

ORAL ARGUMENT NOT YET SCHEDULED
No. 24-1120 (and consolidated cases)

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF WEST VIRGINIA, *et al.*,

Petitioners,

v.

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY, *et al.*,

Respondents.

*On Petitions for Review of Final Agency Action of the United
States Environmental Protection Agency
89 Fed. Reg. 39,798 (May 9, 2024)*

**BRIEF OF MIDCONTINENT INDEPENDENT SYSTEM
OPERATOR, INC., PJM INTERCONNECTION L.L.C.,
SOUTHWEST POWER POOL, INC., AND ELECTRIC
RELIABILITY COUNCIL OF TEXAS, INC., AS *AMICI CURIAE* IN
SUPPORT OF PETITIONERS**

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**CERTIFICATE AS TO PARTIES, RULINGS, AND
RELATED CASES**

Pursuant to D.C. Cir. Rule 28(a)(1), *Amici Curiae* states as follows:

A. Parties, Intervenors, and *Amici Curiae*

Except for the following, all Parties, Intervenors, and *Amici Curiae* appearing in this Court are listed in the Brief for Petitioners: *Amici Curiae* Midcontinent Independent System Operator, Inc., PJM Interconnection L.L.C., Southwest Power Pool, Inc., and Electric Reliability Council of Texas, Inc., in support of Petitioners.

B. Rulings Under Review

References to the rulings at issue appear in the Brief of Petitioners.

C. Related Cases

These consolidated cases have not previously been before this Court or any other court.

CORPORATE DISCLOSURE STATEMENT

Midcontinent Independent System Operator, Inc. (“MISO”)

MISO is a non-stock, not-for-profit corporation organized under the laws of the State of Delaware with its principal place of business in Carmel, Indiana. MISO has no parent corporation, and because MISO is a non-profit corporation that does not issue stock, no publicly held corporation owns 10% or more stock in MISO. Circuit Rule 26.1(b) requires a statement that identifies the represented entity’s general nature and purpose, insofar as is relevant to the petition for review in this proceeding. As is relevant here, MISO is an independent regional transmission system operator authorized by FERC to administer an open access transmission tariff, ensure reliable operation of, and equal access to, high-voltage power lines in 15 U.S. states and the Canadian province of Manitoba, and operates one of the world’s largest energy markets with more than \$40 billion in annual gross market energy transactions.

PJM Interconnection L.L.C. (“PJM”)

Pursuant to Rule 26.1 of the Federal Rules of Appellate Procedure and Rules 15(c)(6) and 26.1 of the Circuit Rules of this Court, PJM states that it is a limited liability company organized and existing under the laws of

the State of Delaware. PJM is a regional transmission organization (“RTO”) for all or portions of Delaware, the District of Columbia, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, and West Virginia. PJM is authorized by FERC to administer an Open Access Transmission Tariff (“Tariff”), provide transmission service under the Tariff on the electric transmission facilities under PJM’s control, operate an energy and other markets, and otherwise conduct the day-to-day operations of the bulk power system of a multi-state electric control area. PJM was approved by FERC first as an independent system operator and then as an RTO. *See Pennsylvania-New Jersey-Maryland Interconnection*, 81 FERC ¶ 61,257 (1997), *reh’g denied*, 92 FERC ¶ 61,282 (2000), *modified sub nom. Atl. City Elec. Co. v. FERC*, 295 F.3d 1 (D.C. Cir. 2002); *PJM Interconnection, L.L.C.*, 101 FERC ¶ 61,345 (2002).

PJM has no parent companies. Under Delaware law, the members of a limited liability company have an “interest” in the company. *See Del. Code Ann. tit. 6, § 18-701* (2024). PJM members do not purchase their interests or otherwise provide capital to obtain their interests. Rather, the PJM members’ interests are determined pursuant to a formula that

considers various attributes of the member, and the interests are used only for the limited purposes of: (i) determining the amount of working capital contribution for which a member may be responsible in the event financing cannot be obtained;¹ and (ii) dividing assets in the event of liquidation. PJM is not operated to produce a profit, has never made any distributions to members, and does not intend to do so (absent dissolution). In addition, “interest” as defined above does not enter into governance of PJM and there are no individual entities that have a 10% or greater voting interest in the conduct of any PJM affairs.

Southwest Power Pool, Inc. (“SPP”)

Pursuant to Rule 26.1 of the Federal Rules of Appellate Procedure and Rules 15(c)(6) and 26.1 of the Circuit Rules of this Court, SPP hereby submits the following corporate disclosure statement:

SPP is a non-profit corporation organized under the laws of the state of Arkansas with its principal place of business in Little Rock, Arkansas. SPP has no parent corporation, and because SPP is a non-

¹ Under the Amended and Restated Operating Agreement of PJM Interconnection, L.L.C., the amount of capital contributions received from all PJM members combined is capped at \$5,200,000. PJM generally finances its working capital.

profit corporation that does not issue stock, no publicly held corporation owns 10% or more stock in SPP.

SPP is an independent regional transmission organization authorized by FERC to administer a Tariff, operate day-ahead and real-time energy, ancillary services, and congestion rights markets, conduct regional transmission planning and administer FERC-approved regional cost allocation mechanisms, and otherwise oversee the day-to-day operations of the bulk power system of a multi-state region, covering portions of Arkansas, Iowa, Kansas, Louisiana, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, and Wyoming. As independent regional transmission organization, SPP is responsible for regional transmission planning and administration of its Tariff.

Electric Reliability Council of Texas, Inc. (“ERCOT”)

ERCOT is a non-profit, tax-exempt organization incorporated in the state of Texas. ERCOT has no parent corporation, and no publicly held company has 10% or greater ownership in it.

CIRCUIT RULE 29(D) CERTIFICATE

Pursuant to D.C. Cir. Rule 29(d), counsel for *Amici Curiae* certifies that it is not aware of any other non-government amicus brief addressing the particular subject matter of this brief, i.e., the compliance deadlines that stem from EPA's BSER determination in the Final Rule, which are based on overly ambitious and inadequately supported assumptions as to target dates for commercialization of CCS, which drive both the rate and timing of compliance which, in turn, will cause the premature retirements of generation sources that will threaten the reliability of the electric grid *Amici* are charged with maintaining.

Amici's brief also addresses EPA's failure to satisfy its burden to consider "energy requirements" when determining the BSER, including specific "Reliability Safety Valve" measures they proposed in their comments to the Proposed Rule, that would have helped mitigate their concerns regarding the effect that the premature retirements of generation units would have on the reliability of the electric grid. *Amici* are similarly unaware of any other non-governmental amicus brief addressing this issue.

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GLOSSARY

BSER = Best System of Emission Reduction

CAA = Clean Air Act

CCS = Carbon Capture and Sequestration/Storage

CO₂ = Carbon Dioxide

EGU = Electric Generating Unit

EEA = Energy Emergency Alert

ELG = Effluent Limitations Guidelines and Standard

EPA = U.S. Environmental Protection Agency

ERCOT = *Amici* Electric Reliability Council of Texas, Inc.

FERC = Federal Energy Regulatory Commission

GHG = Greenhouse Gas Emissions

ISO = Independent System Operator

LCCR = Legacy Coal Combustion Residuals

MATS = Mercury and Air Toxics Standards

MISO = *Amici* Midcontinent Independent System Operator, Inc.

NERC = North American Electric Reliability Corporation

PJM = *Amici* PJM Interconnection L.L.C.

PUC = Public Utility Commission

RTO = Regional Transmission Organization

RULOF = Remaining Useful Life and Other Factors

SPP = *Amici* Southwest Power Pool, Inc.

STATUTES AND REGULATIONS

All applicable statutes are contained in the Addendum to the Brief of Petitioners.

IDENTITY AND INTEREST OF *AMICI CURIAE*²

MISO, PJM, SPP, and ERCOT (collectively the “Joint ISOs/RTOs”) are independent entities, separate from companies that own electric generation and transmission facilities, that have been designated by FERC, or in the case of ERCOT, the Texas PUC, as responsible for maintaining and enhancing the reliability of the bulk power grid in all or parts of 30 states and the District of Columbia. The Joint ISOs/RTOs ensure the reliable delivery of power from the high-voltage transmission grid to local distribution utilities, which are then responsible for delivery to end-use customers—45 million in MISO, 65 million in PJM, 19 million in SPP, and 27 million in ERCOT. FERC (and in the case of ERCOT, the Texas PUC) authorizes the Joint ISOs/RTOs³ to exercise functional control over the high-voltage transmission system and otherwise

² Pursuant to Fed. R. App. P. 29(a)(4)(E) and D.C. Cir. R. 29(b), *Amici Curiae* state that no counsel for a party authored this brief in whole or in part, and no party or counsel for a party contributed money intended to fund the preparation or submission of this brief. No person other than *Amici Curiae* or their counsel contributed money intended to fund the preparation or submission of this brief.

³ FERC’s jurisdiction over ERCOT is limited, but does include authority to enforce mandatory reliability standards under section 215 of the Federal Power Act. See *LS Power Dev., LLC*, 155 FERC ¶ 61,176 at p.3 n.4 (2016).

administer the bulk electric system in their regions. One of their critical functions is to facilitate and maintain the reliable delivery of electricity.

The Joint ISOs/RTOs are responsible for the safety, reliability, and security of the bulk power transmission system, which refers to the large-scale electrical network that transmits electricity from power plants to substations before it is distributed to consumers. Over 100 million businesses and residences—including this Court—depend on the Joint ISOs/RTOs to coordinate the generation and transmission of the right amount of electricity every minute of every day to meet individual end-use customer requirements. In addition to managing and ensuring the reliability of the power grid within their regions, the Joint ISOs/RTOs administer the buying and selling of electricity at the wholesale level and plan the electric grid of the future. *See, e.g., Citadel FNGE Ltd. v. FERC*, 77 F.4th 842, 848 (D.C. Cir. 2023) (“[RTO]s serve several functions, including operating the electrical grid in a defined geographic area, balancing energy supply and demand, establishing markets for the sale and purchase of electricity, and ensuring the reliable transmission of electricity.”); *Am. Mun. Power, Inc. v. FERC*, 86 F.4th 922, 926 (D.C. Cir. 2023) (similar).

For all of these reasons, *Amici Curiae* have an interest in the Final Rule. Without additional modification, the compliance timelines and related provisions of the Rule are not workable and are destined to trigger an acceleration in the pace of premature retirements of EGUs that possess critical reliability attributes at the very time when such generation is needed to support ever-increasing electricity demand because of the growth of the digital economy and the need to ensure adequate back-up generation to support an increasing amount of intermittent renewable generation.

Such inevitable and foreseeable premature retirement decisions resulting from the Rule's timelines will substantially strain each of the Joint ISOs/RTOs' ability to maintain the reliability of the electric power grid to meet the needs of the citizenry and the country's economy. *See, e.g., Delaware Div. of Pub. Advocate v. FERC*, 3 F.4th 461, 463 (D.C. Cir. 2021) ("As an RTO, PJM promotes efficiency and reliability in the operation and planning of the electric transmission grid. To promote reliability and prevent service interruptions, PJM must ensure that its system has sufficient generating capacity.") (alterations adopted)

(quotations and citations omitted). For these reasons, *Amici* have a strong interest in this case.

SUMMARY OF THE ARGUMENT

The BSER determinations in EPA's Final Rule governing GHG emissions from certain fossil-fuel-fired power plants are based on overly ambitious and inadequately supported assumptions. These assumptions then drive both the rate and timing of compliance which, in turn, will drive the premature retirements of generation sources that will threaten the reliability of the electric grid. The Final Rule unreasonably discounts that existing fossil power generators will need to decide whether to commit to installing untested technology or retire the generating unit years before the compliance deadline, given the economic cost and risk of compliance. As a result, decisions to retire units before the end of their useful life may be accelerated because of the Final Rule. The Joint ISOs/RTOs are concerned that premature retirements of generating units that provide critical reliability attributes can have significant, negative consequences on reliability.

In their comments on the Proposed Rule, the Joint ISOs/RTOs offered four "Reliability Safety Valve" options that would help mitigate these concerns. Specifically, *Amici* proposed:

- (1) Providing up-front, clear criteria on the use of the RULOF Provision and enforcement discretion;

- (2) Creating a sub-category of units needed for reliability;
- (3) Providing clear guidance to the states regarding what would constitute an acceptable state plan, within the context of a regional Reliability Safety Valve to address regional resource adequacy issues; and
- (4) Recommending to the states in a given region served by an ISO/RTO or balancing authority the creation of a bank of regional reliability allowances available to unit owners only during emergency conditions.

Amici accompanied their proposals with the legal support for EPA to adopt each such provision, along with suggested means of implementation. But in the Final Rule, EPA did not address these specific recommendations, let alone explain why it did not adopt them. In failing to address these legitimate reliability risks or *Amici*'s proposed "Reliability Safety Valve" measures, EPA failed to satisfy its burden to adequately consider "energy requirements" when determining the BSER. See 42 U.S.C. § 7411(a)(1).

EPA's failure to address *Amici*'s proposed mitigation measures is exacerbated by the impact the Final Rule will have when analyzed in conjunction with the numerous other proposed, pending, or existing EPA regulations that impact grid reliability and resource adequacy—all of which are resulting in a decline in reserve margins and premature

retirement of dispatchable “baseload” resources. *Amici* are also concerned about the chilling impact these collective rules will have on the investment required to retain and maintain existing units that are needed to provide key reliability attributes and grid services before the Final Rule’s compliance date. In reality, EPA’s new rules, in conjunction with other rules already in place, are significantly impacting baseload resources with high accreditation valuations and needed system attributes. Failure to adequately address the interaction of the compliance deadlines in the Rule with other rules, and the compliance deadlines affecting these very same EGUs, does not adequately address Congress’ requirement that EPA take into account overall “energy requirements.”

Finally, EPA’s proposed short-term remedy for grid reliability issues is too constraining to address reliability impacts resulting from the compliance strictures of the Rule. Specifically, EPA established a triggering standard requiring declaration of an “Energy Emergency Alert 2” (“EEA2”) (as further described herein) before any compliance mitigation can be implemented to address imminent emergencies. This short-term reliability mechanism that EPA did adopt in the Rule thus

unduly places the grid—and customers—at greater risk before any short-term relief would be available. *Amici* should not have to wait until the heightened level of emergency that an EEA2 declaration represents; they should be able to take proactive measures to address reliability issues upon earlier evidence of deteriorating grid conditions as evidenced by declaration of an “Energy Emergency Alert 1” (“EEA1”) (as further described herein).

For these reasons, *Amici* respectfully request that the Court remand the Final Rule back to EPA, with instructions for it to adequately consider the grid adequacy and reliability issues *Amici* previously raised in the docket below, as well as the specific solutions which they—as the grid operators charged with maintaining grid reliability now and in the future—proposed that EPA adopt. Absent such a remand, the Final Rule is devoid of the adequate consideration of “energy requirements” that Congress directed be considered in any Section 111(d) rulemaking.

ARGUMENT

I. The Final Rule is based on overly ambitious and inadequately supported assumptions and establishes compliance deadlines and criteria that, absent modification, do not adequately address Congress' directive that EPA Rules take into account "energy requirements."

EPA's Final Rule governing greenhouse-gas emissions from certain fossil-fuel-fired power plants, CI8244 (89 Fed. Reg. 39,789) (the "Final Rule" or the "Rule"), is problematic. While the CAA directs EPA to establish standards of performance for both "new sources" as well as existing sources of emissions, those standards must utilize the BSER that "has been adequately demonstrated" and that is "achievable." 42 U.S.C. § 7411(a)(1), (b), (d). The standard must also "tak[e] into account the cost of achieving such reduction and ... energy requirements." *Id.* § 7411(a)(1). The BSER determination then drives both the rate and timing of compliance with the Final Rule. *Id.* at § 7411; *see also* 89 Fed. Reg. at 39,801-02.

The Final Rule establishes CCS with a 90% capture of emitted CO₂ as the BSER for existing coal-fired EGUs that plan to continue operation after January 1, 2039, as well as for new and modified natural gas-fired units with annual capacity factors of 40% or greater. Both coal-fired and natural gas-fired EGUs of these types must achieve 90% capture by

January 1, 2032. *See* 89 Fed. Reg. at 39,841; 39,913; 39,938. While sources subject to the standard of performance can use any system of reduction to meet the limit, 42 U.S.C. § 7411(b)(5), here, EPA did not identify any other technology or compliance option that sources could use to meet the reduction requirements.

The Opening Brief of Petitioners discusses in detail EPA's BSER determination, including whether CCS has been "adequately demonstrated" and is "achievable." *See generally* Section I of Pet's Opening Br. *Amici* raised similar concerns in the proceedings below,⁴ but focus this Brief on the compliance deadlines that stem from EPA's BSER determination, which are based on overly ambitious and inadequately supported assumptions as to target dates for commercialization of CCS. Those BSER determinations then drive both the rate and timing of compliance which, in turn, will drive the premature retirements of

⁴ *See generally* CI0673 (Joint Comments of Electric Reliability Council of Texas, Inc., Midcontinent Independent System Operator, Inc., PJM Interconnection, L.L.C., and Southwest Power Pool, Inc. "Joint ISOs/RTOs Comments"); CI0623 (MISO Comments); CI0670 (SPP Comments); *Joint Comments of Electric Reliability Council of Texas, Inc., Midcontinent Independent System Operator, Inc., PJM Interconnection, L.L.C., and Southwest Power Pool, Inc.*, Regulations.gov (Dec. 20, 2023) [hereinafter Joint Supplemental Comments], <https://www.regulations.gov/comment/EPA-HQ-OAR-2023-0072-8207>.

generation sources that will threaten the reliability of the electric grid even before the compliance date in the Rule.

However, none of EPA's projected timeframes reflect historical rates of adoption of CCS technology for electrical generation purposes, nor does EPA adequately consider the risks that the technologies will not mature in time for EGU owners to deploy them. EPA's BSER determination is overly optimistic regarding the commercial viability of CCS today and downplays the cost and practicalities of developing entirely new supporting infrastructure within the timeframes and at the costs projected.

Given the implausibility of CCS as a viable option for mitigating CO₂ emissions and the resulting likelihood of premature retirements of fossil-fired generators, the Final Rule is likely to hamper *Amici* in their efforts to provide reliable power to the communities and consumers that they and others serve.

II. The assumptions and compliance deadlines in the Final Rule work to exacerbate existing challenges to reliability and resource adequacy of the electric grid.

In December 2023, NERC published its Long-Term Reliability Assessment, noting:

Environmental regulations and energy policies that are overly rigid and lack provisions for electric grid reliability **have the potential to influence generators to seek deactivation** despite a projected resource adequacy or operating reliability risk; **this can potentially jeopardiz[e] the orderly transition of the resource mix**. For this reason, regulators and policymakers need to consider effects on the electric grid in their rules and policies and design provisions that safeguard grid reliability.

2023 Long-Term Reliability Assessment, N. Am. Elec. Reliability Corp. 10

(Dec. 2023) (emphasis added) (footnote omitted),

<https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/N>

[ERC LTRA 2023.pdf](#). Unfortunately, without modification, the Final

Rule will exacerbate premature retirements of generation with attributes

needed for reliability. The Final Rule did not adequately address these

concerns, despite the legal requirement to address “energy requirements”

in any final rule. 42 U.S.C. § 7411(a)(1). In fact, applying EPA’s own prior

interpretation of its responsibilities under the “energy requirements”

provision in the CAA,⁵ it did not appropriately consider those requirements.

The Final Rule unreasonably discounts the fact that owners of existing fossil power generators will need to make decisions as to whether to commit to installing this untested technology or retire the generating unit years before the compliance deadline, given the obligations of states to submit binding compliance plans by May 2026 under the Final Rule. See 89 Fed. Reg. at 39,997. As a result, decisions to retire units before the end of their useful life may be accelerated because of the Final Rule's provisions and timelines. The assumptions and compliance deadlines in the Final Rule thus work to exacerbate existing challenges to the reliability and resource adequacy of the electric grid.

⁵ In interpreting its responsibilities to meet the “energy requirements” analysis required in Section 111, EPA has stated:

EPA interprets this caselaw to authorize it to assess the impacts of the controls it is considering as the BSER, including their costs and implications for the energy system, ***on a sector-wide, regional, or national basis, as appropriate***. For example, the EPA may assess whether controls it is considering would create risks to the reliability of the electricity system in a particular area or nationwide and, if they would, to reject those controls as the BSER.

89 Fed. Reg. at 39,833 (emphasis added).

A. EPA did not adequately analyze or adopt proposed adjustments to the Rule to mitigate potential reliability impacts.

EPA has not adequately analyzed resource adequacy and reliability impacts in the Final Rule. Congress explicitly required consideration of resource adequacy and reliability impacts by providing in Section 111 that EPA consider “energy requirements” in establishing its regulatory program under this section. 42 U.S.C. § 7411(a). By including that requirement, Congress clearly required EPA to do more than simply look at environmental issues in a vacuum without considering the larger energy requirements of the grid.

EPA’s interpretation of “energy requirements” in the Final Rule includes “the impact, if any, of the air pollution controls on the source’s own energy needs.”⁶ As noted above, this more limited interpretation is at odds with its own later interpretation within the Rule and case law reviewing the term.⁷ *See, e.g., Sierra Club v. Costle*, 657 F.2d 298, 327-28

⁶ 89 Fed. Reg. at 39,833.

⁷ *Amici* also refer the Court to Section I(C) of Petitioners’ Opening Brief, at pages 123-144, for further analysis of this issue, including judicial interpretation of the term “energy requirements.”

(D.C. Cir. 1981). The term “energy requirements” must be interpreted to require explicit consideration of the Final Rule’s impact on the larger electricity grid—as the Joint ISOs/RTOs urged in their comments to the Proposed Rule—rather than simply the “energy requirements” of individual units, as EPA seems to have done. That is because the delivery of electricity to customers requires the integration and coordinated dispatch of multiple generators connected to a networked transmission and distribution system, virtually simultaneous from its production to its consumption, from the generator to the end user’s home or business. Indeed, in their Joint Comments, *Amici* alerted EPA that it:

[s]hould undertake additional analysis that reflects supply chain constraints, real world siting and permitting expense and timelines, requisite infrastructure expansion and the maintenance of essential grid reliability attributes in order to provide a full assessment of the Rule’s potential reliability impacts. The Joint ISOs/RTOs, each of whom administer interconnection queues for new resources, have information that would be informative to that analysis.

(CI0673, Joint ISOs/RTOs Comments, at 8.) However, despite offers of assistance by *Amici* and promised coordination with other federal agencies, EPA did not adequately analyze such information before promulgating the Final Rule.

Resource adequacy challenges occur when the total accredited megawatt rating of all the resources in a region (including generation and demand response resources) is insufficient to meet the demand plus reserve margin needed to meet projected load, either seasonally, annually, or both. With some specific regional differences, generally, resource adequacy is assessed on an annual basis by determining, on a forward basis, the needed demand plus reserve margin.⁸ That determination is based on a forecast of load and is correlated with the risks of outages of needed generation to meet that load forecast, particularly during peak conditions.

The Joint ISOs/RTOs project their future demand plus reserve margins annually and address any deficiencies through mechanisms such as capacity and/or energy markets, deficiency payment-based resource adequacy constructs, or, in the case of vertically integrated regions, through the provision of information to states regarding projected demand plus reserve margin shortfalls, which states are then

⁸ *Planning Resource Adequacy Analysis, Assessment and Documentation*, N. Am. Elec. Reliability Corp. 1-4 (Oct. 16, 2017), <https://www.nerc.com/pa/Stand/Reliability%20Standards/BAL-502-RF-03.pdf>.

required to address through their integrated resource plans and other regulatory mechanisms to ensure their utilities have adequate generation and reserve to serve their native load.⁹

But EPA has not adequately analyzed the “energy requirements” of the system, given these reliability challenges, let alone the “Reliability Safety Valve” mechanisms *Amici* proposed. *Amici* SPP, PJM, and MISO all operate the electric grid across multiple states, making consideration of impacts and crafting of solutions appropriate at the regional level, rather than simply on a unit-by-unit basis.¹⁰ And Section 111 contemplates a shared responsibility between the state environmental

⁹ *Resource Adequacy*, ERCOT, <https://www.ercot.com/gridinfo/resource> (last visited Sept. 12, 2024); Letter from James P. Danly, Comm’r of the Fed. Energy Regul. Comm’n to Hon. Michael S. Regan, Adm’r of the U.S. Env’t Prot. Agency (Dec. 20, 2023) [hereinafter Letter to Adm’r Regan], <https://www.regulations.gov/comment/EPA-HQ-OAR-2023-0072-8216>; *2024 SPP Resource Adequacy Report*, Sw. Power Pool (June 14, 2024), <https://www.spp.org/documents/71804/2024%20spp%20june%20resource%20adequacy%20report.pdf>; *PJM Load Forecast Report: January 2024*, PJM (Feb. 1, 2024), <https://www.pjm.com/-/media/library/reports-notices/load-forecast/2024-load-report.ashx>; *2025/2026 Base Residual Auction Report*, PJM (July 30, 2024), <https://pjm.com/-/media/markets-ops/rpm/rpm-auction-info/2025-2026/2025-2026-base-residual-auction-report.ashx>.

¹⁰ *Amici* ERCOT does operate as a separate interconnection within the state of Texas.

regulators and EPA. 42 U.S.C. § 7411(c), (d). While electric resource adequacy is a state issue in states which have not restructured their electricity markets, for the multi-state RTOs (among *Amici*), resource adequacy is also a regional issue and not solely an issue that can be fully addressed by a single state crafting or amending a single state plan or considering the impacts or operations of a facility or facilities within a state in isolation.¹¹

EPA cannot simply disclaim responsibility to analyze these impacts by citing to the role of other agencies or the states. For one, Congress assigned the review of “energy requirements” *to EPA* for consideration in its rulemaking. Although EPA can certainly cooperate with other federal agencies, at the end of the day, EPA alone has enforcement

¹¹ See MISO Bd. of Dirs., *Strategy Update: Reliability Imperative*, MISO (Dec. 7, 2023), <https://cdn.misoenergy.org/20231207%20Board%20of%20Directors%20Item%2007b%20Reliability%20Imperative%20Update631057.pdf>; *SPP BA Emergency Operating Plan V 9.0*, Sw. Power Pool (Oct. 4, 2023), <https://spp.org/documents/70346/spp%20ba%20emergency%20operating%20plan%20v%209.0.pdf>; *Energy Transition in PJM: Resource Retirements, Replacements & Risks*, PJM 3, 13 (Feb. 24, 2023), <https://pjm.com/-/media/library/reports-notices/special-reports/2023/energy-transition-in-pjm-resource-retirements-replacements-and-risks.ashx>.

authority over EGUs. A plant needed for reliability simply cannot operate without facing enforcement actions by the EPA.

By the same token, Section 111 contemplates a shared responsibility between the state environmental regulators and EPA. *See* 42 U.S.C. § 7411(c), (d). While in a single state RTO, electric reliability is a state issue, for the multi-state RTOs that operate a single multi-state dispatch, reliability is also a regional issue and not solely an issue that any one state can adequately address through an individual state implementation plan. As a result, given Congress' directives, EPA's retention of enforcement authority, and the limitations on individual state plans, EPA cannot dodge its responsibility to adequately assess "energy requirements" by pointing to others.

Thus, it was incumbent upon EPA to ensure the Final Rule, both in its provisions and timelines, adequately addressed regional reliability challenges. In an effort to provide EPA a mechanism for addressing these concerns, *Amici* proposed to EPA specific short and long term "Reliability Safety Valve" measures that would help address and mitigate these regional impacts. *Amici* proposed four specific and detailed options to address the longer-term reliability and several specific shorter-term

solutions. Specifically, *Amici* proposed four options for EPA's consideration to address longer-term reliability issues in the context of the Final Rule:

- (1) Providing up-front, clear criteria on the use of the RULOF Provision and enforcement discretion;
- (2) Creating a sub-category of units needed for reliability;
- (3) Providing clear guidance to the states regarding what would constitute an acceptable state plan, within the context of a regional Reliability Safety Valve to address regional resource adequacy issues; and
- (4) Recommending to the states in a given region served by an ISO/RTO or balancing authority the creation of a bank of regional reliability allowances available to unit owners only during emergency conditions.

(Joint Supplemental Comments, *supra* note 4.) *Amici* accompanied their proposals with the legal support for EPA to adopt each such provision, along with suggested means of implementation. *Id.*

In fairness, EPA did include certain provisions in the Final Rule to ***begin to*** address the resource adequacy and reliability implications of the Final Rule and its compliance timelines. However, EPA failed to address the specific "Reliability Safety Valve" measures *Amici* proposed.

In doing so, EPA:

- failed to address, let alone state, its reasons for not adopting any of these measures;
- failed to adequately consider the impact of premature retirements driven by the Rule's compliance timelines (despite such concerns documented and substantiated by *Amici* and others);
- largely deferred reliability issues to the states without providing adequate guidance or clarifying an expectation that regional reliability issues would need to be addressed as a condition to EPA's approval of a given state plan; and
- failed to consider, let alone address, *Amici's* proposal to require a process for future analysis and potential adjustment to the compliance timelines, should the challenges of implementing CCS delay EPA's expected in-service dates of this not-yet-commercial new technology.

EPA's failure to adequately address *Amici's* concerns is grounds for remand of this proceeding for EPA to address these issues. *See, e.g., Ohio v. EPA*, 144 S.Ct. 2040, 2055-56 (2024) (criticizing EPA for failing to address public comments adequately before issuing final rule).

B. EPA has not adequately considered resource adequacy and reliability impacts as part of its responsibility to consider “energy requirements” in conjunction with other proposed, pending, or existing regulations.

The impact of the Final Rule must also be considered in conjunction with the numerous other proposed, pending, or existing environmental regulations that impact grid reliability and resource adequacy—all of

which are resulting in a decline in reserve margin and premature retirement of dispatchable “baseload” resources (i.e., resources most currently in the form of coal and natural gas). EPA performed an analysis of resource adequacy; however, by its own admission, EPA did not analyze the reliability implications to the grid, stating “EPA does not conduct operational reliability studies.” Technical Memorandum from the U.S. Env’t Prot. Agency Off. of Air & Radiation 4 (Apr. 2024), <https://www.epa.gov/system/files/documents/2024-04/technical-memo-resource-adequacy-analysis-vehicle-rules-final-111-egu-rules-elg-and-mats.pdf>.

Certain types of resources are accredited, or count, for different levels of capacity, depending on their reliability value at times of peak demand.¹² Traditional dispatchable generators, like coal and natural gas,

¹² *MISO’s Response to the Reliability Imperative*, MISO 7-8, <https://cdn.misoenergy.org/2024%20Reliability%20Imperative%20report%20Feb.%202021%20Final504018.pdf?v=20240221104216> (last updated Feb. 2024); Electronic Filing from Michael Kessler, MISO’s Managing Assistant Gen. Couns., to Hon. Kimberly D. Bose, Fed. Energy Regul. Comm’n Sec’y (Nov. 30, 2021) [hereinafter Electronic Filing from Michael Kessler], https://cdn.misoenergy.org/2021-11-30_RAN%20Seasonal%20Construct%20and%20Availability%20based%20accreditation608310.pdf; Electronic Filing from Michelle Quinn, MISO’s Senior Corp. Couns., to Hon. Debbie-Anne Reese, Fed. Energy Regul. Comm’n Sec’y (Mar. 28, 2024) [hereinafter Electronic Filing from

tend to have much higher accredited capacity, availability, or other necessary reliability attributes than most of the generation or storage capacity.¹³ that has replaced these units in recent years.¹⁴

On April 25, 2024, EPA finalized four new rules implementing pollution restrictions for power plants: the Final Rule, the MATS Rule (89 Fed. Reg. 38,508 (May 7, 2024)), the ELG Rule (89 Fed. Reg. 40,198 (May 9, 2024)), and the LCCR Rule (89 Fed. Reg. 38,950 (May 8, 2024)). The Final and MATS Rules focus on air pollution, while the ELG Rule looks to limit water pollution, and the LCCR Rule regulates coal ash disposal at previously used disposal sites.

Michelle Quinn], <https://cdn.misoenergy.org/2024-03-28%20Docket%20No.%20ER24-1638-000632361.pdf>; *Energy Transition in PJM: Resource Retirements, Replacements & Risks, supra*.

¹³ Although longer duration energy storage can help to mitigate these reliability concerns, long duration energy storage resources are only in nascent development and have not yet proven economically feasible for deployment on a mass scale to make up for the premature retirement of generation. Battery storage capacity also does not provide all the necessary reliability attributes that coal and natural gas units provide, such as grid inertia.

¹⁴ Electronic Filing from Michael Kessler, *supra*; Electronic Filing from Michelle Quinn, *supra*; *MISO's Response to the Reliability Imperative, supra*, at 7-8.

Amici are concerned about the chilling impact of the Final Rule—in conjunction with these other recently adopted rules—on investment required to retain and maintain existing units that are needed to provide key reliability attributes and grid services before the Final Rule’s compliance date. The implementation of the Final Rule, along with these other new rules, in conjunction with rules already in place, is already significantly impacting baseload resources with high accreditation valuations and needed system attributes. Investments are based, in part, on the expected revenues associated with continuing operation of the unit. Unit owners may decide to retire units early rather than incur additional expense and risk. EPA did not adequately address the impact of these rules holistically as part of the “energy requirements” analysis required by Congress.¹⁵

Alternatively, should the units remain operational, with the expectation of retirement at a future date certain, unit owners may forgo

¹⁵ In the Final Rule, EPA did a limited resource adequacy analysis of the impacts of the Rule in conjunction with certain other recently issued environmental rules. However, this analysis did not recognize the more limited accredited value of renewables utilized by the Joint ISOs/RTOs in their reliability analyses as compared to the fossil generation predicted to retire as a result of the various EPA rules.

required maintenance in the interim because of the lower return on their investment. The failure to properly maintain generating units can lead to a higher incidence of forced outages of these units, diminishing the dispatchable generation supply in the interim.

In states that employ traditional cost-of-service regulation of the electric utility sector, the state PUC has authority to direct the construction of new generation by the vertically integrated investor-owned utilities they regulate,¹⁶ and in many cases has the ability to prohibit a generator from retiring. However, even in those states, load is served from a combination of merchant generation that is not subject to the same degree of state regulation as well as generation from traditional vertically integrated utilities subject to state regulation.¹⁷ In addition, for states that are part of a multi-state RTO or ISO, the state's resource

¹⁶ The state PUC traditionally has no authority over generation owned by cooperatives, municipal utilities, or merchant generation selling into the wholesale market.

¹⁷ This is particularly true for merchant renewable generation which exists in those states but often serves designated customers through long term power purchase agreements ("PPAs") rather than through direct regulation by the state PUC.

adequacy requirements and responsibilities are shared within the region, to prevent one state from “leaning” on neighboring states.

Moreover, when ISOs/RTOs in regions with vertically integrated utilities face imminent reliability challenges, there is no one entity that can simply order a unit to operate, if that unit owner is otherwise facing violations of its environmental compliance obligations, should it run. While Section 202(c) of the Federal Power Act does provide a narrow authorization for the Secretary of Energy to override environmental requirements if found necessary to ensure reliability, this relief is only available for up to 90-day periods. Moreover, an applicant for 202(c) relief needs to show imminent harm given the emergency nature of the statute. In the context of vertically integrated states, but even more relevant in areas consisting of restructured states, no unit owner will continue to invest to maintain a unit simply on the hope that the Secretary of Energy will grant a last-minute, temporary reprieve from violations of their environmental compliance requirements.

By the same token, states that have restructured their electricity markets have effectively ceded their ability to order new generation. Rather, they depend on the market to send price signals to attract new

generation and retire unneeded generation.¹⁸ The markets have worked quite well in achieving that goal. In PJM, during the initial MATS rule transition, the market efficiently replaced 20,000 MW of coal generation with new, cleaner, natural gas generation that took advantage of the shale gas revolution that was occurring simultaneously. However, as PJM detailed in its 4R's (Resource Retirements, Replacements and Risks) Report,¹⁹ the markets cannot instantly replace policy-driven unit retirements with units that provide the same or even enhanced reliability services. MISO, ERCOT, and SPP have all come to the same conclusion.²⁰ In the Final Rule, EPA did not adequately consider or address potential

¹⁸ Letter to Adm'r Regan, *supra* note 9, at 3 (“[T]he majority of Americans are served by distributors who procure electric power from one or another of FERC’s wholesale markets The markets were designed to obtain the requisite quantity of generation through procurement auctions with price signals and incentives designed to do the work that the utilities’ planning processes had once done.”).

¹⁹ *Energy Transition in PJM: Resource Retirements, Replacements & Risks, supra*.

²⁰ *Joint Comments of Electric Reliability Council of Texas, Inc.; Midcontinent Independent System Operator, Inc.; PJM Interconnection, L.L.C.; and Southwest Power Pool, Inc.*, PJM (Aug. 8, 2023), <https://pjm.com/-/media/documents/other-fed-state/20230808-comments-of-joint-isos-rtos-docket-epa-hq-oar-2023-0072.ashx>.

impacts of the Rule on wholesale electricity markets or generation owners' decisions to continue or cease operations.²¹ In short, the Final Rule establishes clear timelines, but has not put in place adequate reliability or resource adequacy safeguards.

C. The Final Rule doesn't allow enough compliance flexibility to mitigate short-term grid emergencies.

In addition to failing to address *Amici's* proposals to mitigate resource adequacy concerns, EPA also proposed an unreasonable short-term remedy to address emergency conditions on the grid that may require compliance flexibility. For instance, to maintain the reliability of the electric system within its region, each of the *Amici* operate under a set of carefully designed operating procedures that define system conditions and guide system operator actions in a variety of conditions.²² Operating procedures guide system operator actions when an event

²¹ Letter to Adm'r Regan, *supra* note 9.

²² By way of example, see *Operating Procedures*, MISO, <https://cdn.misoenergy.org/Three%20Pager%20-%20MISO%20Operating%20Procedures%2010252022318965.pdf> (last visited Sept. 12, 2024). See also *ERCOT Nodal Protocols*, ERCOT (Aug. 23, 2024), <https://www.ercot.com/files/docs/2024/08/21/August%2023,%202024%20Nodal%20Protocols.pdf>.

occurs on the electric system that has the potential to, or actually does, negatively impact system reliability.²³ There are a variety of progressively more serious warnings each of the Joint ISOs/RTOs communicates ahead of a declared EEA.

EEA1 is the first level of emergency operations and is issued to maintain reliability of the grid.²⁴ It signals that each ISO/RTO can no longer meet the forecasted demand plus operating reserve requirements without taking action.²⁵ Put another way, EEA1 means power demand could exceed supply if actions are not taken. By declaring EEA1, each ISO/RTO operator is generally able to access additional generation to increase the supply of electricity.²⁶

EEA2 is the second level of emergency operations and is issued to maintain reliability of the grid as operating reserves continue to

²³ *Operating Procedures*, *supra* note 21; *ERCOT Nodal Protocols*, *supra* note 21.

²⁴ By way of example only, see *Grid Conditions At a Glance*, MISO, <https://www.misoenergy.org/meet-miso/media-center/2024/grid-conditions-explainer/> (last visited Sept. 12, 2024).

²⁵ *Id.*

²⁶ *Id.*

decline.²⁷ It signals that the ISO/RTO is energy deficient and there is a need to reduce energy demand.²⁸ By declaring EEA2, an ISO/RTO operator is able to tap into emergency generation not available during normal conditions.²⁹

Energy Emergency Alert 3 (“EEA3”) is the third and final level of emergency operations and is issued to protect the electric grid from cascading outages and ensure reliability is maintained to the greatest number of consumers possible.³⁰ It signals energy supply and demand cannot be balanced and power interruptions are imminent or happening.³¹

The Final Rule is too constraining to address reliability impacts resulting from the compliance strictures of the Rule by making the declaration of an EEA2 emergency a condition precedent to a unit owner

²⁷ *Id.*

²⁸ *Id.*

²⁹ *Id.*

³⁰ *Id.*

³¹ *Id.*

availing itself of short-term compliance relief from the Rule's requirements. *Amici* attempted to raise this issue with EPA prior to the promulgation of the new Rule, which resulted in the addition of two provisions, (*see* 89 Fed. Reg. at 39,803, 40,011-40,020), but these provisions are insufficient.

Specifically, the Rule's short-term reliability mechanism requires the declaration of an EEA2 or EEA3, neither of which provide enough time for ISOs/RTOs to mitigate real time reliability issues as they arise within an operating day. *See* 89 Fed. Reg. at 39,805, 39,971-73. Instead, as *Amici* urged in their comments to EPA, the availability of compliance flexibility should be triggered at or in anticipation of grid conditions that trigger an EEA1 event, when operators are still able to access additional generation to increase the supply of electricity. The reliability mechanism in the Rule was a helpful and appreciated step forward, but on its face, is unduly limited and potentially places the grid—and customers—at risk. *Amici* shouldn't have to wait until there is a real-time emergency; they should be able to take proactive measures to protect reliability within the existing EEA structure for short-term emergencies (i.e., when an EEA1 is, or is expected to be, declared) and

through the longer-term reliability safety valve mechanisms *Amici* proposed in the docket below.

In longer-term situations, states can ask EPA to extend deadlines, or decrease technology standards, by which units must cease operations per the RULOF doctrine. *Id.* This also was a helpful and appreciated addition to the Final Rule. However, the lack of any guidance on what would constitute an acceptable plan invoking RULOF does not provide the certainty which *Amici* require, given the reliability challenges that are imminent, due to rising load growth and premature plant retirements. Thus, RULOF—although helpful—may not be the safety valve EPA makes it out to be.

CONCLUSION

Amici worked proactively to craft specific “Reliability Safety Valve” proposals to address their concerns with the Proposed Rule and presented them to EPA through detailed written submittals. EPA failed to adequately address these proposals in the Final Rule, and also failed to undertake the comprehensive analysis of “energy requirements” that Congress made clear must be part of any EPA rulemaking under Section 111. As a result, the significant grid reliability issues—and *Amici*’s

proposed solutions—weren't adequately addressed by EPA in response to the extensive record presented below by *Amici* and others.

For these reasons, *Amici* respectfully request that the Court remand the Final Rule back to EPA, with instructions for it to adequately consider the following grid adequacy and reliability issues *Amici* previously raised:

- (1) Providing up-front, clear criteria on the use of the RULOF Provision and enforcement discretion;
- (2) Creating a sub-category of units needed for reliability;
- (3) Providing clear guidance to the states regarding what would constitute an acceptable state plan, within the context of a regional Reliability Safety Valve to address regional resource adequacy issues;
- (4) Recommending to the states in a given region served by an ISO/RTO or balancing authority the creation of a bank of regional reliability allowances available to unit owners only during emergency conditions;
- (5) Establishing an Energy Emergency Alert 1 declaration as the appropriate trigger for compliance flexibility for individual units needed for reliability; and
- (6) Building into the Rule a fixed period for review if the chosen BSER technology is not proceeding as quickly as EPA anticipated in the Final Rule.

Absent such a remand, the Final Rule lacks adequate consideration of “energy requirements” that Congress directed be considered in any Section 111(d) rulemaking.

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE

This brief complies with the type-volume limitations of Fed. R. App. P. 32(a)(7)(B) because it contains 6,228 words, excluding the parts of the brief exempted by Fed. R. App. P. 32(f) and D.C. Cir. R. 32(e)(1).

This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed. R. App. P. 32(a)(6). It has been prepared in a proportionally spaced typeface using Microsoft Word in 14-point Century Schoolbook.

Dated: September 13, 2024

/s/ Jenny R. Buchheit
Jenny R. Buchheit

CERTIFICATE OF SERVICE

I hereby certify that on this 13th day of September 2024, I caused a true and correct copy of the foregoing to be electronically filed with the Clerk of the Court of the United States Court of Appeals for the District of Columbia Circuit by using the CM/ECF system. I certify that all participants in the case are registered CM/ECF users, and that service will be accomplished by the CM/ECF system.

/s/ Jenny R. Buchheit

Jenny R. Buchheit