UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

New Source Performance Standards for Greenhouse Gas Emissions From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule	)	**Docket No. EPA–HQ–OAR–2023–0072** *Via Regulations.gov* *December 20, 2023*

Comments of Sierra Club, Earthjustice, and Environmental Defense Fund

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I. Introduction

Sierra Club, Earthjustice, and Environmental Defense Fund appreciate this opportunity to provide these comments in response to the Environmental Protection Agency's (EPA) supplemental notice of proposed rulemaking,[1] regarding EPA's proposed rule entitled *New Source Performance Standards for Greenhouse Gas Emissions From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule*.[2]

As in our August submissions, we emphasize at the outset of these comments that climate change poses an urgent and critical threat to public health and welfare, and that fossil fuel-fired power plants significantly and disproportionately contribute to the climate crisis and to conventional pollution that has devastating impacts to public health.[3] Given these stakes, it is imperative that EPA swiftly finalize its proposal when it issues a final rule (Rule) to establish nation-wide limits on carbon pollution from fossil fuel-fired electric generating units (EGUs). Further, as detailed throughout our prior comments, EPA must strengthen its proposal to achieve additional emissions reductions, consistent with EPA's duties under the Clean Air Act (CAA).[4] Across the country, there is already clean, affordable, and reliable power at scale, and there is every indication and ample solutions to ensure that low cost, affordable clean energy will continue to support a reliable grid.

These comments respond to the agency's request for additional feedback on the issue of grid reliability. In particular, we write here regarding EPA's request for "detailed comment on whether the Agency should include a specific mechanism or mechanisms to address grid reliability needs that may arise during implementation of its final rules."[5] We urge EPA not to adopt any additional mechanism as part of the Rule, as additional mechanisms would be unnecessary to ensure reliability and would threaten to undermine the Rule.

As explained in these comments, numerous factors independent from the EPA's ultimate Rule—including technological developments, market economics, state policies, private sectors commitments, and historic federal legislation—are already driving a power sector transition from fossil fuel-fired EGUs to clean energy resources.[6] While, if fully adopted, the proposed rule will

[1] 88 Fed. Reg. 80,682 (Nov. 20, 2023).
[2] 88 Fed. Reg. 33,240 (May 23, 2023).
[3] Comments of Sierra Club, Earthjustice, Conservation Law Foundation, and Appalachian Voices at 1–3 (Aug. 18, 2023) (Sierra Club et al. Comments), EPA-HQ-OAR-2023-0072-0813; Comments of Environmental Defense Fund at 6–13 (Aug. 15, 2023) (EDF Comments), EPA-HQ-OAR-2023-0072-0764.
[4] *See generally* Sierra Club et al. Comments; EDF Comments.
[5] 88 Fed. Reg. at 80,684.
[6] For in-depth discussion of factors driving the power sector transition, see Susan F. Tierney, Analysis Grp., *U.S. Coal-Fired Power Generation: Market Fundamentals as of 2023 and Transitions Ahead* (Aug. 8, 2023),

secure critical emissions reductions from the most polluting portion of the power sector, EPA's own analyses show that it will have only incremental effects on fossil fuel-fired EGUs' operations and retirement decisions, compared to the larger, ongoing energy transition. Notably, the proposed rule provides significant flexibilities in its compliance obligations, and its ample lead times will facilitate planning and market responses to address any such effects.[7]

There is already in place a comprehensive set of tools and mechanisms for ensuring future grid reliability. Many entities (including federal regulators, grid operators, and states) have broad authority over the different aspects of the power sector that contribute to grid reliability, and they are actively planning for the larger changes associated with the ongoing energy transition. These comments detail critical areas in which the Federal Energy Regulatory Commission (FERC) and entities within its jurisdiction can take action to facilitate future grid reliability and—importantly—have recently taken significant strides in doing so. These areas include:

- Streamlining outdated interconnection processes that have left new generators (including thousands of gigawatts of proposed clean energy resources) stranded for years;
- Proactively planning for and building transmission to facilitate integration of clean energy resources, particularly regional and interregional transmission that plays a key role in a more efficient, reliable, and resilient grid;
- Removing market barriers and updating processes to maximize the full suite of grid contributions from a diverse array of resources, including wind, solar, storage, demand response, and distributed resources;
- Reforming resource adequacy and capacity accreditation processes to properly value resources' reliability contributions, including addressing current gaps that overvalue fossil fuel-fired generation.

As explained herein, these tools and mechanisms provide numerous options to plan for and ensure future grid reliability, even with any incremental effects to the energy transition from EPA's Rule. As such, there is little reason for concern that reliability issues would result from the implementation of the Rule itself.

While these planning tools should be sufficient to prevent reliability issues from arising, there are nonetheless existing outlets for responding to any unforeseen reliability challenges that do emerge. These include statutory mechanisms under the CAA and Federal Power Act (FPA),

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https://www.analysisgroup.com/globalassets/insights/publishing/2023-tierney-coal-generation-report.pdf (Tierney, *U.S. Coal-Fired Power Generation*), included as Exhibit 1; *see also* Susan F. Tierney, Analysis Grp., *Electric System Reliability and EPA Regulation of GHG Emissions from Power Plants: 2023*, (Nov. 7, 2023), https://www.analysisgroup.com/globalassets/insights/publishing/2023-tierney-electric-reliability-and-epa-ghg-regs.pdf (Tierney, *Electric System Reliability*), included as Exhibit 2.

[7] For additional discussion of flexibilities included in the proposed rule and other reliability-related themes, see Tierney, *Electric System Reliability*, *supra* note 6.

including EPA's proposed administrative compliance order mechanism. This comprehensive framework of planning tools and statutory mechanisms renders it unnecessary for EPA to include an additional reliability mechanism that would risk diluting critical pollution standards and undermining efforts to plan for the energy transition.

Finally, these comments emphasize our opposition to specific reliability measures proposed in comments from several regional transmission organization/independent system operators (RTO/ISOs), including a reliability-based subcategory that would give each RTO/ISO broad discretion to exempt EGUs from compliance with EPA's standards.[8] These proposals have legal flaws, lack adequate safeguards, and risk exacerbating harms to affected communities.

II. The grid is shifting away from fossil fuels, and towards clean energy resources, regardless of EPA's Rule.

The U.S. power grid has seen significant change in the last two decades. Twenty years ago, coal made up more than half of the U.S. electricity mix. Wind and solar power made up just 0.3 percent of the grid and, in total, renewables (mainly hydro) made up about 7.5 percent of the grid.[9] Gas comprised about 17 percent of the electricity mix in 2003. Today, coal's share has fallen by more than two-thirds. The Energy Information Administration (EIA) estimates that coal will make up just 19 percent of the electricity mix this year and renewables will provide 21 percent (of which wind and solar now make up almost 70 percent of the renewable mix).[10] The transformation of the U.S. power grid is only projected to accelerate over the coming years. Economic factors, magnified by the historic investments provided by the Inflation Reduction Act (IRA), are already accelerating the shift to cleaner generation, reducing electricity costs, and lowering climate and air pollution. Of the 221 GW of net capacity additions over the last decade, almost three-fourths were renewable facilities, while less than one-fourth of net capacity additions were gas-fired. This trend has continued into 2023.[11] Wind, solar, and storage combined are estimated to make up 82 percent of new electric capacity additions this year, with solar accounting for more than half of that figure.

Multiple factors—entirely independent of EPA's proposed rule—are driving this shift. First, clean energy resources are more cost-effective for utilities, businesses, and consumers particularly with the power sector provisions of the IRA. With the value of the IRA production and investment tax credits, the levelized cost of new renewables and solar plus storage can be equivalent to or lower cost than just the marginal (operating) cost of existing fossil-fired power

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[8] *See* Joint Comments of Electric Reliability Council of Texas, Inc. et al. (Aug. 8, 2023) (Joint ISOs/RTOs Comments), EPA-HQ-OAR-2023-0072-0673.

[9] EIA, *Electricity Data Browser, Net Generation, United States, All Sectors*, https://www.eia.gov/electricity/data/browser/ (last visited Dec. 20, 2023).

[10] EIA, *Frequently Asked Questions, What is U.S. electricity generation by energy source?* (Oct. 20, 2023), https://www.eia.gov/tools/faqs/faq.php?id=427&t=3#:~:text=About%2060%25%20of%20this%20electricity,was%20from%20renewable%20energy%20sources.

[11] Tierney, *U.S. Coal-Fired Power Generation*, *supra* note 6.

plants. According to Lazard's 2023 Levelized Cost of Energy Plus, the marginal operating cost of coal ranges from $29 to $74 per MWh (mean of $52/MWh). For combined cycle gas plants, the figure ranges from $51 to $73 per MWh (mean of $62/MWh).[12] In contrast, when including the tax credit provisions of the IRA, the cost of new solar ranges from $0 to $88 per MWh and new wind ranges from $0 to $66 per MWh across the U.S.[13] In other words, it is now cheaper to *build and operate* renewables than to simply *operate* fossil units.

Second, local, state, and federal policymakers, and individual corporations and utilities all recognize the need to address climate change, the impacts of which are becoming more and more dire with each passing day, and which will only accelerate without deep and rapid decarbonization measures (such as EPA's Rule). Indeed, climate change itself threatens grid reliability: an increased frequency and severity of extreme weather events and temperature spikes driven in large part by climate change have already impacted energy infrastructure and supply, with impacts expected to be more pronounced as climate change worsens. Recent extreme weather events, such as Winter Storm Elliott in PJM Interconnection (PJM) and surrounding grid regions, have highlighted the vulnerability of fossil plants under these extreme conditions.[14] In recognition of the serious climate, public health, and economic threats posed by greenhouse gas emissions, states across the country have already established clean energy policies,[15] including 23 states with 100 percent clean energy goals and/or legislative mandates that include interim targets for 2030 and 2035.[16]

III. EPA's own analysis shows that the Rule will have only incremental effects on the future resource mix, compared to the energy transition already underway.

EPA's Rule will provide meaningful and much needed emission reductions from power plants. Nonetheless, EPA's analysis reasonably reflects that the Rule will have only incremental effects on the future resource mix, given the other economic, technological, and policy factors that are already driving a transition to clean energy.

EPA's baseline case (i.e., absent any section 111 rule) appropriately captures these larger forces. For instance, a recent meta-analysis examined 11 independent analyses, including EPA's

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[12] George Bilicic & Samuel Scroggins, *Lazard's Levelized Cost of Energy Analysis—Version 16.0*, at slide 6 (Apr. 2023), https://www.lazard.com/media/2ozoovyg/lazards-lcoeplus-april-2023.pdf.

[13] *Id.*

[14] FERC, *Winter Storm Elliott Report: Inquiry into Bulk-Power System Operations During December 2022* 45-52 (Nov. 7, 2023), https://www.ferc.gov/media/winter-storm-elliott-report-inquiry-bulk-power-system-operations-during-december-2022, included as Exhibit 3.

[15] *See* Nat'l Regul. Rsch. Inst., *State Clean Energy Policy Tracker*, https://www.naruc.org/nrri/nrri-activities/clean-energy-tracker/ (last visited Dec. 20, 2023).

[16] Clean Energy States Alliance, Tale of 100% Clean Energy States, https://www.cesa.org/projects/100-clean-energy-collaborative/guide/table-of-100-clean-energy-states/#:~:text=There%20are%20currently%2022%20states,including%20Puerto%20Rico%2C%20click%20here (last visited Dec. 20, 2023).

own modeling runs, focusing on the impact of the IRA on power sector outcomes.[17] Across all analyses, the study showed a dramatic shift to clean energy, with average projected growth rates for wind and solar ranging from 10–99 GW per year (56 GW/year average) annually through 2035 across the 11 models, well above the annual record (as of November 2023) of 32 GW installed in 2021.[18] The study further demonstrates that EPA's modeling of a baseline case is well-aligned with average estimates across the literature, as other commenters have detailed.[19] While the study identifies policy issues that are difficult to model, such as bottlenecks with FERC's interconnection process, it recognizes and elevates the need for FERC and others to take action to address these issues in a timely manner.[20]

Against this backdrop, EPA's Rule will have a comparatively modest impact. Indeed, as described below, EPA's proposal requires many generators to make few or no changes, and additional improvements are economically achievable.[21] And the proposal includes significant flexibilities, allowing generators to choose among tiered, staggered compliance obligations.[22] EPA's own modeling of the Rule's impacts likewise shows only incremental grid impacts relative to that of the IRA and underlying market conditions. For instance, EPA projects an additional 1 GW of coal retirements by 2030 (relative to 104 GW of coal retirements under the updated baseline), an additional 23 GW of coal retirements by 2035 (relative to a baseline of 97 GW of coal retirements), and an incremental 17 GW of coal retirements by 2040.[23] While that modeling is illustrative in nature and does not seek to project actual compliance decisions by specific units,[24] the results are nonetheless indicative of the relative scale of impacts due to EPA's Rule. Although these impacts will provide much-needed climate and public health benefits, they are quite modest compared to the larger trends described above.

These analyses are likewise consistent with the significant compliance flexibilities incorporated into EPA's Rule. As explained in the next section, the Rule's flexibilities will align compliance obligations with grid operation needs and facilitate planning for future grid reliability.

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[17] Bistline et al., *Power sector impacts of the Inflation Reduction Act of 2022*, Env't Rsch. Letters 19 (Nov. 30, 2023), https://iopscience.iop.org/article/10.1088/1748-9326/ad0d3b/meta (Bistline Report), included as Exhibit 4.

[18] *Id.* at 4.

[19] Comments of Clean Air Task Force et al. at 37–51 (Aug. 8, 2023), EPA-HQ-OAR-2023-0072-0893.

[20] Bistline Report, *supra* note 17, at 4, 9. As discussed further below, FERC recently issued an order to modernize and speed up interconnection queue processes and has announced that it intends to undertake further reforms in this area. *See infra*, Part V.B.

[21] *See infra*, Part IV.A.

[22] *See infra*, Part IV.A.-C.

[23] EPA, Integrated Proposal Modeling and Updated Baseline Analysis at 29–30 (July 7, 2023), EPA-HQ-OAR-2023-0072-0237.

[24] *See* 88 Fed. Reg. at 33,409.

IV. EPA's Rule—even as strengthened in accordance with our prior comments—contains flexibilities to accommodate grid reliability issues.

EPA must strengthen the Rule to achieve the greatest possible reduction in carbon pollution emissions from affected power plants. Commenters' previous recommendations discuss how achieving the environmental and health benefits mandated by section 111 of the Clean Air Act aligns with measures that are achievable and cost-effective, all while ensuring the operation of a reliable grid.[25]

As detailed in prior comments, we urge EPA to strengthen the proposal in a variety of ways, including basing the intermediate load subcategory for new gas units on combined cycle technology instead of simple cycle technology;[26] lowering the proposed 20 percent capacity factor threshold between the low and intermediate load subcategories for new gas units[27] and covering the full scope of existing gas units;[28] basing the standards for each subcategory on state-of-the-art thermal efficiency[29] and recalculating the baseline emission reduction rates for all affected combustion turbines;[30] and not exempting new combustion turbines below 25 MW in capacity from regulation under the program.[31]

Even when strengthened in those and other ways discussed by commenters, EPA's Rule would still provide for significant flexibility, obviating any concerns about its impact on grid reliability.

A. Subcategories based on utilization and annual averaging of capacity factors allow gas units to assist with covering peak electric demand, including during unanticipated events.

By categorizing gas units by utilization, the structure of the Rule supports grid reliability by ensuring that peaking plants can continue to supplement base load generation and contribute electricity to the grid during swings in electricity demand. The proposed compliance obligations for gas units vary in stringency based on each source's capacity factor, which will help support operation of a reliable grid. The Rule applies the least stringent standards to infrequently used "peaker" units that can support reliability in times of peak grid operation. For new gas units, the least stringent standards apply to units that operate less frequently while the most stringent standards apply to units that operate most frequently.[32] As noted above, we advocate that EPA lower the threshold separating intermediate from low load units, but our proposal does not change this fundamental structure. For existing gas units, only units larger than 300 MW that

[25] *See generally* Sierra Club at al. Comments; EDF Comments.
[26] Sierra Club et al. Comments 7–19; EDF Comments at 32–33.
[27] Sierra Club et al. Comments at 19–29; EDF Comments at 32–35.
[28] Sierra Club et al. Comments at 40–46; EDF Comments at 35–38.
[29] *See* EDF Comments at 34–35; Sierra Club et al. Comments at 27–29.
[30] *See* Sierra Club et al. Comments at 27–29.
[31] *See id.* at 29–30.
[32] *See* Tierney*, Electric System Reliability*, *supra* note 6, at 29.

operate above a 50 percent capacity factor are subject to the proposed standards.[33] Here again, even if (as we advocate) EPA ultimately adopts standards for *all* existing gas units, whatever approach it takes will certainly end up imposing more stringent requirements on the most frequently operated units and less stringent requirement on other units, ensuring that peaker plants will be able to comfortably operate in periods of high demand while still complying with their emission limits.

The Rule further provides flexibility by allowing for annual averaging of capacity factors, which will allow units to operate temporarily above usual levels should they need to do so, provided that their *annual* average does not exceed the regulatory limit. In addition, under EPA's "system emergency" provision,[34] electricity sold when a unit is called on to operate during a reliability emergency is not counted toward the capacity factor threshold.[35] This feature further supports system reliability, particularly during any unanticipated emergencies such as extreme weather events. Thus, even with the more stringent thresholds called for by commenters, the Rule will still provide ample room for gas plants to operate when needed to ensure reliability, all while establishing the most stringent requirements for a small portion of the fleet.[36]

This structure will further support reliability by ensuring that new and existing peaking units continue to operate during extreme weather events, and if anything, provides gas units with *too much* flexibility. These capacity factor thresholds must be made more stringent to avoid harmful leakage and erosion of public health benefits by causing units to shift generation to units operating under less stringent standards. As previously detailed by commenters, the proposed standards for new gas allow peaking units to operate significantly above a typical peaking unit's capacity factor.[37] And for existing gas, units under a 50 percent capacity factor are not subject to any standards, only covering an exceedingly small portion of the fleet.[38] Instead of complying with emission limits, higher capacity units may choose to lower their capacity to avoid applicability, thereby leading to a loss in potential carbon pollution reductions.

To avoid potential erosion of public health protections, the standards for certain gas subcategories should be strengthened by lowering the capacity factor. Even with the more stringent thresholds called for by commenters, the thresholds still provide ample room for gas plants to operate and still only impact a small portion of the fleet.

B. Categorizing coal units by operating horizon allows for transparency into retirement commitments and facilitates grid reliability planning.

The Rule's compliance obligations for existing coal units vary based on a unit's operating horizon. This subcategory structure considers the cost reasonableness of emissions controls on a unit that may instead choose to retire in the nearer term. As currently proposed, state plans—which would include all coal unit owners' and operators' subcategory elections and retirement

[33] 88 Fed. Reg. at 33,245.
[34] *Id.* at 33,333 (citing 40 C.F.R. pt. 60, subpt. TTTT; proposed 40 C.F.R. pt. 60, subpt. TTTTa).
[35] *Id.*
[36] *See* EDF Comments at 32–38; Sierra Club et al. Comments at 7–31.
[37] EDF Comments at 32–35; Sierra Club et al. Comments at 19–29.
[38] EDF Comments at 35–38; Sierra Club et al. Comments at 40–46.

commitments[39]—are due two years after the Rule's finalization, after which EPA must then approve or disapprove the plan.[40] Based on this timeline, reliability authorities will likely have knowledge of federally enforceable retirement commitments by August 2027 (and of the utilities' proposed compliance plans well in advance of that date), thus providing much-needed transparency for anticipated retirements and facilitating reliability planning prior to the commencement of any compliance obligations, which at the earliest would begin in 2030. This is more than enough time for utilities and regulators to make any necessary preparations to ensure grid reliability in response to any coal retirements that are instigated or accelerated as a result of the Rule.

In addition, the Rule's compliance milestones will help to facilitate orderly retirement and reliability planning. These milestone obligations require that unit owners and operators coordinate with local reliability authorities prior to the unit's anticipated retirement date.[41] The proposal also includes recordkeeping and reporting requirements that provide further transparency to all grid authorities on retirement commitments associated with subcategory elections.[42] As such, the Rule will actually help alleviate some of the existing uncertainty around coal retirement dates that can lead to reliability concerns by requiring utilities and state regulators to engage in early and transparent decision making around when existing coal units will be retired.

C. Ample lead times allow adequate time for compliance planning and grid planning.

The ample lead time for compliance will allow owners, operators, and grid authorities sufficient opportunity to facilitate the needed planning, permitting, and construction activities required for a coal unit's chosen compliance pathway. The Rule does not require coal units that retire by 2032 to make *any* emissions reductions relative to baseline operations, and coal units that accept a maximum capacity factor of 20 percent starting in 2030 may operate until 2035 with no emission reduction obligations beyond business as usual. In addition, coal units that choose to retire in 2035 and beyond have six years after the Rule's finalization to comply with their chosen pathway. The current proposal gives existing gas plants either eight or eleven years after the Rule's finalization to comply, based on their chosen pathway.

These long lead times allow ample time for compliance, and for planning and operation of a reliable grid.[43] As discussed above, the chosen compliance pathways for existing units, including coal units that choose to retire, will be available to reliability authorities to plan far in advance of any compliance obligations and with ample time before the most stringent standards commence. In fact, still greater emission reductions can be achieved from existing units without sacrificing grid reliability. Such additional opportunities, such as through heat rate improvements

[39] 88 Fed. Reg. at 33,397, 33,402–03.
[40] *Id.* at 33,406.
[41] *Id.* at 33,390.
[42] *Id.* at 33,400.
[43] *See* Tierney, *Electric System Reliability*, *supra* note 6, at 29–30.

through enhanced operation and maintenance practices and equipment upgrades, are discussed in our earlier comments.[44]

D. While the proposal's state plan revision framework provides additional flexibility, EPA should ensure that it is narrowly tailored and protects communities' health.

EPA's proposal to allow targeted, unit-specific variances in state plans through the remaining useful life and other factors (RULOF) framework provides additional flexibility. This provision allows a state to apply for and receive a revision to its implementation plan where an individual unit can show that after diligently implementing its chosen emissions reduction strategy it has encountered truly extenuating circumstances—not within the control of the owner and operator—representing "fundamental differences" from the circumstances EPA considered when setting the presumptive BSER, such that the unit cannot meet the standard on time.[45] In this limited context, plan revisions through RULOF facilitating longer compliance schedules could address infrastructure-related challenges specific to the unit, such as significant delays in the installation of required equipment that would otherwise cause the unit to be in non-compliance with its emissions standard.[46] Increments of progress should provide early notice if a source will not be able to meet a compliance date so that a plan revision can be submitted with long enough lead time to be approved by EPA before the compliance deadline.[47]

However, to avoid circumvention of the Clean Air Act's core public health purpose, EPA must ensure that states' use of RULOF is narrowly tailored; any RULOF-based revision must be amply supported *and* protect affected communities' health.[48] The proposal requires states to provide substantial evidence of the fundamentally changed circumstances causing the unit to fall short of its compliance deadline, evidence that the unit has been complying with increments of progress and milestones, and evidence that the circumstances were not due to a self-created impossibility.[49] A successful showing would provide for only a delay in compliance, not a substantive relaxion of the emissions standard, save for the most extreme circumstances where a unit cannot comply with its standard at *any* future date.[50]

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[44] *See* Sierra Club et al. Comments at 32–54; EDF Comments at 35–38.
[45] *See* 40 C.F.R. § 60.24*a*(e)(2) (effective Dec. 18, 2023); 88 Fed. Reg. at 33,404-05 (describing state plan revision process and proposing the limited circumstances when states could use RULOF variances to adjust deadlines when an individual unit cannot comply with the presumptive standard by the compliance deadline).
[46] 88 Fed. Reg. at 33,404 (providing examples of unforeseen situations beyond the control of the operator that may necessitate changes through revision after plan approval, including when it is not "possible to complete the necessary planning and construction within a shortened timeframe" and the problem "was not caused by a self-created impossibility").
[47] *Id.* at 33,388–90.
[48] See Sierra Club et al. Comments at 82–85; EDF Comments at 51–53.
[49] 88 Fed. Reg. at 33,404.
[50] *Id.* at 33,404–05.

In addition to requiring substantial evidence to permit a plan revision through RULOF, EPA should, in the Rule, supersede its section 111(d) implementing regulations and require states to conduct meaningful engagement to adequately assess the effects of RULOF variances on the most impacted communities, as it has proposed,[51] and also meaningfully address any impacts from a RULOF variance, as commenters have requested.[52] Although EPA decided against including this element in its recent revisions to the general implementing regulations that apply to all existing source categories, it allowed for individual emissions guidelines to supersede these default requirements.[53] The large volumes of pollution emitted in the power plant context greatly intensify the stakes of any compliance delays for these sources. Thus, the impacts of additional power plant emissions on communities' health warrant a comprehensive understanding of the effects of delaying pollution control through RULOF. EPA should therefore finalize the proposed meaningful engagement procedures requiring that states pay special attention to the increased pollution and health impacts of RULOF variances on the most impacted communities.

V. Existing reliability tools and mechanisms are sufficient to ensure a reliable grid under changing conditions, including any effects from EPA's Rule.

As an initial matter, we emphasize that reliability authorities[54] have an obligation to ensure a reliable grid that accounts for changes in the power sector due to economic forces, regulatory requirements, and other factors. Reliability authorities have a long history of meeting this obligation against the backdrop of federal and state environmental regulations,[55] and they are fully equipped to continue doing so with respect to EPA's Rule.

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[51] *Id.* at 33,386 ("A lack of consideration of such potential outcomes would be antithetical to the public health and welfare goals of CAA section 111(d).").

[52] *See* EDF Comments at 51–53 ("EPA should add more specific substantive obligations, such as by committing to disapprove any less stringent standard that increases harm on vulnerable communities, and requiring states to consider at least three contrasting control options for potential RULOF sources to ensure a thorough comparison of the health and welfare risks to the most vulnerable and affected communities, as well as possible pathways to avoid these dangers." (footnotes omitted)); Joint Environmental Commenters, Comments on Adoption and Submittal of State Plans for Designated Facilities: Implementing Regulations Under Clean Air Act Section 111(d), at 12 (Feb. 27, 2023), EPA-HQ-OAR-2021-0527-0099 ("The agency should commit to disapproving any less effective standard that would increase harm to such a [vulnerable] community."), included as Exhibit 5.

[53] Adoption and Submittal of State Plans for Designated Facilities; Implementing Regulations under Clean Air Act Section 111(d), 88 Fed. Reg. 80,480, 80,528–29 (Nov. 17, 2023).

[54] We use "reliability authorities" to broadly encompass the many entities with authority over aspects of the electric system, FERC, the North American Electric Reliability Corporation (NERC) and regional reliability organizations, state public utility commissions, RTO/ISOs, balancing area authorities, regional transmission planning entities, and individual utilities.

[55] *See, e.g.*, Tierney, *Electric System Reliability*, *supra* note 6, at 15–22 (describing misplaced concerns regarding implementation of prior EPA regulations).

As explained below, there is already a comprehensive framework of tools and mechanisms sufficient to address the energy transition, including any additional effects from the Rule. Reliability authorities have broad authority over critical aspects of the power system, providing a diverse array of tools that they use to facilitate a reliable grid. *See infra*, Part V.A. These entities are actively applying these tools to plan for future grid reliability given the ongoing energy transition. *See infra*, Part V.B. We highlight notable progress that FERC and other reliability authorities have made, as well as further steps that they are undertaking (or stakeholders are advocating for them to undertake) to plan for and facilitate future grid reliability. *Id.* And even if, despite these tools, the Rule were to result in reliability issues, there are additional statutory mechanisms, including EPA's proposed administrative compliance order process under CAA section 113, to address such unforeseen circumstances. *See infra*, Part V.C.[56]

Because these reliability tools and mechanisms are sufficient to address the Rule's incremental effects, EPA should not include an additional reliability mechanism. An additional mechanism would be both unnecessary and counterproductive, undermining efforts to plan for the ongoing energy transition. *See infra*, Part V.D.

A. FERC, RTO/ISOs, and states have broad authority over myriad aspects of the power system that are critical to reliability.

The FPA vests FERC with expansive jurisdiction over the bulk power system, including specific regulatory responsibility for reliability.[57] Broadly speaking, FERC exercises that authority in two categories that are particularly relevant to reliability.

First, FERC oversees and approves electric reliability standards developed by the North American Electric Reliability Corporation (NERC)—the national certified electric reliability organization—and six regional reliability entities.[58] These reliability standards govern critical aspects of grid operation, including transmission operations, transmission planning, essential reliability services, and emergency preparedness.[59] Generators, grid operators, and other relevant entities must follow NERC's standards.

Second, FERC regulates utility rates and charges for electricity sales and transmission within FERC's jurisdiction, as well as rules, regulations, and practices affecting those rates and charges.[60] FERC regulates these matters by reviewing tariffs of individual utilities or RTO/ISOs, as well as issuing rules setting standards that apply to all such entities. In this role, FERC oversees important pieces of the reliability framework, including interconnection of new

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[56] As we explain in Part V.C, we agree that EPA's proposed administrative compliance order process, subject to the constraints of CAA section 113, is an appropriate, limited mechanism to include in the Rule. However, we urge EPA to provide an opportunity for public comment on these important decisions.

[57] *See* 16 U.S.C. § 824*o*(b) (electric reliability); *see also id.* § 824(b) (transmission and wholesale sales of electric energy in interstate commerce).

[58] 16 U.S.C. § 824*o*(b), (d).

[59] *See generally* NERC, *Reliability Standards*, https://www.nerc.com/pa/Stand/Pages/ReliabilityStandards.aspx (last visited Dec. 20, 2023).

[60] 16 U.S.C. §§ 824*d*(a), 824*e*(a).

generation to the grid, transmission planning, procurement of ancillary services, rules affecting market participation, and generator retirements.

RTO/ISOs are independent entities that operate large portions of the bulk power system (often spanning multiple states). RTO/ISOs generally use bid-based markets to procure energy and reliability services, which they then dispatch across their footprints. These markets determine which generators run and send price signals to incent efficient entry and exit from the power markets, ensuring the development of new resources to replace those that are retiring.[61] FERC is responsible for oversight of these RTO/ ISOs, providing guidance and requirements for and approval of their market designs and operations.

In addition to FERC's and grid operators' roles, states retain authority over retail electric sales and the generation mix within their states.[62] State regulators (e.g., public utilities commissions) thus have a significant role in ensuring system reliability and evaluating the reasonableness of a utility's planned generation mix, which they execute using a variety of proceedings. Many states use Integrated Resource Planning (IRP) proceedings to evaluate utilities' long-term planning to ensure the development of new generators, implementation of demand-side management programs, and the related transmission capacity needed to satisfy anticipated load growth and generator retirements. For short- and near-term generator resources planning (e.g., Resource Adequacy), states, like California, have the authority to establish mechanisms to ensure that utilities procure enough energy to meet the usage demands in their service territory and to dictate the types of resources from which utilities must procure energy. States with vertically integrated utilities also oversee decisions by those utilities about whether to invest in order to meet new environmental regulations at their existing generation facilities, or to instead retire those facilities based on assessments that replacement generation or demand-side resources would be more cost-effective.

B. FERC and other reliability authorities can exercise their authority to take significant steps to plan for and ensure future grid reliability, and they have taken important strides in doing so.

As discussed above, the grid is already shifting from fossil fuel generation to clean energy resources due to market factors, technological improvements, state and private sector policy decisions, and federal funding. Accordingly, FERC, grid operators, utilities, and other stakeholders are already planning for a decarbonized grid, irrespective of EPA's Rule.[63]

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[61] *See, e.g.*, PJM, *PJM Capacity Market: Promoting Future Reliability* (Sept. 23, 2022), https://www.pjm.com/-/media/about-pjm/newsroom/fact-sheets/pjm-capacity-market-promoting-future-reliability-fact-sheet.ashx.

[62] *See* 16 U.S.C. § 824(a), (b)(1); *Hughes v. Talen Energy Mktg., LLC*, 578 U.S. 150, 154 (2016).

[63] *See, e.g.*, Modernizing Wholesale Electricity Market Design, 179 FERC ¶ 61,029, at P 1 (Apr. 21, 2022) (directing RTO/ISOs to file report regarding "changing resource mixes and load profiles," expected changes over the next five and ten years, and potential reforms);

Collectively, these entities have already identified significant improvements within FERC's jurisdiction—and in many cases, within the primary control of grid operators like RTO/ISOs—that will help ensure future grid reliability, even accounting for any incremental changes attributable to EPA's Rule. Many of these improvements are already underway. We highlight several of the most important improvements here, although this list is not exhaustive.[64]

First, FERC and NERC can develop reliability standards to address future grid issues. For instance, in February of this year, FERC approved NERC standards for extreme cold weather—an increasingly frequent and severe threat due in large part to climate change[65]—and directed NERC to strengthen the standards even further.[66] And in October, FERC directed NERC to develop new reliability standards for inverter-based resources (e.g., wind, solar, and storage), which will further ease the reliable integration of those resources onto the grid.[67]

MISO, *MISO's Response to the Reliability Imperative* 4–5 (rev. Jan. 2023) (noting that "[m]any MISO members and states have set ambitious goals to partially or fully decarbonize their fleets of generating resources" and stating MISO's commitment to "reliably operate whatever resource mix utilities and states decide to build"), https://cdn.misoenergy.org/MISO%20Response%20to%20the%20Reliability%20Imperative504018.pdf; ISO New England, *New England's Future Grid Initiative Key Project*, https://www.iso-ne.com/committees/key-projects/new-englands-future-grid-initiative-key-project/ (last visited Dec. 20, 2023) (describing future grid reliability efforts and observing: "New England is unquestionably on a path to a clean-energy future. Over the past 20 years, competitive wholesale electricity markets combined with state emission-reduction regulations and policies have driven a dramatic transition of the region's power fleet to cleaner, more efficient energy resources.").

[64] For additional discussion of longstanding reliability tools and practices, see Tierney, *Electric System Reliability*, *supra* note 6, and Susan Tierney, Analysis Grp., *Electric System Reliability and EPA's Clean Power Plan: Tools and Practices* ES-1 to T7 (Feb. 2015) (included as Attachment 1 to Tierney, *Electric System Reliability*).

[65] In contrast to claims that the transition to clean energy somehow threatens reliability, it is interesting to note that fossil generators have fared quite poorly during recent extreme winter events. For example, PJM data shows that during Winter Storm Elliott, 39 percent of gas capacity (33 GW out of 86 GW total) and 16 percent of coal capacity (7 GW out of 45 GW total) had forced outages, while wind resources performed above their expected capacity. PJM, *Winter Storm Elliott, Event Analysis and Recommendation Report* 49, 57–58 (July 17, 2023), https://pjm.com/-/media/library/reports-notices/special-reports/2023/20230717-winter-storm-elliott-event-analysis-and-recommendation-report.ashx, included as Exhibit 6. Similarly, MISO reported 23 GW of gas plant outages and 16 GW of coal plant outages during Winter Storm Elliott, while wind production remained high and provided support to the transmission system. MISO Reliability Subcomm., *Overview of Winter Storm Elliott December 23, Maximum Generation Event* 10–11 (Jan. 17, 2023), https://cdn.misoenergy.org/20230117%20RSC%20Item%2005%20Winter%20Storm%20Elliott%20Preliminary%20Report627535.pdf, included as Exhibit 7.

[66] *See N. Am. Elec. Reliability Corp.*, 182 FERC ¶ 61,094 (2023).

[67] Reliability Standards to Address Inverter-Based Resources, 185 FERC ¶ 61,042 (2023).

Second, FERC can improve interconnection processes to facilitate the rapid deployment of clean energy resources, including the many proposed projects already seeking approval to connect to the grid. More than 2,000 GW of proposed solar, wind, and battery storage currently sit in interconnection queues around the country, at various phases of the generator interconnection process.[68] These backlogged interconnection queues impose significant delays (often five years or more) and drive up costs,[69] ultimately reducing project completion rates and depriving consumers of the benefits of cheaper, cleaner electricity. While grid operators play the lead role in administering their own interconnection processes, FERC serves a critical function by approving interconnection processes and issuing rules that set minimum standards that those processes must meet to ensure that rates, terms, and conditions for wholesale electricity services are just, reasonable, and not unduly discriminatory or preferential.

FERC recently took an important step towards modernizing interconnection processes by issuing Order No. 2023, which implemented a series of overdue, commonsense reforms.[70] These reforms will result in faster, more efficient, and more transparent interconnection processes. There is room for further improvements, however. FERC can and should strengthen other aspects of interconnection processes, including addressing issues like improving clean energy developers' access the generator replacement process, which uses retiring generators' interconnection rights to quickly bring clean energy onto the grid.[71] Indeed, just yesterday, Chairman Phillips announced that FERC will convene a technical conference on further interconnection queue reforms.[72] And grid operators concerned about the ability to replace retiring generation need not wait for FERC action—they can go beyond Order No. 2023's minimum requirements to speed up their own processes.

Third, FERC, RTO/ISOs, and other planning authorities can make critical improvements to facilitate the planning and construction of necessary transmission infrastructure. Building new transmission infrastructure, as well as upgrading existing lines and installing grid enhancing technologies (GETs), results in a more efficient, reliable, and resilient grid. Transmission planning can proactively address future needs by prioritizing long-distance, high-capacity transmission projects that can connect generators located in areas possessing favorable wind and/or solar conditions with load centers of high demand. FERC is currently considering and

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[68] Joseph Rand et al., Lawrence Berkeley Nat'l Lab'y, *Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection as of the End of 2022* 3, (Apr. 2023), https://emp.lbl.gov/sites/default/files/queued_up_2022_04-06-2023.pdf, included as Exhibit 8.
[69] *Id.*
[70] Order No. 2023, 184 FERC ¶ 61,054 (July 28, 2023), *set aside in part on other grounds by* 185 FERC ¶ 61,063 (Oct. 25, 2023); *see also Explainer on the Interconnection Final Rule*, https://www.ferc.gov/explainer-interconnection-final-rule (last visited Dec. 20, 2023).
[71] FERC 2023 Reliability Technical Conference, Docket No. AD23-9-000, Statement of Robert Bradish, Senior Vice President, Regulated Infrastructure Investment Planning at American Electric Power Service Corporation at Transcript at 4, 7-8 (Nov. 8, 2023), https://www.ferc.gov/media/bradish-statement, included as Exhibit 9.
[72] FERC, *December Comm'n Meeting* at 45:00-45:18 (Dec. 19, 2023), available at https://www.ferc.gov/news-events/events/december-19-2023-open-meeting-12192023.

should quickly finalize a strong rule that ensures that utilities undertake long-term planning that considers multiple scenarios—including a business-as-usual scenario to meet the expected future resource mix.[73] But grid operators need not wait for FERC to act (and in many cases are not, as described below). They have existing tools and well-known practices to ensure robust transmission planning. Grid operators know what generation has requested to interconnect to the grid. While historically not all generation in the interconnection queue is built, grid operators can use probabilistic scenarios to plan for transmission to meet the needs of expected new generation. Many studies have shown growth in electrification and other load changes, and grid operators must start incorporating these foreseeable changes into their transmission plans.

Increased interregional transfer capabilities also allow grid operators to draw power from a greater diversity of sources across a broader footprint. This diversity, in turn, enables operators to better balance wind and solar resources throughout the year and generally makes dispatch of all resources more efficient. Interregional transfer capability has also proved particularly vital in recent extreme weather events such as Winter Storm Uri, where grid operating regions with strong interconnections to neighbors, like Midcontinent Independent System Operator (MISO), were able to weather the storm with minimal loss of load, while those with weak transmission ties, like Electric Reliability Council of Texas (ERCOT), fared far worse. During Uri, MISO was able to import 15 times as much power as ERCOT.[74] Given these efficiency and reliability benefits, grid operators must start planning for transmission between regions. While FERC has begun exploring interregional transfer requirements,[75] grid operators do not have to and should not wait for FERC or congressional action. Similarly, while Congress recently directed NERC to

[73] Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection, 179 FERC ¶ 61,028 (Apr. 21, 2022) (notice of proposed rulemaking); *see also, e.g.*, Comments of Pub. Interest Orgs., FERC Docket No. RM21-17-000 (Aug. 17, 2022), included as Exhibit 10.

[74] *See* NERC, *February 2021 Cold Weather Grid Operations: Preliminary Findings and Recommendations* 7 (Sept. 23, 2021), https://www.ferc.gov/media/february-2021-cold-weather-grid-operations-preliminary-findings-and-recommendations-full ("Overall, MISO's and SPP's ability to transfer power through their many transmission ties with adjacent Balancing Authorities in the Eastern Interconnection helped to alleviate their generation shortfalls, preventing more severe firm load shed."), included as Exhibit 11.

[75] Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection, 176 FERC ¶ 61,024 (July 15, 2021) (advance notice of proposed rulemaking); Staff-Led Workshop Concerning Establishing Interregional Transfer Capability Transmission Planning and Cost Allocation Requirements, FERC Docket No. AD23-3-000 (Dec. 5-6, 2022), https://www.ferc.gov/news-events/events/staff-led-workshop-establishing-interregional-transfer-capability-transmission.

prepare a report on interregional transmission capacity,[76] FERC need not wait to take action and has indicated that it does not intend for that NERC study to delay its progress.[77]

In short, grid operators and other planning authorities can strengthen their own processes and take the initiative to plan for and develop more regional and interregional transmission infrastructure. Indeed, some RTO/ISOs have made notable progress on that front. For instance, MISO has implemented a long-range transmission planning process based on future scenarios with increased reliance on member states' policies requiring a transition to clean energy resources. Notably, MISO's process is similar to proposals in FERC's pending rulemaking on transmission reforms. Pursuant to its long-range transmission planning process, MISO has identified four tranches of projects that, by addressing key regional transmission constraints, will support large amounts of new clean energy resources and deliver economic and reliability benefits.[78] Last July, MISO's Board approved the first tranche of projects, which are expected to support integration of 53 GW of clean energy.[79] MISO has also worked with a neighboring RTO/ISO (Southwest Power Pool, or SPP) to identify a series of transmission projects along the seam between the MISO and SPP regions that will provide a more cost-effective solution to bring an another estimated 30 GW of renewable generation online.[80] The Independent System Operator of New England (ISO New England) has likewise taken steps to evolve its long-term

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[76] Fiscal Responsibility Act of 2023, Pub. L. No. 118-5, § 322, 137 Stat. 10, 46 (2023).

[77] *Oversight of FERC: Adhering to a Mission of Affordable and Reliable Energy for America: Hearing Before Energy, Climate, and Grid Sec. Subcomm.*, 118th Cong. (June 13, 2023) https://www.youtube.com/watch?v=BZu41UWWwrI&t=3199s (statement of Willie Phillips, Chairman, FERC, beginning at 52:15).

[78] *See generally Long Range Transmission Planning*, https://www.misoenergy.org/planning/long-range-transmission-planning/ (last visited Dec. 20, 2023).

[79] *MISO Board Approves $10.3B in Transmission Projects* (July 25, 2022), https://www.misoenergy.org/meet-miso/media-center/2022/miso-board-approves-$10.3-in-transmission-projects; Clean Grid All., *Renewable Energy & Job Impacts via MISO's New Portfolio of Regional Transmission Lines*, https://cleangridalliance.org/_uploads/_media_uploads/_source/RE_and_Jobs_impacts_-_MISO_Tranche_1-converted.pdf (projecting 53 GW in additional clean energy), included as Exhibit 12.

[80] *See* MISO-SPP Joint Stakeholder Meeting, *MISO-SPP Joint Target Interconnection Queue Update* (Mar. 27, 2023), https://cdn.misoenergy.org/20230337%20MISO%20SPP%20JTIQ%20Update628357.pdf, included as Exhibit 13; Dep't of Energy, Grid Deployment Off., *Efficient and Collaborative Transmission Planning for the Central United States*, https://www.energy.gov/sites/default/files/2023-11/DOE_GRIP_3048_MN%20Dept%20of%20Commerce_v4_RELEASE_508.pdf, included as Exhibit 14.

transmission planning, initiating a study process that will use future scenarios to identify long-term transmission capacity needs in its service territory.[81]

The IRA and the Bipartisan Infrastructure Law also provided historic funding and new tools to drive transmission development. The Department of Energy, which implements many of these laws' provisions,[82] has already disbursed billions in financing for grid upgrades and the development and siting of large-scale transmission lines.[83] Those grants include an award of $464 million to the MISO-SPP joint transmission projects discussed above, which will, as noted above, unlock another 30 GW of clean energy.[84]

Fourth, FERC and grid operators can remove unnecessary barriers that prevent a diverse array of resources from making their full contributions to the grid. Battery storage—either stand-alone resources or hybrids paired with wind and/or solar—can balance the intermittent characteristics of renewable energy. Moreover, strategic dispatch of storage during times of peak demand can displace inefficient fossil-fuel fired peaker plants.[85] Demand response resources can likewise provide a variety of benefits, such as further reducing the need for inefficient peaking resources, quickly lowering demand during extreme weather events, and avoiding unnecessary grid build-out. Finally, inverter-based resources are technologically capable of providing operational reliability services.[86] Grid operators have yet to capture these resources' full potential, often moving slowly to adapt their market rules and processes to these emerging resources' characteristics—indeed, as discussed further below, inverter-based resources have

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[81] ISO New England, *Draft 2050 Transmission Study* 8-9 (Nov. 1, 2023), https://www.iso-ne.com/static-assets/documents/100005/2023_11_01_pac_2050_transmission_study_draft.docx, included as Exhibit 15.

[82] Grid Deployment Office, *Building a Better Grid Initiative*, https://www.energy.gov/gdo/building-better-grid-initiative (last visited Dec. 20, 2023).

[83] *Fact Sheet: Biden-Harris Administration Announces Historic Investment to Bolster Nation's Electric Grid Infrastructure, Cut Energy Costs for Families, and Create Good-paying Jobs* (Oct. 30, 2023), https://www.whitehouse.gov/briefing-room/statements-releases/2023/10/30/fact-sheetbiden-harris-administration-announces-historic-investment-to-bolster-nations-electric-grid-infrastructure-cut-energy-costs-for-families-and-create-good-paying-jobs/.

[84] *Id.*

[85] *See* Thomas Bowen et al., Nat'l Renewable Energy Lab'y, *Grid-Scale Battery Storage: Frequently Asked Questions* (Sept. 2019), https://www.nrel.gov/docs/fy19osti/74426.pdf, included as Exhibit 16.

[86] *See, e.g.*, Mike O'Boyle et al., Energy Innovation, *Maintaining a Reliable Grid under EPA's Proposed 111 Rules Restricting Power Plant Emissions* 19–24 (Nov. 2023), https://energyinnovation.org/wp-content/uploads/2023/11/Maintaining-a-Reliable-Grid-Under-EPAs-Proposed-111-Rules.pdf (describing how inverter-based resources can replace the essential reliability services provided by retiring fossil plants), included as Exhibit 17; NERC, *An Introduction to Inverter-Based Resources on the Bulk Power System* 4 (June 2023) ("Inverter-Based Resources . . . [c]an provide essential reliability services."), https://www.nerc.com/pa/Documents/2023_NERC_Guide_Inverter-Based-Resources.pdf, included as Exhibit 18.

been blocked from MISO's ancillary services market due to MISO's prolonged failure to update its software.[87]

Aside from that setback, FERC has taken steps to kick-start the needed transition. FERC has issued a series of landmark orders requiring RTO/ISOs to revise their market rules to remove barriers to participation by demand response,[88] battery storage,[89] and distributed energy resources.[90] In those orders, FERC has consistently found that enabling full participation by those resources will not only enhance competition and reduce costs, but also supply important contributions to grid reliability. Demand response can "support system reliability and address resource adequacy and resource management challenges surrounding the unexpected loss of generation" by supplying "quick balancing of the electricity grid."[91] Similarly, integrating "electric storage resources' unique physical and operational characteristics" will "help support the resilience of the bulk power system."[92] And distributed energy resources' "relatively short development lead time" allows them "to respond rapidly to near-term generation or transmission reliability-related requirements, further improving their ability to enhance reliability and reduce system costs."[93]

RTO/ISOs are still in the process of complying with these landmark orders, particularly the more recent ones regarding storage and distributed energy resources. RTO/ISOs should maximize the potential of those rapidly growing resources (including their reliability contributions) by swift and full implementation, and FERC should ensure that RTO/ISOs' new rules actually place resources on an even playing field.[94] Moreover, FERC should take action on its pending notice of inquiry to eliminate a state opt-out of Order No. 719's demand response

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[87] *See infra*, p.19.

[88] *See* Order No. 719, 125 FERC ¶ 61,071 (2008), *order on reh'g*, Order No. 719-A, 128 FERC ¶ 61,059 (2009), *order on reh'g*, Order No. 719-B, 129 FERC ¶ 61,252 (2009); Order No. 745, 134 FERC ¶ 61,187 (2011), *order on reh'g*, Order No. 745-A, 137 FERC ¶ 61,215 (2011), *order on reh'g*, Order No. 745-B, 138 FERC ¶ 61,148 (2012), *vacated sub nom. Elec. Power Supply Ass'n v. FERC*, 753 F.3d 216 (D.C. Cir. 2014), *rev'd & remanded sub nom. FERC v. Elec. Power Supply Ass'n*, 136 S. Ct. 760 (2016).

[89] Order No. 841, 162 FERC ¶ 61,127 (2018), *order on reh'g*, Order No. 841-A, 167 FERC ¶ 61,154 (2019), *aff'd sub nom. Nat'l Ass'n of Regul. Util. Comm'rs v. FERC*, 964 F.3d 1177 (D.C. Cir. 2020).

[90] Order No. 2222, 172 FERC ¶ 61,247 (2020), *order on reh'g*, Order No. 2222-A, 174 FERC ¶ 61,197 (2021), *order on reh'g*, Order No. 2222-B, 175 FERC ¶ 61,227 (June 17, 2021).

[91] Order No. 745, 134 FERC ¶ 61,187, at P 10; *see also* Order No. 719, 125 FERC ¶ 61,071, at P 54 (finding that "competitiveness within ancillary services markets, as well as the system reliability, would be enhanced through increased participation" by demand response resources).

[92] Order No. 841, 162 FERC ¶ 61,127, at P 2.

[93] Order No. 2222, 172 FERC ¶ 61,247, at P 4.

[94] *See, e.g.*, *Midcontinent Indep. Sys. Operator, Inc.*, 185 FERC ¶ 61,011, at PP 133–36 (2023) (finding that MISO's Order No. 2222 compliance filing had not justified a single-node limit on distributed energy resource aggregations); *id.*, at PP 410–12 (finding that MISO's proposed effective date of October 2029 did not implement Order No. 2222 in a timely manner).

participation requirements,[95] which would open up wholesale demand response in states that currently prohibit it.

In addition to implementing these orders, FERC and RTO/ISOs should eliminate additional barriers to clean energy resources providing grid reliability services. For instance, FERC recently approved contested MISO policies that exclude wind, solar, and hybrid resources from providing ancillary services.[96] In those proceedings, MISO acknowledged that some of these inverter-based resources "may be technically capable of providing ancillary services," but MISO claimed that it could not integrate the resources into those markets, in large part due to limitations in MISO's own software.[97] While FERC accepted MISO's rationale, the fact remains that MISO can and must quickly address those limitations.[98]

Fifth, FERC and RTO/ISOs can and should ensure that ongoing reforms to capacity auction and capacity accreditation processes result in frameworks that properly value resources' contributions to system reliability.[99] Capacity accreditation measures the contribution of individual generators towards resource adequacy.[100] Properly designed, these processes give grid operators an accurate picture of the system's reliability capabilities and provide generators the correct incentives to fill reliability needs.[101] However, many current rules bias these processes towards fossil-fuel generators and against clean energy resources, giving an inaccurate picture of reliability concerns and impeding an efficient energy transition. Perhaps most significantly, many grid operators fail to account for correlated outage risks (the likelihood that multiple resources of the same type will fail) for fossil-fuel resources.[102]

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[95] *See* Participation of Retail Demand Response Customers in Markets Operated by Regional Transmission Organizations and Independent System Operators, 174 FERC ¶ 61,198 (Mar. 2021) (notice of inquiry).

[96] *See Midcontinent Indep. Sys. Operator, Inc.*, 184 FERC ¶ 61,134 (2023); *Solar Energy Indus. Ass'n v. Midcontinent Indep. Sys. Operator, Inc.*, 184 FERC ¶ 61,137 (2023); *see also* 185 FERC ¶ 61,185 (2023) (denying rehearing on both orders).

[97] *Solar Energy Indus. Ass'n*, 184 FERC ¶ 61,137, at P 21.

[98] Indeed, two of the four Commissioners emphasized that their decision turned on "the particular factual circumstances" currently before them, and "strongly urge[d]" MISO to address the limitations in its software. *Solar Energy Indus. Ass'n*, 184 FERC ¶ 61,137, at PP 2, 4 (Phillips, Chairman, and Clements, Comm'r, concurring).

[99] *See* Derek Stenclik et al., Energy Sys. Integration Grp., *Ensuring Efficient Reliability: New Design Principles for Capacity Accreditation*, at 12 (Feb. 2023) (noting new or proposed capacity market rules over the past year in every RTO/ISO, as well as ERCOT and non-RTO/ISO areas), https://www.esig.energy/wp-content/uploads/2023/02/ESIG-Design-principles-capacity-accreditation-report-2023.pdf, included as Exhibit 19.

[100] *See id.* at 1.

[101] *See id.* at 7–8.

[102] These correlated outage risks include extreme weather events that directly cause resources to fail (e.g., frozen equipment or heat stress) and indirectly impair necessary inputs (e.g., gas fuel supply in winter or lack of cooling weather in extreme heat and drought scenarios). *See*

There is widespread agreement that grid operators must improve these processes, particularly given the already changing resource mix, and grid operators are undertaking active reform efforts in many regions.[103] Many such proposals improve the status quo, but FERC and RTO/ISOs must ensure that these reforms result in non-discriminatory rules that properly value contributions from all resource types, including addressing correlated outage risks. Moreover, FERC can take a leading, proactive role by granting a recent request for a technical conference on capacity accreditation, which would allow FERC, grid operators, and stakeholders to address these common issues in a more cohesive manner.[104]

In short, the legal and regulatory tools are all there: FERC, RTO/ISOs, and other authorities are fully equipped to ensure grid reliability as efforts to decarbonize the energy sector accelerate, and EPA should not relax the emission reduction requirements in its Rule to prevent against theoretical grid disruptions.

C. There are additional outlets to address unforeseen reliability issues.

As detailed above, reliability authorities have a comprehensive set of tools and mechanisms, providing numerous options to plan for and ensure future grid reliability, and to adjust those plans to changing circumstances in the future. In addition, we highlight three outlets available to address rare events where unforeseen circumstances result in true reliability crises.

First, the FPA provides FERC with limited authority to authorize grid operators to temporarily suspend generator retirements to ensure reliability, without delaying the generator's obligation to comply with other regulations, including EPA rules. While FPA section 201 provides that states, not the Commission, have jurisdiction "over facilities used for the generation of electric energy," section 215 provides the Commission with the narrow authority to authorize grid operators to ensure that reliability of the grid is maintained before, during, and

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Advanced Energy United, *With Fossil Fuel Plants Overvalued, It's Time to Get Capacity Right*, at 3–5 (Mar. 30, 2022), https://info.aee.net/hubfs/Getting%20Capacity%20Right%20-%20How%20Current%20Methods%20Overvalue%20Conventional%20Power%20Sources.pdf, included as Exhibit 20; Pet. of Am. Clean Power Ass'n for Technical Conference on Capacity Accreditation, at 8, FERC Docket No. AD23-10-000 (Aug. 22, 2023) ("[G]enerators that rely on once-through cooling and share a water source can experience simultaneous outages or output reductions due to high water temperatures or drought conditions." (citing NERC, *2022 Summer Reliability Assessment* 4 (May 2022)), included as Exhibit 21.

[103] *See* Stenclik, *Ensuring Efficient Reliability*, *supra* note 99, at 12 (noting new or proposed capacity market rules over the past year in every RTO/ISO, as well as ERCOT and non-RTO/ISO areas).

[104] Pet. of Am. Clean Power Ass'n for Technical Conference on Capacity Accreditation, FERC Docket No. AD23-10-000 (Aug. 22, 2023); Comments of Pub. Interest Orgs., FERC Docket No. AD23-10-000 (Oct. 2, 2023) (supporting request for technical conference), included as Exhibit 22.

after a generator unit retires.[105] Most grid operators analyze the reliability implications of a planned retirement, and if reliability needs cannot be met by other means, will exercise this authority to varying degrees using tools such as reliability-must-run agreements, which compensate a generator for remaining online.[106]

RTO/ISOs generally require that generators provide advanced notice of their intent to retire so that grid operators can study the impact to the transmission system to identify issues, such as thermal or voltage violations, and upgrade the transmission system if needed to prevent the violations.[107] For instance, MISO and PJM will evaluate the grid reliability impacts of a proposed retirement and, if significant impacts are identified, request that the generator remain in service until they are able to implement any needed transmission upgrades.[108] MISO's request is compulsory,[109] and similar to the other grid operators, its process for executing an agreement

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[105] FERC's rules governing reliability require that "all users, owners and operators of the bulk-power system shall comply with reliability standards that take effect under [FPA Section 215]," including generation owners required to comply with FERC-approved tariffs that include mechanisms to postpone retirement while any reliability concerns are addressed. *See* 16 U.S.C. § 824*o*(b)(1). However, FPA 215 does not allow FERC to authorize the construction or additional generation or set and enforce compliance with standards for adequacy or safety of electric generators. *See* 16 USC § 824o(i)(2)).

[106] *See, e.g.*, Tierney, *Electric System Reliability*, *supra* note 6, at 32–33.

[107] ISO New England, Open Access Transmission Tariff (OATT), § I.3.9.1 (i) ("Review of Market Participant's Proposed Plans"), § I.3.9.3 ("Reliability Review of Retirments"), § I.3.10 (Market Participant to Avoid Adverse Effect) (available at https://www.iso-ne.com/participate/rules-procedures/tariff/oatt); MISO, OATT, § 38.2.7 (a)(i) (Notification Procedures for units); *id.* § 38.2.7 (c) (stating that the scope of MISO's evaluation includes "performance of the transmission system to determine if thermal or voltage violations of applicable NERC standards and Transmission Owner planning criteria occur when the unit is offline compared to conditions when it is online.") (available at https://etariff.ferc.gov/TariffBrowser.aspx?tid=1162); SPP, OATT, Attachment AB, Generator Retirement Process, § 2.0 (Submission of Study Request for Resource Retirements); *id.* § 3.1 (stating that SPP will screen the request to identify whether the generator can be deactivated or whether a further transmission study is needed to assess the impact to the transmission system genera); *id.* § 3.2 (stating that SPP will perform power flow, transient stability, and short circuit analysis as needed) (available at https://spp.etariff.biz:8443/viewer/viewer.aspx); PJM, OATT, § 113.2, ("Notice of Reliability Impact") (available at https://agreements.pjm.com/oatt/3897) ; New York Independent System Operator (NYISO), OATT, Attachment FF, § 38.3.1.1 (requiring that generators provide NYISO with "a minimum of 365 days prior notice . . . before its generator . . . may be retired"; *id.* at § 38.3.1.4 (stating that during the prior-notice period, NYISO shall conduct studies to determine whether the deactivation will cause "reliability impacts") (available at https://etariff.ferc.gov/TariffBrowser.aspx?tid=898).

[108] MISO OATT § 38.2.7 (c), ("Evaluation of Need for the System Support Resource Designation"); PJM, Tariff, § 113.2, ("Notice of Reliability Impact").

[109] MISO Tariff § 38.2.7(b) ("If, after completing a reliability study (Attachment Y Reliability Study) and analyzing potential alternatives (Attachment Y Alternatives Study), [MISO]

with a generator to extend its retirement deadline is subject to additional guardrails. MISO must first attempt to identify other feasible alternative solutions. Second, the term of MISO's contract duration cannot exceed one year, unless MISO demonstrates exigent circumstances.[110] Finally, the agreement, which is subject to FERC approval, must include provisions to compensate the generator for certain costs,[111] including capital costs associated with complying with environmental regulations.[112]

Second, EPA has also proposed an additional mechanism for addressing unforeseen reliability issues via administrative compliance orders (ACOs) under CAA section 113.[113] We agree with EPA's conclusions that the rule should not "result in resource constraints that would adversely affect electric reliability," and that this limited ACO process is an appropriate precautionary mechanism, in lieu of otherwise relaxing standards.[114] In particular, the CAA's statutory limits on ACOs—which cannot last for more than one year and are not renewable[115]—provide an important check against utilities and grid operators over-relying on the availability of that mechanism, instead of planning for grid reliability using the tools described above. In addition, the documentation EPA proposes to require of owner/operators and reliability authorities to substantiate the presence of an actual, non-self-created reliability risk is an important safeguard to prevent the abuse of this feature.[116] However, given the potential impacts of an ACO that delays compliance, we urge EPA to include as part of this ACO process a mechanism for public input on an owner/operator's submission.

Third, the FPA also provides another, narrow statutory mechanism for emergency reliability situations. Under section 202(c), when DOE determines that a grid emergency exists (due to factors such as a sudden increase in demand or shortage of supply), DOE can issue

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determines that [System Support Resource] Unit status is justified for a Generation Resource or SCU, that is not subject to an exception under Section 38.2.7.a, then [MISO] and the Market Participant of such Generation Resource or SCU ***shall enter*** into an SSR Agreement, in accordance with the Attachment Y-1 form of agreement.")(emphasis added).

[110] MISO OATT, Attachment Y-1, System Support Resource Agreement, at Section 3.A (1) (stating that the agreement "must not exceed a one (1) year term, except in exigent circumstances").

[111] MISO Tariff § 38.2.7(g), ("Evaluation of Need for the System Support Resource Designation").

[112] *See Midwest Indep. Transmission Sys. Operator, Inc.*, 140 FERC ¶ 61,237, at P 138 (2012).

[113] 88 Fed. Reg. at 33,401–02; *see also* 42 U.S.C. § 7413.

[114] 88 Fed. Reg. at 33,401.

[115] *See* 42 U.S.C. § 7413(a)(4).

[116] *See* 88 Fed. Reg. at 33,401 (providing minimum conditions that an owner/operator must show for a potentially approvable ACO, including: revised enforceable compliance schedule, documentation of reliability risk by electric planning authority, showing that need to run is outside owner/operator's control and not self-created, demonstration that unit has met all increments of progress, demonstration of a lack of time to address risk through a plan revision).

emergency orders for generators to operate.[117] Generators can comply with a section 202(c) order even if compliance would otherwise result in a violation of federal, state, or local environmental law.[118] In the case of conflict with environmental laws, however, section 202(c) prescribes limits. DOE must "ensure that such order requires generation . . . only during hours necessary to meet the emergency and serve the public interest, and, to the maximum extent practicable," remains consistent with environmental laws "and minimizes any adverse environmental impacts."[119] Moreover, section 202(c) orders cannot last for more than 90 days, although DOE can and does renew or reissue an order for additional 90-day periods as "necessary to meet the emergency and serve the public interest."[120] And if DOE renews or reissues an order, it must consult with the relevant federal environmental agency and include in the order any conditions that the agency determines are necessary to minimize environmental impacts.[121] DOE's orders are subject to judicial review.[122]

Past experience illustrates how EPA's ACO process and DOE's section 202(c) authority can work in tandem to provide a limited framework for addressing the rare instances in which reliability issues arise. When EPA finalized the Mercury and Air Toxics Standards (MATS) in December 2011, the agency issued a memorandum setting forth a similar administrative order (AO) process under CAA section 113.[123] Under the MATS rule, only a handful of facilities sought AOs permitting operation in noncompliance with MATS, according to FERC comments on the applications. In two of these instances—TVA's Paradise Fossil Plant[124] and Kansas City Board of Public Utilities' Nearman Creek Unit 1[125]—the AO process served its purpose by

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[117] *See* 16 U.S.C. § 824*a*(c)(1); *DOE's Use of Federal Power Act Emergency Authority*, https://www.energy.gov/ceser/does-use-federal-power-act-emergency-authority (last visited Dec. 20, 2023).
[118] *See* 16 U.S.C. § 824*a*(c)(3).
[119] *Id.* § 824*a*(c)(2).
[120] *Id.* § 824*a*(c)(4)(A).
[121] *Id.* § 824*a*(c)(4)(B).
[122] *Id.* § 824*a*(c)(5) (limiting liability if "an order issued under this subsection is subsequently stayed, modified, or set aside by a court pursuant to section 825*l* of [Title 16 of the U.S. Code] or any other provision of law").
[123] Memorandum from Cynthia Giles to Regional Administrators et al., on The Environmental Protection Agency's Enforcement Response Policy for Use of Clean Air Act section 113(a) Administrative Orders in Relation to Electric Reliability and the Mercury and Air Toxic Standard (Dec. 16, 2011), https://www.epa.gov/sites/default/files/documents/mats-erp.pdf.
[124] *See City of Ames*, 153 FERC ¶ 61,265, at PP 9–10 (Dec. 2, 2015) (noting request to continue operating Paradise Fossil Plant Unit Nos. 1 and 2 until an NGCC facility could be brought online in April 2017); TVA, *Paradise Combined Cycle Plant*, https://www.tva.com/energy/our-power-system/natural-gas/paradise-combined-cycle-plant (last visited Dec. 20, 2023) ("The Paradise Combined Cycle Plant generation replaced the Paradise Fossil Plant's Unit 1 and Unit 2 which were retired in April 2017.").
[125] *See Ks. City Bd. of Pub. Utils.*, 149 FERC ¶ 61,138, at PP 2, 5 (Nov. 20, 2014) (noting request to continue operating Nearman Unit 1 uncontrolled through October 2016); EPA, *Clean*

allowing continued operation of coal-fired units (with potential limits on hours of operation) until controls could be installed or replacement generation resources could be brought online. In two other cases—Dominion's Yorktown Units 1 and 2[126] and Grand River Dam Authority's Grand River Energy Center Unit 1[127]—EPA issued AOs, but the owners and operators ultimately obtained DOE section 202(c) orders to allow continued noncompliant operation. In still another example—Ames Steam Electric Plant Units 7 and 8—the owner and operator ultimately did not need the AO that it had received from EPA at all, having successfully completed conversion of a coal-fired power plant to natural gas in time to comply with MATS on schedule.[128]

We emphasize two points from this MATS experience. First, even though industry raised similar reliability concerns during the development of that rule,[129] these reliability mechanisms have very rarely been needed in the years since MATS took effect. And notably, MATS—finalized in 2012—took effect at a time where coal constituted a much larger portion of generation capacity.[130] Second, these limited statutory mechanisms have proved to be a sufficient means of addressing those rare instances.

D. Accordingly, EPA should not weaken its rule by adopting any unnecessary, additional reliability mechanisms.

As detailed throughout these comments, numerous factors demonstrate that it is unnecessary for EPA to adopt a reliability mechanism beyond the CAA section 113 ACO process included in the proposed rule. The grid is shifting from polluting fossil fuels to clean energy resources, irrespective of EPA's rulemaking. The entities charged with ensuring

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Air Markets Program Data Query, https://campd.epa.gov/ (query showing mass SO_2 emissions from Nearman Creek Unit 1 going to zero in September and October 2016 and rebounding to much lower levels in the last two months of 2016 than in the first eight months of 2016).

[126] *See City of Ames*, 153 FERC ¶ 61,265, at PP 13–14 (noting request to continue operation of Yorktown Units 1 and 2 until transmission upgrades could be completed in the second quarter of 2017); U.S. Dep't of Energy, *Federal Power Act Section 202(c) – PJM Interconnection & Dominion Energy Virginia, 2017* (June 19, 2017), https://www.energy.gov/oe/articles/federal-power-act-section-202c-pjm-interconnection-dominion-energy-virginia-2017 (listing DOE orders extending noncompliant operation through March 8, 2019).

[127] *See Grand River Dam Auth.*, 151 FERC ¶ 61,027, at PP 5–6 (Apr. 16, 2015) (noting request to continue operation of Grand River Energy Center Unit 1 until an NGCC facility could be brought online in April 2017); U.S. Dep't of Energy, *Federal Power Act Section 202(c) – Grand River Dam Authority, April 2017* (Apr. 14, 2017), https://www.energy.gov/oe/articles/federal-power-act-section-202c-grand-river-dam-authority-april-2017 (listing DOE order extending noncompliant operation potentially through July 15, 2017).

[128] *See City of Ames*, 153 FERC ¶ 61,265, at PP 5–7 (noting request to continue operating Ames Units 7 and 8 from April 2017 through August 2016, to allow for conversion of both units to gas); Energy Info. Admin., *Form 923, Generation and Fuel Data for 2016*, https://www.eia.gov/electricity/data/eia923/ (query showing zero coal consumption from May 2016 onward).

[129] *See* Tierney, *Electric System Reliability*, *supra* note 6, at 15–18.

[130] *See* Tierney, *U.S. Coal-Fired Power Generation*, *supra* note 6, at 7–9.

reliability (including FERC, NERC, RTO/ISOs, other grid operators, and state regulators) are already planning for this transition. Those entities have ample authority, and they are actively engaging tools and mechanisms at their disposal, to address identified needs associated with a changing grid.

Moreover, while EPA's Rule may have incremental effects on the degree or timing of those changes to the resource mix, the Rule will also provide greater visibility into the timing of retirements.[131] Under EPA's subcategories approach, generators must commit to specific, federally enforceable retirement dates, enabling grid operators to plan proactively and efficiently to replace those units' contributions to the grid. Further, EPA's requirements for compliance with increments of progress or milestones will ensure ongoing visibility,[132] allowing grid operators to adapt their plans early if a generator's circumstances change.[133]

Finally, ACOs and section 202(c) orders provide narrow outlets—subject to clearly defined statutory limits—that have a demonstrated history of addressing rare reliability issues that may nonetheless arise.

Under these circumstances, an additional reliability mechanism is unnecessary. It also risks thwarting section 111's technology-forcing design.[134] An additional mechanism could further delay compliance with necessary pollution standards, while at the same time undermining incentives for grid operators and other authorities to take the necessary steps to plan for the grid transition.

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[131] FERC 2023 Reliability Technical Conference, Docket No. AD23-9-000, Prepared Statement of Ric O'Connell, Executive Director, Grid Lab, at 1 (Nov. 9, 2023), https://www.ferc.gov/media/ric-oconnell-executive-director-gridlab# (testifying at FERC's November 2023 Relaiblity Technical Conference that EPA's "new rules will actually bolster reliability by providing the regulatory certainty needed to effectively plan in a coordinated manner with actionable deadlines"), included as Exhibit 23.

[132] *See* 88 Fed. Reg. at 33,388–90.

[133] In the event that such visibility leads to early warnings of compliance difficulties, a generator might also be able to seek a state plan revision in certain limited circumstances, as outlined above. *See supra*, Part IV.D.

[134] *See, e.g.*, Sierra Club et al. Comments at 80–81; *Sierra Club v. Costle*, 657 F.2d 298, 364 (D.C. Cir. 1981) ("EPA does have authority to hold the industry to a standard of improved design and operational advances, so long as there is substantial evidence that such improvements are feasible and will produce the improved performance necessary to meet the standard."); *Nat'l Asphalt Pavement Ass'n v. Train*, 539 F.2d 775, 785 (D.C. Cir. 1976) ("[S]ection 111 looks toward what may fairly be projected for the regulated future, rather than the state of the art at present." (cleaned up)); *Essex Chem. Corp. v. Ruckelshaus*, 486 F.2d 427, 433–34 (D.C. Cir. 1973) ("An achievable standard is one which is within the realm of the adequately demonstrated system's efficiency and which, while not at a level that is purely theoretical or experimental, need not necessarily be routinely achieved within the industry prior to its adoption.").

VI. Joint ISOs/RTOs' proposed reliability mechanisms are flawed and threaten additional harms to affected communities.

For the reasons described above, we urge EPA not to adopt *any* additional reliability mechanisms, which would be both unnecessary and counterproductive. Moreover, we emphasize our opposition to specific reliability measures proposed in comments from the Joint ISOs/RTOs.[135] These proposals have legal flaws, lack adequate safeguards, and risk exacerbating harms to affected communities.

First, we oppose the Joint ISOs/RTOs' proposal to create a reliability-based sub-category, which would effectively allow each RTO/ISO to exempt a generator from compliance, based on the RTO/ISO's determination that retirement "would cause significant reliability challenges."[136] That exemption would extend as long as the RTO/ISO deems necessary, until an "alternative solution can be placed into service."[137]

As an initial matter, the Joint ISOs/RTOs have not clearly demonstrated that EPA has statutory authority to create a subcategory based on factors entirely external to a source, such as the availability or lack thereof of other generation within a region.[138] The proposal is also substantively flawed. Generation mixes fluctuate significantly over time, and a source that an RTO/ISO or state might deem necessary for reliability needs today might not be needed for reliability in 2030 or later, when the Rule's legal requirements first take effect. Moreover, such a designation becomes self-perpetuating, as the retention of a specific generator for reliability purposes brings to a halt transmission planning and market responses that would otherwise enable that generator to retire without causing any reliability issues. The lack of constraints in this subcategory proposal also raises serious concerns. The absence of clear timelines for compliance contrasts sharply with the Congressionally authorized mechanisms described above. Congress limited section 113 administrative compliance orders to one year, with no possibility of renewal.[139] And while Congress allowed DOE to renew section 202(c) orders for additional 90-day periods, Congress prescribed additional protections, such as requiring DOE to minimize environmental harms.[140] A reliability mechanism of indefinite duration carries far greater risk of creating perverse incentives and rewarding poor planning with compliance exemptions, at the cost of emissions that would otherwise have been eliminated.

Joint ISOs/RTOs' proposal also lacks sufficient procedural safeguards. They propose that an RTO/ISO would give "a public explanation of its methodology" (but no process for public input at that stage), and would provide unit-specific analysis for feedback from "industry

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[135] *See* Joint ISOs/RTOs Comments (comments of ERCOT, MISO, PJM, and SPP).
[136] *Id.* at 10.
[137] *Id.*
[138] *Cf. id.* at 11 (stating only that "Joint ISOs/RTOs believe the creation of such a subcategory in the Rule is entirely consistent with the EPA's existing authority under Section 111 . . . . to establish subcategories based on source type, class, or size").
[139] *See* 42 U.S.C. § 7413(a)(4).
[140] *See* 16 U.S.C. § 824*a*(c)(2), (4)(B).

stakeholders," without any commitment to engage affected communities and other stakeholders who may be unfamiliar with their bureaucratic processes.[141] Those concerns are only heightened by Joint ISOs/RTOs' unsupported assertion that EPA legally can —and should—"give deference" to an RTO/ISO's determination that a unit belongs in a reliability subcategory.[142]

Further, we remain seriously concerned about the Rule's uneven distribution of conventional pollution impacts, as detailed in prior comments.[143] Any reliability mechanism with potential for broadly use (or abuse) risks exacerbating those disparities, contrary to EPA's mission.[144] The subcategory proposal poses a particular threat, as prolonged compliance exemptions for certain units provide a cost advantage and incentivize running those units more often. Yet the proposal identifies no mechanism to identify and analyze, let alone mitigate, increased or unjustly distributed environmental harms to affected communities.

Second, we oppose Joint ISOs/RTOs' proposal that EPA "establish a presumptive, automated reliability process" for obtaining RULOF variances.[145] An RTO/ISO would "certify that a unit is needed for reliability for a certain period," and then the affected state would automatically (or perhaps, presumptively) grant a RULOF variance deferring compliance obligations for that period.[146] This RULOF proposal closely resembles Joint ISOs/RTOs' subcategory proposal, and is defective for similar reasons, such as its open-ended duration, lack of procedural safeguards (particularly at the RTO/ISO level), and the potential to cause or exacerbate distributional harms. Furthermore, the very concept of automated or presumptive RULOF variances is contrary to section 111(d)'s legal architecture, in which RULOF variances are designed to address unique situations on a case-by-case basis and are subject to EPA's review through the state plan approval process. As explained in prior comments, EPA should place the burden of any variance squarely on the state, and "should *not* provide any presumptively approvable standard, criteria, or analytic approach for units seeking variances."[147] Strict limits on RULOF are particularly appropriate in this instance, where EPA has already established subcategories that are tiered to sources' remaining useful lives.[148] The Joint ISOs/RTOs' proposal would flip RULOF on its head by allowing an RTO/ISO (with

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[141] Joint ISOs/RTOs Comments at 10.
[142] Joint ISOs/RTOs Comments at 10. While the Joint ISOs/RTOs suggest that they would "link[]" this process to the existing RMR process, *id.*, those RMR agreements are reviewed at FERC, where affected parties have additional participatory rights. *See, e.g.*, 18 C.F.R. §§ 385.211 (protests at FERC), 385.214 (intervention at FERC). It is not clear that subcategory designations would be subject to FERC review, or the level of public participation that EPA could provide in this context.
[143] *See* Sierra Club et al. Comments at 102–03; EDF Comments at 56–58
[144] We reiterate that, "[i]n issuing its final rule, EPA must not exacerbate—and, indeed, make every effort to mitigate—existing disparities in pollution that have, for many decades, jeopardized the health and well-being of EJ communities." *Id.* at 103.
[145] Joint ISOs/RTOs Comments at 6 n.6, 11.
[146] *Id.* at 11.
[147] Sierra Club et al. Comments at 83; *see also* EDF Comments at 43–44.
[148] Sierra Club et al. Comments at 82; EDF Comments at 44–46.

presumptive or automatic approval by a state) to effectively establish a broad reliability-based subcategory.[149]

Third, we oppose Joint ISOs/RTOs' proposal that EPA combine certain subcategories (near-term and imminent-term existing coal-fired steam generating units) to eliminate any capacity factor threshold and require nothing beyond "routine methods of operation" and retirement by 2035.[150] The record amply supports EPA's subcategory approach for coal units,[151] and Joint ISOs/RTOs have in no way justified such a dramatic weakening of the rule.

Finally, in response to Joint ISOs/RTOs' request that EPA specifically authorize interstate allowance trading,[152] Sierra Club and Earthjustice reiterate their opposition to trading and averaging as a compliance option and incorporate by reference their prior comments on this issue.[153]

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[149] Joint ISOs/RTOs' invocation of EPA's implementation of the Coal Combustions Residuals (CCR) rule does not support their RULOF proposal. Joint ISOs/RTOs Comments at 11 & n.16. Even putting aside the merits of EPA's CCR approach, here, EPA's proposed ACO process *already* provides an extension mechanism that incorporates consideration of an RTO or other planning authority's reliability analysis, subject to the statutory constraints emphasized above. *See supra*, Part V.C; 88 Fed. Reg. at 33,401. Importantly, both the CCR orders and the proposed ACO process provide for a case-by-case evaluation whereby EPA considers a reliability authority's analysis and then makes an independent determination, unlike the proposed automated RULOF process. *See* Final Decision, Denial of Alternative Closure Deadline for General James M. Gavin Plant, Chesire, Ohio, at 83 (Nov. 18, 2022), https://www.regulations.gov/document/EPA-HQ-OLEM-2021-0590-0100 (explaining that if PJM were to disapprove the compliance outage request, EPA would then "based on its review of that disapproval and its bases, determine whether it is reasonable to grant a further extension" of the compliance deadline). And the Rule provides even lengthier compliance timelines than in the CCR context, making it easier for grid operators to plan and further obviating the need for this presumptive RULOF proposal.

[150] Joint ISOs/RTOs Comments at 9–10.

[151] Indeed, the obligations that EPA has identified for existing coal units are, if anything, conservative. Some of our organizations have identified ways in which EPA should strengthen those emission guidelines. *See, e.g.*, Sierra Club et al. Comments at 34–40.

[152] Joint ISOs/RTOs Comments at 13–15.

[153] Sierra Club et al. Comments at 85–90.

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