric tons per year is clearly achievable.

III. Applicants have not shown irreparable harm

When “the moving party has not demonstrated irreparable harm, then this Court can avoid delving into the merits.” *Labrador v. Poe*, 144 S. Ct. 921, 929 (2024) (Kavanaugh, J., concurring). Applicants have not shown that they will suffer irreparable harm during this litigation, for the reasons explained in EPA’s and the State Respondents’ briefs. Environmental and Public Health Respondents will not repeat those arguments here, other than to emphasize two points: First, as to state

applicants, the state planning process envisioned by this Rule is no more complex or costly than what states have conducted under the Clean Air Act for decades.

Seligman Decl. ¶¶ 13, 17; Bast Decl. ¶ 8 (Attachments 1 & 8 to Opp. Env'tl. & Pub. Health Resp't-Intvs. to Stay Motions, D.C. Cir. No. 24-1120, ECF No. 2059133 (filed June 11, 2024)). In any event, as the D.C. Circuit observed, no state has to participate. Order, D.C. Cir. No. 24-1120, ECF No. 2065493 (filed July 19, 2024).

Second, as to the industry applicants, the only activity that may need to occur during litigation is, at most, conceptual design work and other preliminary tasks for carbon capture installation, or planning for new generation to replace retiring coal-fired plants. Neither activity demands “substantial sums of money” (*contra* EEI 21), and the latter is part of routine utility planning, involving minimal, always-ongoing costs. *See* 89 Fed. Reg. at 39,874; Rochelle Decl. ¶ 32 (“less than 0.1% of total project costs”); Hovorka Decl. ¶ 33, Grove Decl. ¶ 27 (storage and pipeline feasibility need not begin until 2026); O’Connell Decl. ¶¶ 13, 15-17; Navarro Decl. ¶ 9 (Attachments 3, 4, 5, 6, and 7 to Opp. Env'tl. & Pub. Health Resp't-Intvs. to Stay Motions, D.C. Cir. No. 24-1120, ECF No. 2059133 (filed June 11, 2024)). Applicants also have not shown that any coal plant retirements will result from the Rule rather than from existing market trends. Celebi Decl. ¶¶ 7-8; O’Connell Decl. ¶¶ 6, 10-11; Tierney Decl. ¶ 20; Navarro Decl. ¶ 9 (Attachments 2, 5, 6, and 9 to Opp. Env'tl. & Pub. Health Resp't-Intvs. to Stay Motions, D.C. Cir. No. 24-1120, ECF No. 2059133 (filed June 11, 2024)).

IV. The public interest overwhelmingly favors denying a stay

If this Court were to delay the compliance deadlines for the Rule's urgently needed emission reductions, as stay applicants request, the public would experience widespread and serious harm. Federal carbon emission standards for power plants are long overdue, and these uncontrolled emissions have already caused profound harm. *See* Br. of Amicus Curiae Sierra Club 1-7, D.C. Cir. No. 24-1120, ECF No. 2059073 (filed June 11, 2024) (describing this decades-long regulatory history, despite the government's recognition long ago of the need to curb carbon dioxide emissions and EPA's authority to do so); *id.* at 7-11 (explaining how atmospheric carbon dioxide is amassing at an accelerating pace, with enormous contributions from the electric sector). Any further delay would only compound this harm.

Fossil fuel-fired power plants are the nation's largest stationary source of greenhouse gas emissions, responsible for 25 percent of the U.S. total in 2021. 89 Fed. Reg. at 39,799. These emissions steadily increase atmospheric concentrations of greenhouse gases, overheating the planet and leading to more frequent and intense heat waves, increased ground-level ozone pollution, more intense hurricanes and other extreme weather events, rising seas, storm surges and flooding in coastal areas, and more intense and larger wildfires. *See generally id.* at 39,807-10.

Applicants falsely suggest that delaying the Rule's compliance deadlines would sacrifice no public health or environmental benefit, because the power sector is already reducing its carbon emissions. EEI 24; WV 38. But EPA projects that the Rule will reduce carbon emissions by *another* almost 1.4 billion metric tons between

2028 and 2047. 89 Fed. Reg. at 40,004. In 2035 alone, EPA estimates the Rule will reduce emissions by 123 million metric tons. *Id.* at 40,005 tbl.4.

Some applicants also observe, irrelevantly, that power plants are subject to limits on pollutants other than greenhouse gases, MOG 11, or that greenhouse gas regulations already apply to other sectors, WV 39. Neither form of regulation secures the Rule’s benefits. Similarly, state-level requirements will not achieve the Rule’s additional benefits, *contra* WV 39.

Applicants also suggest that staying the Rule during litigation will have no emissions or climate impacts, because compliance deadlines are still years away. WV 39, 40; OH 15; NACCO 34. That claim is wholly inconsistent with applicants’ own arguments. They claim that compliance work is needed *now* in order to meet the Rule’s future deadlines, and they seek a stay precisely in order to avoid that work (WV 31, EGST 27, NMA 4-5, NRECA 38)—and thus *not* meet the deadlines.

The claim that “postponing the applicability of this Rule by 2 to 3 years . . . cannot practically cause any damage,” EGST 34 n.6, is simply untrue. A stay that delays the Rule’s emission reductions means that hundreds of millions of additional tons of carbon dioxide will be irretrievably dumped into the atmosphere, where that pollution will remain, causing damage for hundreds of years. Accumulations will be higher every year thereafter relative to what they would have been if the Rule were timely implemented, because these gases build up in the atmosphere, increasing climate change’s harmful effects. *See* 89 Fed. Reg. at 39,808.

CONCLUSION

The applications for a stay should be denied.

DATE: August 19, 2024

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(with consent)

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