

United States Court of Appeals for the Fifth Circuit

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Fifth Circuit

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Lyle W. Cayce
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No. 17-60088

STATE OF TEXAS; TEXAS COMMISSION ON ENVIRONMENTAL
QUALITY; LUMINANT GENERATION COMPANY, L.L.C.; BIG
BROWN POWER COMPANY, L.L.C.; SANDOW POWER COMPANY,
L.L.C.; LUMINANT MINING COMPANY, L.L.C.,

Petitioners,

versus

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY;
MICHAEL S. REGAN, *in his official capacity as Administrator of the United
States Environmental Protection Agency,*

Respondents,

CONSOLIDATED WITH

No. 21-60673

STATE OF TEXAS; TEXAS COMMISSION ON ENVIRONMENTAL
QUALITY; LUMINANT GENERATION COMPANY, L.L.C.;
LUMINANT MINING COMPANY, L.L.C.,

Petitioners,

versus

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY;
MICHAEL S. REGAN, *Administrator, United States Environmental
Protection Agency*,

Respondents.

Petitions for Review of an Order of the
Environmental Protection Agency
EPA Nos. 81 Fed. Reg. 89,870;
86 Fed. Reg. 34,141; 86 Fed. Reg. 34,187

ON PETITION FOR REHEARING

Before ELROD, *Chief Judge*, and KING and SOUTHWICK, *Circuit Judges*.
LESLIE H. SOUTHWICK, *Circuit Judge*:

The petition for rehearing is GRANTED. We withdraw the prior opinion, 91 F.4th 280 (5th Cir. 2024), and substitute the following.

This case concerns the standards that the United States Environmental Protection Agency (“EPA”) must follow when reviewing attainment recommendations by the States in relation to the National Ambient Air Quality Standards (“NAAQS”). Relying exclusively on data submitted by Intervenor Sierra Club, EPA, in late 2016, designated two counties in Texas as nonattainment for purposes of the 2010 sulfur dioxide NAAQS. Afterwards, EPA twice changed course, perhaps reflecting how quadrennial elections have consequences.

The first course change occurred in 2019. EPA reported that the previous designation may have been in “error,” explained that the data available at the time may have been insufficient to establish the counties’ noncompliance with the NAAQS, and proposed to “correct” the mistake by redesignating the counties as unclassifiable after seeking comment from the public regarding the error. The second course change was in June 2021,

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when EPA withdrew the error-correction proposal and denied a request to reconsider.

The State of Texas and Luminant Generation Company, L.L.C., two parties adversely affected by the nonattainment designation, petition for review of the final EPA action. We GRANT the petitions for review.

STATUTORY BACKGROUND

Section 109 of the Clean Air Act (“CAA”) directs EPA to establish the NAAQS, which set maximum permissible concentrations of harmful air pollutants deemed to pose a risk to public health and safety. 42 U.S.C. §§ 7408–7409. Congress delegated authority to EPA to establish the particular limits for these “criteria pollutants.” § 7408; *National Lime Ass’n v. EPA*, 233 F.3d 625, 637 (D.C. Cir. 2000); *see generally* 40 C.F.R. pt. 50. Among the criteria pollutants is sulfur dioxide (“SO₂”), exposure to which can cause respiratory and cardiovascular illnesses. *See* Primary National Ambient Air Quality Standard for Sulfur Dioxide, 75 Fed. Reg. 35,520, 35,525–26 (June 22, 2010) (codified at 40 C.F.R. pts. 50, 53, 58).

“[A]s expeditiously as practicable, but in no case later than 2 years” from establishing or revising a NAAQS for a pollutant, EPA must designate regions of the United States as either in “attainment,” “nonattainment,” or “unclassifiable.” 42 U.S.C. § 7407(d)(1)(A), (d)(1)(B)(i). That “period may be extended for up to one year in the event the [EPA] has insufficient information to” make a designation. § 7407(d)(1)(B)(i). The States have a responsibility to recommend a designation, which EPA then reviews and modifies if it “deems necessary.” § 7407(d)(1)(A), (d)(1)(B)(ii). If EPA designates an area as “nonattainment,” the State must submit a state implementation plan (“SIP”) that includes measures to meet the new standard. § 7410(a)(2)(D), (a)(2)(I). Regarding SO₂, new standards must be met within five years. §§ 7514(a), 7514a(a).

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FACTUAL AND PROCEDURAL BACKGROUND

In 2010, EPA revised the NAAQS for SO₂ to 75 parts per billion (“ppb”), measured as a one-hour average. *See* Primary National Ambient Air Quality Standard for Sulfur Dioxide, 75 Fed. Reg. at 35,521.

Affected here are two lightly populated counties in east Texas: Rusk and Panola. Luminant Generation Company, L.L.C., owns and operates the Martin Lake power plant in Rusk County. That power plant is relevant because SO₂ is a natural byproduct of burning coal to generate electricity. The State of Texas must consider that source of SO₂ emissions in assessing whether Rusk and Panola Counties were in attainment for the new NAAQS.

The State set out to make its initial attainment recommendations. One difficulty was that infrastructure had not yet developed to allow reliable monitoring or modeling of SO₂ emissions. EPA issued a guidance document explaining its expectation that most areas would be designated as unclassifiable for lack of clear data, explaining: “Given the current limited network of SO₂ monitors, and our expectation that states will not yet have completed appropriate modeling of all significant SO₂ sources, we anticipate that most areas of the country will be designated ‘unclassifiable.’”

Consistent with this expectation, in June 2011, the State recommended that most counties be designated as unclassifiable, including Rusk and Panola Counties. EPA was required by statute to make final designations within two years after the revision of the NAAQS. 42 U.S.C. § 7407(d)(1)(B)(i). In July 2012, however, EPA extended this deadline to June 3, 2013, because there was “insufficient information to promulgate the designations” of the Counties. Extension of Deadline for Promulgating Designations for the 2010 Primary Sulfur Dioxide National Ambient Air Quality Standard, 77 Fed. Reg. 46,295, 46,297–98 (Aug. 3, 2012) (codified at 40 C.F.R. pt. 81). It further responded to the State’s February 2013

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recommendations and explained that its review “of the most recent monitored air quality data from 2009–2011 shows no violations of the 2010 SO₂ standard in any areas in Texas.”

EPA did not meet the June 3 deadline. In August 2013, EPA issued “Round 1” designations under the 2010 NAAQS, designating regions in 16 states. Air Quality Designations for the 2010 Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standard, 78 Fed. Reg. 47,191 (Aug. 5, 2013) (codified at 40 C.F.R. pt. 81). The Round 1 designations relied only on the available air quality monitoring data. *Id.* at 47,195. EPA stated it would continue to make designations “in separate future actions.” *Id.* at 47,193.

Sierra Club and the National Resources Defense Council sued EPA in the Northern District of California to compel EPA to complete designations for the rest of the country. They argued EPA failed to fulfill a nondiscretionary duty under the CAA. Texas and other States intervened to represent their interests in disputing any nonattainment designations, given that such a designation would create an obligation to develop a SIP. EPA did not contest liability. The district court granted summary judgment in favor of the plaintiffs and ordered the parties to confer on the proper remedy. Sierra Club and EPA entered into, and the district court approved, a consent decree that required EPA to issue final designations for regions with the largest sources of SO₂ by July 2, 2016. *See* Consent Decree, *Sierra Club v. McCarthy*, No. 3:13-CV-3953, 2015 WL 889142 (N.D. Cal. Mar. 2, 2015), ECF No. 163. The States appealed, presenting essentially the same arguments raised in the district court. The Ninth Circuit affirmed the entry of the consent decree, holding that the settlement was consistent with the CAA. *Sierra Club v. North Dakota*, 868 F.3d 1062, 1068 (9th Cir. 2017).

Before the Ninth Circuit decision, EPA developed its final designations under the new deadlines. In conjunction with the new schedule,

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EPA issued a regulation providing “a process and timetables” for the States to collect new data regarding SO₂ emissions. Data Requirements Rule for the 2010 1-Hour Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standard, 80 Fed. Reg. 51,052 (Aug. 21, 2015) (codified at 40 C.F.R. pt. 51). The Data Requirements Rule directed the States to furnish either monitoring or modeling data for SO₂ emissions for certain regions, which included Rusk and Panola Counties. *Id.* The States could either mechanically measure air concentrations using physical gas detectors — known as “monitoring” — or they could develop air dispersion programs to predict concentrations based on SO₂ emissions and weather patterns — known as “modeling.” *Id.* at 51,053–54.

In response, Texas submitted recommendations for area designations. Texas recommended that Rusk and Panola County be designated as either unclassifiable or in attainment and that data gathered from air quality monitors be used. Texas notified EPA in June 2016 that it elected to create such a monitoring network in Rusk County to measure emissions from the Martin Lake power plant. Sierra Club also submitted modeling that purported to show three facilities within these counties that established the areas were nonattainment. Sierra Club’s model predicted the SO₂ concentration within a fifty-kilometer radius of the Martin Lake power plant. The model projected a maximum concentration of 132.7 ppb, easily in excess of the 75-ppb limit established by the revised NAAQS. EPA subsequently issued a draft Technical Support Document that rejected Texas’s recommendations and stated it would instead rely upon Sierra Club’s modeling.

EPA proposed that 68 areas in 24 states would be included in the “Round 2” designations. *See* EPA Responses to Certain State Designation Recommendations for the 2010 Sulfur Dioxide National Ambient Air Quality Standard: Notice of Availability and Public Comment Period, 81 Fed. Reg.

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10,563, 10,563 (Mar. 1, 2016) (codified at 40 C.F.R. pt. 81). In this proposal, EPA designated Rusk and Panola Counties as nonattainment. Interested parties had 30 days to provide additional information before EPA made its final decision. *Id.* at 10,564. During the comment period, Luminant submitted its own modeling that purportedly showed Sierra Club's modeling overstated the impact of emissions for the three Texas areas due to errors and shortcomings.

In July 2016, EPA delivered its final-rulemaking designations for 61 areas. Round 2 Air Quality Designations for the 2010 Sulfur Dioxide Standard, 81 Fed. Reg. 45,039, 45,040–41 (July 12, 2016) (codified at 40 C.F.R. pt. 81). Pursuant to an agreed modification to the consent decree, EPA delayed issuing the Round 2 designations for the four remaining areas in Texas. *See* Joint Notice of Stipulated Extension of Consent Decree Deadline, *Sierra Club*, No. 3:13-cv-3953 (N.D. Cal. Oct. 28, 2016), ECF No. 180.

In December 2016, EPA issued a “Supplement to Round 2 for Four Areas in Texas” making designations for the areas surrounding the Big Brown, Martin Lake, Monticello, and Sandow power plants. 81 Fed. Reg. 89,870, 89,871, 89,873 (Dec. 13, 2016) (codified at 40 C.F.R. pt. 81). Contrary to Texas's recommendations and after providing the required notice to Texas, EPA designated three of the areas as “nonattainment.” *Id.* at 89,875. Those areas included portions of: (1) Freestone and Anderson Counties; (2) Rusk and Panola Counties; and (3) Titus County. *Id.* EPA acknowledged Petitioners' objections, but it explained that it relied upon the modeling submitted by Sierra Club in making these determinations, despite recognizing its “potential defects.” U.S. Environmental Protection Agency, Responses to Significant Comments on the Designation Recommendations for the 2010 Sulfur Dioxide National Ambient Air Quality Standards (NAAQS), at 17 (Nov. 29, 2016); U.S. Environmental Protection Agency,

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Technical Support Document for Supplemental Designations — Four Areas in Texas, at 61, 75 (Nov. 29, 2016).

During the March 2016 comment period, Sierra Club re-submitted its modeling data with certain adjustments. In addition, Luminant submitted its own modeling analysis respecting Rusk and Panola Counties. In doing so, Luminant made alterations to EPA’s preferred air-dispersion model, called AERMOD. The alterations were designed to account for the site-specific conditions that Petitioners contend should have been addressed by Sierra Club’s model. Among other things, Luminant’s model utilized two peer-reviewed modeling refinements, called AERLIFT and AERMOIST. Luminant’s model predicted a SO₂ concentration in Rusk and Panola Counties less than the 75-ppb legal limit.

EPA declined to consider Luminant’s model because it “did not conform to [EPA] guidance.” Technical Support Document for Supplemental Designations at 33. EPA assessed whether the adjustments might affect the model and admitted that “the impacts they would have on the modeling are very significant.” *Id.* at 34; *see also id.* at 35 (noting that “the scientific principles seem like these might be refinements”). Even so, EPA concluded it could not credit the changes without a “full review.” *Id.* at 35. The agency referred Luminant to its regulatory procedure for reviewing new air dispersion models, codified at 40 C.F.R. Part 51 Appendix W, and observed that a “full review . . . has not yet occurred for AERLIFT or AERMOIST.” *Id.* Given the lack of agency review of Luminant’s new model, EPA stated, “the validity of the models and resulting concentrations is not known.” Responses to Significant Comments at 36. Finally, the agency contended Luminant’s model might be inaccurate because it relied in part on “reduced emission rates” and “efficiency improvements” not included within the company’s current air permit. Technical Support Document for Supplemental Designations at 55–56.

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EPA finalized its December 2016 proposal, designating Rusk and Panola Counties as nonattainment. Supplement to Round 2 for Four Areas in Texas, 81 Fed. Reg. at 89,873. After EPA promulgated its final designations, Petitioners filed their first petition for review to this court and administrative petitions for reconsideration with EPA regarding the three nonattainment designations. EPA moved to transfer the petition for review to the D.C. Circuit pursuant to 42 U.S.C. § 7607(b)(1). We denied the motion to transfer, explaining that the petition concerned only several counties in Texas and was not the sort of nationwide dispute that mandated venue in Washington, D.C. *Texas v. EPA*, 706 F. App'x 159, 161 (5th Cir. 2017).

In September 2017, EPA sent a letter in response to Luminant's reconsideration petition, stating that "[a]fter review of the information contained in your petition, we intend to undertake an administrative action with notice and comment to revisit the nonattainment designations for the portions of . . . Rusk and Panola Counties." U.S. Environmental Protection Agency, Response to Petition for Reconsideration and Administrative Stay to Vista Energy, at 1 (Sept. 21, 2017). We granted EPA's motion to place the petition for review in abeyance because further administrative proceedings might moot the controversy.

While the reconsideration process was underway, the nonattainment designations remained in effect. *Id.* In December 2017, Texas also submitted a reconsideration petition, and Luminant submitted additional information explaining that Luminant intended to close the power plants in Titus and Freestone/Anderson Counties. Petitioners proposed that EPA change the designation surrounding the Martin Lake power plant in Rusk and Panola Counties to "unclassifiable" for three years to allow for a newly installed monitor to collect data.

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In August 2019, EPA issued a proposed “Error Correction of the Area Designations” for the three areas designated as nonattainment. 84 Fed. Reg. 43,757 (Aug. 22, 2019) (codified at 40 C.F.R. pt. 81). EPA advanced these corrections for two primary reasons. First, EPA suggested it had erred by “failing to give greater weight to the preference of the state to monitor air quality” pursuant to the Data Requirements Rule. *Id.* at 43,761. Second, EPA suggested it erred by relying on Sierra Club’s modeling when it contained “key limitations and uncertainties.” *Id.* The “purpose of this [Proposed Error Correction was] to solicit input from the public on EPA’s error in designating portions of Freestone and Anderson Counties, Rusk and Panola Counties, and Titus County as nonattainment, and the corrected designations of unclassifiable.” *Id.* at 43,762.¹ In response, Sierra Club submitted updated modeling that supported EPA’s 2016 nonattainment designations of the Counties.

In June 2021, EPA informed Petitioners that it was denying their reconsideration petitions, detailing the governing standards and the reasons for the denial. EPA then published notice of its denials. *See* Air Quality Designations for the 2010 1-Hour SO₂ NAAQS: Responses to Petitions for Reconsideration and Administrative Stay of the Designations for Portions of Freestone and Anderson Counties, Rusk and Panola Counties, and Titus County in Texas, 86 Fed. Reg. 34,141 (June 29, 2021) (codified at 40 C.F.R. pt. 81). EPA also published a notice withdrawing its Proposed Error Correction. *See* Error Correction of the Area Designations for the 2010 1-Hour Sulfur Dioxide (SO₂) Primary National Ambient Air Quality Standard

¹ In May 2021, EPA issued Clean Data Determinations for Freestone/Anderson and Titus counties, finding that due to the retirement of the power plants in those areas, each was now attaining the 2010 SO₂ NAAQS. Air Plan Approval, 86 Fed. Reg. 26,401 (May 14, 2021) (codified at 40 C.F.R. pt. 52).

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(NAAQS) in Freestone and Anderson Counties, Rusk and Panola Counties, and Titus County in Texas, 86 Fed. Reg. 34,187 (June 29, 2021) (codified at 40 C.F.R. pt. 81).

EPA provided an evaluation of Sierra Club’s modeling with its denials of the petitions for reconsideration. In its withdrawal of the Proposed Error Correction, EPA stated the Sierra Club’s updated 2019 model “addressed all aspects of the March 2016 modeling that the EPA had identified . . . as a limitation or uncertainty.” *Id.* at 34,188. EPA further contended that it was impossible to “giv[e] greater weight” to the State’s decision to establish a monitoring network in Rusk County because its court-ordered deadline to make initial designations — July 2016 — came before the State could install the SO₂ monitors. *Id.* Indeed, EPA asserted it lacked legal authority to defer to a State’s future collection of monitoring data. *See id.* at 34,188–89 (“[T]he EPA does not interpret the [CAA] as allowing the EPA to consider future air quality in the initial designations process . . .”). In a separate letter to the State, EPA explained its position as follows:

[A]t the time of the final designations, the agency did not have the discretion to await the results of 3 years of ambient air monitoring data (*i.e.*, 2018–2020) from Texas’s proposed (but not yet established) monitoring sites before taking final action due to the [consent decree with Sierra Club] to designate certain areas in Texas.

U.S. Environmental Protection Agency, Petition Denial Letter, Enclosure 1, at 11 (June 10, 2021).

Petitioners filed a petition in this court for review of the administrative orders that withdrew the proposed error correction and denied the reconsideration petitions. That action was consolidated with the prior petition seeking review of EPA’s designation of Rusk and Panola counties as nonattainment.

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DISCUSSION

Petitioners argue that EPA’s nonattainment designation should be vacated for three reasons. First, they argue EPA’s designation of portions of Rusk and Panola counties as not attaining air quality standards for SO₂ violates the CAA because the evidence available at the time showed attainment. Second, they argue EPA acted unlawfully because it treated similarly situated counties in other States differently than Rusk and Panola counties. Third, they argue EPA misconceived the law and its legal authority in issuing the designation and denying Petitioners’ petitions for reconsideration because EPA erroneously believed it did not have the legal authority to delay classification until the State gathered monitoring data.

The Administrative Procedure Act (“APA”) requires a reviewing court to “hold unlawful and set aside agency action[s]” that are “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2). In determining whether agency action is “arbitrary” or “capricious,” a reviewing court must “insist that an agency ‘examine the relevant data and articulate a satisfactory explanation for its action.’” *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 513 (2009) (quoting *Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983)). In doing so, a reviewing court does not “substitute [its] judgment for that of the agency,” *Clean Water Action v. EPA*, 936 F.3d 308, 316 (5th Cir. 2019), and instead “simply ensures that the agency has acted within a zone of reasonableness,” *FCC v. Prometheus Radio Project*, 592 U.S. 414, 423 (2021). The reviewing court “may not supply a reasoned basis for the agency’s action that the agency itself has not given.” *State Farm*, 463 U.S. at 43 (quoting *SEC v. Chenery Corp.*, 332 U.S. 194, 196 (1947)).

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I. The Counties' Nonattainment Designation

This petition for review requires us to interpret the relevant statute and to apply arbitrary and capricious review to the EPA decision. We begin with the statute.

A. Interpretation of the Statute

The CAA identifies an “unclassifiable” area as “any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.” 42 U.S.C. § 7407(d)(1)(A)(iii). In 2015, EPA issued guidance as part of a consent decree in California litigation that was to be applied nationwide. Petitioners rely on that guidance to insist that this provision requires designation of an area as unclassifiable when “the information at the time of designation does not *clearly demonstrate* that the area is in attainment or nonattainment.”² “Clearly demonstrate” was part of the 2015 guidance, and no replacement guidance was entered relevant to the suit before us. Petitioners argue that due to the existence of conflicting data in the record, the information could not have clearly demonstrated nonattainment. They therefore contend EPA’s nonattainment designation for portions of Panola and Rusk counties violated the statute.

² A guidance document can bind an agency “if it either appears on its face to be binding[] or is applied by the agency in a way that indicates it is binding.” *Texas v. EEOC*, 933 F.3d 433, 441 (5th Cir. 2019) (alteration in original) (quoting *Texas v. United States*, 809 F.3d 134, 171 (5th Cir. 2015), *aff’d by an equally divided court*, 579 U.S. 547, 548 (2016)); *see also Fort Bend County v. U.S. Army Corps of Eng’rs.*, 59 F.4th 180, 200 (5th Cir. 2023). Whether the prior guidance is binding makes little difference here because, as explained below, we interpret “unclassifiable” in a way that is not meaningfully distinguishable from “clearly demonstrating a designation.” Whether the guidance was binding therefore does not affect our resolution of this case.

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We examine the statute that needs interpreting — Section 7407(d)(1)(A)(iii). We “exercise independent judgment in construing statutes administered by agencies” and “in deciding whether an agency has acted within its statutory authority.” *Loper Bright Enters. v. Raimondo*, 603 U.S. 369, 406, 412 (2024). This requires the use of “‘all relevant interpretive tools’ to determine the ‘best’ reading of a statute; a merely ‘permissible’ reading is not enough.” *Mayfield v. U.S. Dep’t of Lab.*, 117 F.4th 611, 617 (5th Cir. 2024) (quoting *Loper Bright*, 603 U.S. at 400).

To be clear, discarding *Chevron* deference does not mean ignoring agency interpretations. The Supreme Court discussed in considerable detail its 1944 precedent that to a large but not complete extent *Chevron* displaced in 1984. *Loper Bright*, 603 U.S. at 388 (discussing *Skidmore v. Swift & Co.*, 323 U.S. 134 (1944)). The *Loper Bright* Court agreed with *Skidmore* that an agency’s “expertise has always been one of the factors which may give an Executive Branch interpretation particular ‘power to persuade, if lacking power to control.’” *Id.* at 402 (quoting *Skidmore*, 323 U.S. at 140). It is not necessary to give *Chevron* deference in order “to ensure that the resolution of statutory ambiguities is well informed by [an agency’s] subject matter expertise. . . . Congress expects courts to do their ordinary job of interpreting statutes, *with due respect* for the views of the Executive Branch.” *Id.* at 402–03 (emphasis added). The degree of respect, *i.e.*, the weight to be given an agency’s interpretation, will “depend upon the thoroughness evident in its consideration, the validity of its reasoning, its consistency with earlier and later pronouncements, and all those factors which give it power to persuade, if lacking power to control.” *Id.* at 388 (quoting *Skidmore*, 323 U.S. at 140).

One final preliminary point. If “the best reading of a statute is that it delegates discretionary authority to an agency,” then our role under the APA is “to independently identify and respect such delegations of authority, police the outer statutory boundaries of those delegations, and ensure that

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agencies exercise their discretion consistent with the APA.” *Loper Bright*, 603 U.S. at 395, 404.

Our analysis “begin[s] with the language employed by Congress and the assumption that the ordinary meaning of that language accurately expresses the legislative purpose.” *Gross v. FBL Fin. Servs., Inc.*, 557 U.S. 167, 175 (2009) (quoting *Engine Mfrs. Ass’n v. S. Coast Air Quality Mgmt. Dist.*, 541 U.S. 246, 252 (2004)). We repeat that, under Section 7407(d)(1)(A)(iii), an area is to be labeled “unclassifiable” when it “cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.” 42 U.S.C. § 7407(d)(1)(A)(iii). To “classify” ordinarily means “to arrange in classes” or “to consider (someone or something) as belonging to a particular group.” *Classify*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/classify> (last visited May 14, 2025). A standard definition of “available” is to be “present or ready for immediate use.” *Available*, MERRIAM-WEBSTER, <https://www.merriam-webster.com/dictionary/available> (last visited May 14, 2025). A legal dictionary defines “available” to mean “[l]egally valid or colorable.” *Available*, BLACK’S LAW DICTIONARY (12th ed. 2024). “Meet” has several definitions, including “[t]o come into conformity” or “to satisfy or comply with.” *Meet*, BLACK’S LAW DICTIONARY (12th ed. 2024).

In addition, we cannot read subsection (iii) in isolation; “[i]t is a fundamental canon of statutory construction that the words of a statute must be read in their context and with a view to their place in the overall statutory scheme.” *Davis v. Mich. Dep’t of Treasury*, 489 U.S. 803, 809 (1989). “The construction of statutory language often turns on context, which certainly may include the definitions of related words.” *FCC v. AT & T Inc.*, 562 U.S. 397, 404 (2011) (citation omitted). Section 7407(d)(1)(A) provides:

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By such date as the Administrator may reasonably require, but not later than 1 year after promulgation of a new or revised national ambient air quality standard for any pollutant under section 7409 of this title, the Governor of each State shall (and at any other time the Governor of a State deems appropriate the Governor may) submit to the Administrator a list of all areas (or portions thereof) in the State, designating as—

- (i) nonattainment, any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant,
- (ii) attainment, any area (other than an area identified in clause (i)) that meets the national primary or secondary ambient air quality standard for the pollutant, or
- (iii) unclassifiable, any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

We next consider the meaning EPA gave to the section on unclassifiable areas. EPA argued it must “assess all available information and apply an unclassifiable designation only when EPA lacks the information to make a reasoned technical determination regarding air quality status at that time.” In its initial briefing in this court, EPA also argued what “unclassifiable” does not mean, *e.g.*, that there are competing models when those models are “unrepresentative” or unreliable; or that no designation can be made if a party promises to provide more data from future “monitoring sites or by subjectively concluding that there are competing views of the data.” EPA posits that “available information,” expressed in the present tense, means the information currently before the agency, a position this court endorsed in *Texas v. EPA*, 983 F.3d 826, 838 (5th Cir. 2020). Further, EPA argues that it can declare an end to the time for

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submitting evidence and need not wait for more data, a point another circuit court endorsed. *Mississippi Comm’n on Env’t Quality v. EPA*, 790 F.3d 138, 156–58 (D.C. Cir. 2015).

Finally, before making our own analysis, we examine Petitioners’ arguments about the statutory language. Prior to *Loper Bright*, Petitioners introduced their arguments this way: “EPA’s nonattainment designation for Rusk and Panola Counties is in direct conflict with the plain language of the Clean Air Act and EPA’s own guidance and precedent.” In its original brief here, Petitioners identified three ways in which EPA erred, but none were that EPA was incorrectly interpreting the statutory language; instead, the arguments were that EPA ignored some of the evidence and relied too much on modeling data that EPA itself found had errors. The brief then detailed the various ways in which “EPA ignored the plain statutory language” and the “available” information. The only argument related to statutory interpretation was that EPA had improperly abandoned the guidance that the evidence must *clearly demonstrate* a designation as attainment or nonattainment or unclassifiable would be the result. The argument was not about the best statutory interpretation but on EPA’s unexplained change of position

Having set out the agency’s interpretation, we follow the Supreme Court’s requirement that we determine the best meaning of statutory language. *Loper Bright*, 603 U.S. at 400. Reading the three subparts of Section 7407(d)(1)(A) as a comprehensive explanation of the determinations EPA can make, we conclude that the best reading of this language is that Congress insisted on a finding of “we don’t know” when the “available information” does not reliably support a finding of attainment or nonattainment. A finding is not to be forced. The mere presence of competing evidence does not bar factfinding, of course. Among the ways for EPA to know that an area should be unclassifiable is when there is not much

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evidence, when the competing evidence is too closely balanced, or when the evidence is dubious. To put it more generally, EPA is obligated to designate an area as “unclassifiable” if the available evidence does not allow for a meaningfully reliable determination of attainment or nonattainment. Does that mean that the evidence must “clearly demonstrate” attainment or nonattainment, a descriptive phrase EPA no longer endorses? We do not see much daylight between our interpretation and that phrase. Consequently, we need not explore questions about whether the guidance was improperly abandoned without notice to affected parties or other issues related to an agency’s changing its position.

Is this different from EPA’s interpretation? The one evident difference is that we accept a need for greater clarity than EPA is currently expressing by its abandoning the “clearly demonstrates” phrase. Indeed, we consider our interpretation to be giving due respect to EPA inasmuch as its own interpretation once included “clearly demonstrates.”

We will need to consider how EPA applied its understanding of the statute before deciding if reversible error arose. EPA has an obligation to “examine the relevant data and articulate a satisfactory explanation for its action.” *Fox*, 556 U.S. at 513 (quoting *State Farm*, 463 U.S. at 43). It must weigh evidence and determine if some evidence is reliable while other evidence is not. It is not possible to interpret *Loper Bright* as discarding deferential review of agency *factfinding*. The Supreme Court relied extensively on the provisions of the APA in its *Loper Bright* opinion. The Court distinguished a court’s deferential standard for reviewing findings of fact under the APA from the absence of deference for legal conclusions, stating that the APA

prescribes no deferential standard for courts to employ in answering those legal questions. That omission is telling, because Section 706 *does* mandate that judicial review of agency

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policymaking and factfinding be deferential. *See* [5 U.S.C.] § 706(2)(A) (agency action to be set aside if “arbitrary, capricious, [or] an abuse of discretion”); § 706(2)(E) (agency factfinding in formal proceedings to be set aside if “unsupported by substantial evidence”).

Loper Bright, 603 U.S. at 392 (second alteration in original).

Against that backdrop, we turn to EPA’s evaluation of the evidence in making its nonattainment designation to determine whether EPA acted arbitrarily, capriciously, or otherwise unlawfully.

B. Evaluation of the Evidence

Petitioners assert that EPA’s designation of portions of Rusk and Panola counties as not attaining ambient air quality standards for SO₂ was arbitrary, capricious, or unlawful because EPA (1) ignored monitoring data purportedly showing attainment, (2) refused to consider Luminant’s modeling even though it was obligated to select the best modeling, and (3) based its decision on Sierra Club’s modeling, despite its limitations and uncertainties. We address the arguments in that order.

1. Monitoring Data

Petitioners argue that EPA did not give due consideration to air quality monitoring data from the Longview airport in Gregg County that showed actual SO₂ levels below the NAAQS. They contend this data was relevant because it was within the 50-mile radius of the modeling submitted by Sierra Club, and that it should have been used to validate Sierra Club’s modeling results, which “predicted values *more than double* what the monitor actually registered” for the same location. Petitioners argue this disparity undermines the reliability of Sierra Club’s model.

EPA maintains that it considered the monitoring data but concluded it “was too far from Martin Lake to be of any use,” and was not in the area

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expected to receive the highest impact or be representative of SO₂ emissions from the Martin Lake facility. EPA asserts that the fact the monitor is within the radius of Sierra Club's modeling is meaningless because the monitoring data was still not probative of SO₂ concentrations nearest the source, where concentrations are the greatest. EPA explains that a certain radial distance "just represents the reach of a given *model*. It has nothing to do with the ability of a single *monitor* to assess" SO₂ concentrations 19 kilometers away from its physical location. EPA concluded that "the absence of a violating monitor when considering the distance from the facility [was] not a sufficient technical justification to rule out that an exceedance of the 2010 SO₂ NAAQS may occur in the immediate vicinity of the facility."

Sierra Club adds that the "one version" of its modeling showing SO₂ concentrations exceeding monitored values (September 2015 modeling) was not the modeling EPA relied upon in making its final nonattainment determination (March 2016 modeling). Moreover, the Sierra Club modeling relied upon by EPA showed SO₂ concentrations exceeding acceptable values near the Martin Lake facility but not near the Longview monitor. This is because SO₂ concentrations are highest closer to the combustion source, and the assessment of a monitor located away from that source, like the Longview monitor, would result in a lower reading, unrepresentative of concentrations at the facility location.³

"While courts routinely defer to agency modeling of complex phenomena, model assumptions must have a 'rational relationship' to the real world." *Appalachian Power Co. v. EPA*, 249 F.3d 1032, 1053 (D.C. Cir.

³ Petitioners' response to this point is that neither EPA nor Sierra Club argue that the 2016 version of Sierra Club's modeling did not also overstate SO₂ concentrations at the Longview monitor. As Petitioners put it, "[e]ither Sierra Club (like EPA) has not bothered to look, or it does not like the answer."

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2001) (quoting *Chemical Mfrs. Ass’n v. EPA*, 28 F.3d 1259, 1265 (D.C. Cir. 1994)). An agency must “‘explain[] the assumptions and methodology used in preparing the model’ and ‘provide[] a complete analytic defense’ should the model be challenged.” *Id.* at 1052 (quoting *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 535 (D.C. Cir. 1983)). A “failure to address or reconcile” conflicting data can “create an ‘unexplained inconsistenc[y]’ in the rulemaking record.” *Sierra Club v. EPA*, 939 F.3d 649, 668 (5th Cir. 2019) (alteration in original) (quoting *U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 651 (D.C. Cir. 2016)).

Sierra Club’s modeling and EPA’s Longview monitor showed conflicting results for SO₂ concentrations near the airport. Sierra Club’s 2015 model predicted SO₂ concentrations at the Longview airport to be “75 to 145 ppb,” but EPA’s air quality monitor registered 50 ppb for that same location. EPA did not investigate the reason for the disparity between the model’s predictions and the monitor’s results. Instead, EPA explained the distance from the monitor to the power plant was too great to rule out the possibility that Rusk and Panola Counties were in nonattainment. Even so, that does not explain why the model and the monitor showed vastly different results for the same location — the area around the Longview airport. If the model could not accurately predict SO₂ concentrations in that location, we have no basis to believe it could accurately predict SO₂ concentrations at the Martin Lake power plant. EPA needed to account for this limitation, but it failed to do so. EPA’s failure to reconcile the inconsistencies between Sierra Club’s modeling and the monitoring data created an unexplained inconsistency. *See Sierra Club*, 939 F.3d at 668.

EPA’s argument that it relied on the 2016 instead of the 2015 modeling does not change the result. Sierra Club’s 2016 model used actual emissions instead of allowable emissions and predicted a concentration at the Longview airport monitor less than the value predicted by the 2015 model.

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As previously stated, however, EPA did not investigate or explain the reason for the disparity between the 2015 model and the monitoring data. We therefore cannot assess whether a switch to actual emissions resolved the problem that originally caused the deviation. Because we “cannot excuse the EPA’s reliance upon a methodology that generates apparently arbitrary results,” we remand for EPA to “fulfill its obligation to engage in *reasoned* decisionmaking.” *Appalachian Power Co. v. EPA*, 251 F.3d 1026, 1035 (D.C. Cir. 2001).

We address Petitioners’ other arguments because our resolution of those issues will be relevant on remand.

2. Luminant’s Model

Petitioners argue that EPA erred by failing to give any weight to Luminant’s model submitted during the public comment period. In Petitioners’ view, EPA was required by its own regulations to assess the validity of Luminant’s model before disregarding it in favor of Sierra Club’s model. By failing to follow its own regulations, and thereby relying on that failure to designate Rusk and Panola counties as not attaining air quality standards for SO₂, Petitioners argue that EPA acted unlawfully.

EPA responds with two arguments. First, Petitioners’ explanation of the modeling approval process “wholly mischaracterizes” the regulations EPA allegedly failed to follow. Second, EPA analyzed Luminant’s modeling and rejected it because it

- (a) improperly relied on unenforceable forecasted lower emissions, such as improving scrubber efficiency and fuel switches, instead of current actual higher emissions;
- (b) improperly assumed collateral reductions of SO₂ that Petitioners predicted would result from future restrictions on mercury emissions;
- (c) used unapproved model pre-processors AERLIFT and AERMOIST to adjust the measured stack

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temperatures and velocities to greatly enhance plume rise, even for instances when Luminant's phenomena theory indicated no adjustments should have been made and without demonstrating that such adjustments were appropriate at this facility, all of which likely resulted in large unsubstantiated changes in modeled concentrations compared to use of the measured data with the regulatory version of the model; and (d) misapplied meteorological dispersion and used unsubstantiated adjustments to wind speeds and direction (using unapproved and insufficiently supported beta options) that impacts air transport and generally lowers concentrations.

Sierra Club argues that EPA's regulations required Petitioners to seek approval of their alternative modeling before its use, the necessity of which was made clear by EPA, and that Petitioners conceded they had not initiated or completed the Appendix W process. *See* 40 C.F.R. pt. 51, app. W. §§ 3.2.1a, 3.2.2b. Sierra Club also emphasizes that EPA "devoted nearly 20 pages of its Response to Comments" and Technical Support Documents to provide "a detailed, highly technical response to Luminant's arguments." Sierra Club avers that EPA acknowledged there was evidence to support Luminant's theory that Sierra Club's model overestimated SO₂ concentrations.

We start with the regulation. The Guideline on Air Quality Models "provides a common basis for estimating the air quality concentrations of criteria pollutants used in assessing control strategies and developing emissions limits." 40 C.F.R. pt. 51, app. W (preface). The Guideline provides recommendations "concerning air quality models and techniques, model evaluation procedures, and model input databases and related requirements" and "should be followed in air quality analyses" related to the CAA. § 1.0.e. Though "the model or technique applied to a given situation should be the one that provides the most accurate representation of atmospheric transport, dispersion, and chemical transformations," the

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Guideline is also clear that “deviations from the Guideline should be carefully documented as part of the public record and fully supported by the appropriate reviewing authority”, *id.*, to “promote consistency in model selection and application,” § 3.0.d.

Section 3 of the Guideline “specifies the approach to be taken in determining preferred models for use in regulatory air quality programs.” § 3.0.a. Relevant here, “[t]he section . . . provides the criteria and process for obtaining EPA approval for use of alternative models for individual cases.” *Id.* “If a model is required for a particular application, *the user* must . . . follow procedures in section 3.2.2 for use of an alternative model or technique.” § 3.1.2.a (emphasis added). At that point, “[d]etermination of acceptability of an alternative model is an EPA Regional office responsibility in consultation with the EPA’s Model Clearinghouse.” § 3.2.2.a. An alternative model must “be evaluated from both a theoretical and a performance perspective before it is selected for use.” § 3.2.2.b; *see also* § 3.1.2.a. The Guideline then lists three conditions that an alternative model must satisfy before it can be approved by EPA. *See* § 3.2.2.b.i–iii.

The Guideline provides that “the user” must follow the relevant procedures. § 3.1.2. The parties disagree as to whom the “user” refers to for purposes of completing this process. Petitioners argue that EPA needed “to assess and select the appropriate modeling approach for its regulatory actions” but “shift[ed] the burden to Luminant to comply with EPA’s review process.” EPA argues that Petitioners were the ones with those obligations. Although the Guideline states that it “is intended for use by the EPA Regional offices in judging the adequacy of modeling analyses performed by the EPA, by State, local, and Tribal permitting authorities, and by industry,” it also states that “[t]he Guideline serves to identify, for all interested parties, those modeling techniques and databases that the EPA considers acceptable.” § 1.0.a. As employed elsewhere in the regulation, the

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word “user” invariably refers to the entity performing the analyses and referencing the Guideline.⁴

Given the parties’ dispute regarding the meaning of “the user,” we consider (1) whether the regulation is genuinely ambiguous, and if so, (2) whether EPA’s interpretation is entitled to *Auer* deference because it is the agency’s reasonable reading of its own genuinely ambiguous regulations. *Auer v. Robbins*, 519 U.S. 452, 461 (1997). The Supreme Court clarified *Auer* deference in *Kisor v. Wilkie*, 588 U.S. 558 (2019). It explained that *Auer* deference does not apply “unless the regulation is genuinely ambiguous.” *Id.* at 574. “[I]f the law gives an answer — if there is only one reasonable construction of a regulation — then a court has no business deferring to any other reading.” *Id.* at 575. “[B]efore concluding that a rule is genuinely ambiguous, a court must exhaust all the ‘traditional tools’ of construction,” including careful consideration of “the text, structure, history, and purpose of a regulation.” *Id.* If the regulation remains ambiguous, the agency’s interpretation will be upheld if it is reasonable. *Id.* at 575–76.

We conclude there is no genuine ambiguity regarding “the user.” It is the party performing the analysis, *i.e.*, Luminant here. As we will explain, reading 3.2.1 and 3.2.2 together to classify EPA as a “user” is a distortion of the text, structure, and context of the regulation.

We start with Section 3.1.2(a). It provides, “[i]f a model is required for a particular application, the user must select a model from Addendum A or follow procedures in section 3.2.2 for use of an alternative model or technique.” 40 C.F.R. pt. 51 app. W § 3.1.2(a). Under Petitioners’ view, EPA is the one that must “follow the procedures in section 3.2.2 for use of

⁴ The phrase “the user” appears eight times in the Guideline. 40 C.F.R. pt. 51, app. W §§ 3.1.2.a, 4.2.1.3.b, 4.2.1.3.c, 7.2.1.1.d, 8.0.a, 8.2.2.e, 8.4.4.2.b.i.

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an alternative model or technique.” The sentence structure alone makes that argument unreasonable. It is evident that “the user” for purposes of “select[ing] a model from Addendum A” refers only to the applicant. “User” is the implied subject of the rest of the sentence — the part containing the alternative requirement to “follow procedures in section 3.2.2 for use of an alternative model or technique.” *See id.* The “user” must be the same for both. Indeed, it would be unnatural to read “user” as referring to the applicant in the first instance but EPA in the second. EPA would not be selecting an alternative model; that is for the applicant.

The only reasonable reading is that the “user” refers to the applicant and this provision requires the applicant either to select a model from Appendix A or be subject to the requirements in 3.2.2 if it decides to offer an alternative model.

There is more to examine, of course. Section 3.2.2 is lengthy. One reference to EPA is in its first subsection: “[d]etermination of acceptability of an alternative model is an EPA Regional office responsibility in consultation with the EPA’s Model Clearinghouse.” § 3.2.2(a). Again, an “alternative model” is one offered by the applicant after not choosing one from Addendum A. *See* § 3.1.2(a). This section details what EPA is to consider when an applicant submits an alternative model and what the applicant’s alternative model needs to show. § 3.2.2(a)–(b). The applicant is the user who has chosen an alternative model, and EPA is the one responsible for analyzing the model.

Our reading of “user” comports with how the word is employed elsewhere in the Guideline. Indeed, each instance of the word “user,” including that in Section 3.1.2, refers to an entity apart from EPA in the context of steps the entity should take in selecting data, models, locations, etc., and in the context of the manuals and guides supplied for entities to

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describe model requirements and techniques. *See* §§ 3.1.2, 4.2.1.3.b, 4.2.1.3.c, 7.2.1.1.d, 8.0.a, 8.2.2.e, 8.4.4.2.b.i.⁵ In addition, a previous version of the Guideline distinguishes between the “user” and the EPA Regional Office: “Model users may refer to guidance for further details concerning appropriate modeling approaches.” 40 C.F.R. pt. 51, app. W § 5.1.e (2005) (footnote omitted); *see also* § 5.2.e. Such a reading also serves the purpose of ensuring “consistency and encourage[s] the standardization of model applications,” because it promotes the use of models already approved by EPA. *See* 40 C.F.R. pt. 51, app. W (2017) (preface).

The text and structure of a regulation is where the search for meaning begins. *Kisor*, 588 U.S. at 575–76, 589. In this instance, because we find no ambiguity, the search also ends there. EPA is not a “user” under the relevant regulation. It therefore did not act unlawfully in failing to consider the user Luminant’s model that was not approved “before it [was] selected for use” by Luminant. 40 C.F.R. pt. 51, app. W § 3.2.2.b.⁶

Petitioners also suggest that EPA acted arbitrarily and capriciously when it failed to evaluate Luminant’s model because it did “not know[]” if Luminant’s analysis was accurate or not. To the contrary, EPA considered Luminant’s modeling and rejected it on several grounds, including its failure to comply with EPA’s Model Technical Advisory Document.

⁵ It is also consistent with EPA’s interpretation of this regulation elsewhere. *See, e.g.*, Memorandum, Clarification on the Approval Process for Regulatory Application of the AERMOD Modeling System Beta Options (Dec. 10, 2015), *available at* https://www.epa.gov/sites/default/files/2020-10/documents/aermod_beta_options_memo-20151210.pdf.

⁶ Petitioners argue that EPA “points to nothing in the regulations that requires a third party to make such a submission” and boldly states, “there is none,” while completely neglecting Sierra Club’s argument.

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EPA assessed the validity of Luminant's modeling in detail when it rejected the model. EPA stated that the model used by Luminant's contractor made large adjustments to the normal algorithms and were "not consistent with the theory of how the adjustments should be implemented." The modeling enhancements used in Luminant's model were found by EPA to be "disproportionately large" and "very significant." There was no information provided to establish that the modeling results met the requirements to be used in a regulatory decision, and a proposed option utilized by the Luminant model has not been approved for EPA regulatory use. "EPA believe[d] that the particular implementations of [Luminant's model] need[ed] to undergo extensive review" before being used in a regulatory setting because of the inconsistencies with other acceptable models. EPA determined that Luminant's model could not be relied on for designations, making it insufficient.

EPA cited many reasons for its decision to reject Luminant's model, reasons that are not accurately categorized as offering "barely any explanation" for its determination. *Encino Motorcars, LLC v. Navarro*, 579 U.S. 211, 222 (2016). Instead, EPA "adequately and reasonably justified its decision not to consider" Luminant's model. *Hispanic Affs. Project v. Acosta*, 901 F.3d 378, 392 (D.C. Cir. 2018) (quoting *Association of Oil Pipe Lines v. FERC*, 876 F.3d 336, 342 (D.C. Cir. 2017)). EPA therefore did not act arbitrarily, capriciously, or otherwise unlawfully in rejecting Luminant's model. A contrary conclusion would put a high burden on EPA to evaluate every model submitted during the comment period, where the party submitting the model did not seek approval of the model prior to its use, and it would frustrate the purpose of standardizing the model procedures. See 40 C.F.R. pt. 51, app. W (preface). We nevertheless remand for reasons explained in the prior section and the next section.

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3. *Model Limitations*

Petitioners argue EPA acted arbitrarily and capriciously by relying on Sierra Club's modeling, despite its conclusion that the modeling contained errors and only "mostly followed" EPA's guidance. They assert that EPA later identified "significant limitations and uncertainties" with Sierra Club's modeling, including the use of receptors that did not follow EPA's recommended locations and the failure to use variable stack temperatures or building downwash. In response, both EPA and Sierra Club dedicate significant portions of their briefs to defending EPA's decision to rely on Sierra Club's modeling when it designated Rusk and Panola counties as nonattainment.

EPA asserts it "found Sierra Club's modeling sound and generally 'in accordance with the best practices outlined in the Modeling [Technical Advisory Document],' which was not the case with Luminant's modeling." EPA explained the few cited instances where Sierra Club's modeling deviated from EPA recommendations as (1) the information being unavailable for public use, making Sierra Club's model a conservative underestimate, and (2) a less than 1% deviation in SO₂ concentrations would result with the added information, making Sierra Club's 14% model maximum appropriate. Even altering Sierra Club's model with inputs from Luminant's model at Petitioners' request presented "no material change to the conclusion that SO₂ concentrations in Rusk/Panola counties violated the SO₂ NAAQS," as Sierra Club's original model showed.

"That a model is limited or imperfect is not, in itself, a reason to remand agency decisions based upon it." *Appalachian Power*, 249 F.3d at 1052. Shortcomings must be significant: "An agency's use of a model is arbitrary if that model 'bears no rational relationship to the reality it purports to represent.'" *Columbia Falls Aluminum Co. v. EPA*, 139 F.3d 914, 923 (D.C.

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Cir. 1998) (quoting *American Iron & Steel Inst. v. EPA*, 115 F.3d 979, 1005 (D.C. Cir. 1997)). “So long as the agency ‘explained the available evidence’ and rationally connected the facts to the choice made, it acted reasonably[,] and its determination will be upheld.” *Hispanic Affs. Project*, 901 F.3d at 392 (quoting *New York v. EPA*, 413 F.3d 3, 31 (D.C. Cir. 2005)).

EPA reviewed Sierra Club’s 2015 modeling before issuing its designation and concluded it was adequate. It acknowledged and addressed the concerns raised by Petitioners in their comments regarding the shortcomings of Sierra Club’s modeling, and it found that Sierra Club’s modeling was “deliberately conservative” and “included several techniques which generally would tend to reduce/underestimate design value concentrations.” Specifically, EPA found Sierra Club’s modeling was “conservative” because it used a low estimate of background SO₂ and did not include building downwash, variable stack temperature, and other potential sources of SO₂. To address the potential inadequacies of its models, Sierra Club conducted sensitivity modeling on another location, and EPA stated there would be no change in its conclusions. EPA found no sufficient deviations in the comparison calculations nor in the variables about which Petitioners were concerned to suggest Sierra Club’s modeling was inadequate. Using this comparison, EPA found Sierra Club’s modeling to be “a sufficient basis for a determination of nonattainment and [a] clear[] demonstrat[ion that] the area around Martin Lake is nonattainment.”

We disagree that Sierra Club’s modeling, under these circumstances, provided a sufficient basis for EPA’s nonattainment designation. We do not base our decision on the mere fact that EPA conceded limitations in Sierra Club’s model. That alone is insufficient to remand. See *Appalachian Power*, 249 F.3d at 1052. Our holding is instead guided by our interpretation of “unclassifiable” under 42 U.S.C. § 7407(d)(1)(A)(iii).

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As explained earlier, we interpret Section 7407(d)(1)(A)(iii) as requiring EPA to designate an area as “unclassifiable” if the available evidence does not allow for a meaningfully reliable determination of attainment or nonattainment. We also explained that EPA can know an area should be designated “unclassifiable” when there is not much evidence, the competing evidence is too closely balanced, or the evidence is dubious. Here, the evidence before EPA implicated all three categories — EPA relied *solely* on Sierra Club’s modeling that had conceded limitations and that was further called into question by conflicting monitoring data. Given this, EPA should have designated the areas as unclassifiable or rationally explained why an alternative designation was clear and not debatable. EPA did neither. Instead, EPA seems to have forced a result on sparse and suspect evidence. That violates the APA and cannot withstand our searching review. We remand for EPA to engage in reasoned decision-making in accordance with our interpretation of “unclassifiable” under 42 U.S.C. § 7407(d)(1)(A)(iii).

II. *Treating Like Cases Alike*

“It is a bedrock principle of administrative law that an agency must ‘treat like cases alike.’” *Univ. of Texas M.D. Anderson Cancer Ctr. v. United States Dep’t of Health & Hum. Servs.*, 985 F.3d 472, 479 (5th Cir. 2021) (quoting 32 CHARLES ALAN WRIGHT & CHARLES H. KOCH, *FEDERAL PRACTICE AND PROCEDURE* § 8248, at 431 (2006)). “Unexplained inconsistency is . . . a reason for holding [agency action] to be . . . arbitrary and capricious.” *National Cable & Telecomms. Ass’n v. Brand X Internet Servs.*, 545 U.S. 967, 981 (2005). “[T]he requirement that an agency provide reasoned explanation for its action . . . ordinarily demand[s] that it display awareness that it is changing position [and] . . . must show that there are good reasons for the new” position. *Fox*, 556 U.S. at 515 (emphasis omitted).

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Petitioners argue EPA failed to “treat like cases alike” when it relied on Sierra Club’s modeling for the designation of Rusk and Panola counties, because EPA had rejected Sierra Club’s modeling in designating other counties when presented with conflicting models. Because it will be necessary for EPA to treat this case anew, this argument is moot.

III. Misconception of Law and Statutory Authority

Finally, Petitioners argue that EPA “misconceived the law” when it stated that “the agency does not have the discretion to await the results of future monitoring.” Petitioners assert that EPA had the authority to designate the area as “unclassifiable” and allow the State of Texas to collect additional monitoring data in order to “more accurately characterize air quality in the area.” Further, according to Petitioners, EPA erroneously believed that it “was compelled to issue a nonattainment designation for Rusk and Panola Counties” based on Sierra Club’s modeling by the consent decree’s deadline.

In light of the extensive passage of time since EPA made its 2021 decision not to wait, and because we are remanding for EPA to consider the data that is available now, the issue of the authority to wait for specific additional data, at least in the factual context in which it is raised, is also moot. We conclude that addressing the issue in the abstract would be no more than giving an advisory opinion.

The petitions for review and the petition for rehearing are GRANTED. The case is REMANDED for further proceedings.

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JENNIFER WALKER ELROD, *Chief Judge*, concurring:

I join the substituted majority opinion and acknowledge that it represents a marked shift from its predecessor and well addresses a number of the legal and factual issues that have concerned me in this case. As the substituted majority opinion correctly acknowledges, our duty under *Loper Bright Enterprises v. Raimondo*, 603 U.S. 369 (2024), is to “exercise independent judgment” in determining the “best reading of the statute.” *Id.* at 400, 412. And that reading will then instruct us on “whether an agency has acted within its statutory authority, as the APA requires.” *Id.* at 412.

I write separately to reiterate the importance of the substitute majority opinion’s bases for granting the State of Texas and Luminant’s petition for review and remanding the case for further proceedings. First, the substitute majority opinion correctly concludes that “EPA’s failure to reconcile the inconsistencies between Sierra Club’s modeling and the monitoring data created an unexplained inconsistency,” which we “cannot excuse” because it “generates apparently arbitrary results.” *Ante* at 21–22 (first citing *Sierra Club v. EPA*, 939 F.3d 649, 668 (5th Cir. 2019); and then quoting *Appalachian Power Co. v. EPA*, 251 F.3d 1026, 1035 (D.C. Cir. 2001)). Second, the substitute majority opinion correctly concludes that EPA violated the APA by “forc[ing] a result on sparse and suspect evidence.” *Id.* at 31. In particular, EPA made its nonattainment designation for Rusk and Panola Counties based on record evidence that was inadequate, too closely balanced, and dubious. *Id.* EPA should have designated Rusk and Panola Counties as “unclassifiable.” *Id.*

While I may still quibble with EPA’s actions in declining to consider Luminant’s proposed competing model, under these circumstances, I need not enter the fray of full-blown disagreement with the substitute majority opinion’s analysis on this issue. On remand, EPA will nonetheless be

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required to make its designation determinations in accordance with our interpretation of “unclassifiable” under 42 U.S.C. § 7407(d)(1)(A)(iii).