Comments of the U.S. Chamber of Commerce, Aluminum Association, American Chemistry Council, American Fuel & Petrochemical Manufacturers, National Lime Association, and ConservAmerica in Response to the U.S. Environmental Protection Agency's November 20, 2023 Supplemental Notice of Proposed Rulemaking

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 ID No. EPA-HQ-OAR-2023-0072

88 Fed. Reg. 80,682 (Nov. 20, 2023)

December 20, 2023

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I. Executive Summary

On November 20, 2023, the U.S. Environmental Protection Agency ("EPA") issued a supplemental notice of proposed rulemaking related to its proposed greenhouse gas regulations applicable to new, existing and modified fossil fuel-fired electric generating units ("EGUs") (the "Proposal").[1] Recognizing that it failed to consider reliability in its Proposal, EPA requests comments on a range of reliability issues, some of which were communicated during a Small Business Advocacy Review Panel EPA convened after it published its Proposal on May 23, 2023.[2] In addition, on November 9, 2023, the Federal Energy Regulatory Commission ("FERC") held its Annual Reliability Technical Conference, where representatives from EPA attended and answered questions from FERC Chairman Willie Phillips and Commissioners James Danly, Allison Clements, and Mark Christie. In discussing EPA's Proposal at that conference, Commissioner Christie highlighted one of its fundamental problems—that, under EPA's Proposal, the demand for electricity is projected to far outpace the dispatchable supply of electricity in the United States. According to Commissioner Christie, "[t]he arithmetic doesn't work."[3]

As we explained in the initial comments we submitted on EPA's Proposal on August 8, 2023, the undersigned associations—U.S. Chamber of Commerce, Aluminum Association, American Chemistry Council, American Fuel & Petrochemical Manufacturers, National Lime Association, and ConservAmerica (collectively "commenters")—strongly support effective, durable efforts to reduce greenhouse gas emissions while maintaining an efficient and reliable national electric grid.[4] The need for a reliable and affordable supply of electricity has been and continues to be vitally important to us, our members, the economy and the general health and welfare of the country.[5] In recognition of this fact, the Clean Air Act

[1] 88 Fed. Reg. 80,682 (Nov. 20, 2023).
[2] *Id*. at 80,683.
[3] Transcript of FERC 2023 Reliability Technical Conference at 15, Docket No. AD23-9-000 (Nov. 9, 2023), https://www.ferc.gov/media/transcript-docket-no-ad23-9-000, ("FERC Hearing Tr.") (attached as Exhibit A).
[4] *See, e.g.*, Comments of U.S. Chamber *et al*. at iii-viii (Aug. 8, 2023), EPA-HQ-OAR-2023-0072-0578.
[5] We described the organization and interests of each of the commenters in our initial comments. *Id*. at iii-vi. To avoid repetition, we incorporate that description by reference in these comments on EPA's supplemental notice.

("CAA") places important and meaningful constraints on EPA's authority to propose performance standards under section 111, designed in part to ensure the reliability and affordability of electricity to consumers in the United States. Such constraints include the requirements (1) that EPA ensure that its proposed systems of emission reduction have been adequately demonstrated; (2) that EPA's proposed performance standards based on those systems be achievable; and (3) that EPA's proposed systems reflect the "best" systems, considering reliability and other factors.[6]

EPA's Proposal goes far beyond these constraints, resulting in an unlawful proposal that jeopardizes the reliability and affordability of the nation's power.[7] While these consequences would be significant and highly consequential to the nation, they are not surprising in light of EPA's failure to consider reliability in connection with its Proposal. Rather than correct this legal error, conduct its own reliability analysis, and revise its Proposal in light of that analysis to reflect a "system of emission reduction" that avoids adverse reliability impacts, EPA's supplemental notice forges ahead with a proposed system of emission reduction that cannot be the "best" because it ignores reliability impacts, and requests commenters to suggest "a specific mechanism or mechanisms to address grid reliability needs that may arise during implementation of its final rules."[8]

This approach violates the CAA. Under section 111, EPA must consider "energy requirements" such as reliability in the first instance in determining the "best system of emission reduction," and then formulate achievable standards based on that system.[9] Because EPA failed to do so, EPA's Proposal is unlawful and must be withdrawn and reconsidered in its entirety. In reconsidering its Proposal, EPA must undertake a thorough and robust analysis of reliability impacts, revise the proposed "best" system of

[6] 42 U.S.C. § 7411(a)(1).
[7] *West Virginia v. EPA*, 142 S. Ct. 2587, 2612 (2022) (EPA must consider the performance standard's impact on "the reliability of the grid" in exercising authority under section 111) (internal quotation marks omitted).
[8] 88 Fed. Reg. at 80,684.
[9] 42 U.S.C. § 7411(a)(1) (in establishing the "best system of emission reduction," EPA must "take[] into account … energy requirements," among other factors); *see also West Virginia*, 142 S. Ct. at 2612.

emission reduction in light of that analysis, and provide that for public comment in a new proposed rule.[10] Such an analysis and any associated revisions to EPA's Proposal that result from it are necessary prerequisites to any meaningful discussion of potential "reliability mechanisms" referenced in EPA's supplemental notice.

In the absence of any such EPA analysis at this time, we suggest a number of mechanisms to address grid reliability as a starting point for further discussion and evaluation, subject to review and consideration of any reliability analysis conducted by EPA as required by section 111. As discussed below, such mechanisms could include: (1) EPA's reaffirming the primary statutory authority and expertise of states to review EPA's proposed systems for existing sources in the context of source and site-specific factors, including how the reliability of the electricity supply for that state is impacted by application of EPA's rule; (2) an expedited process for state plan revision under which the regulated source shows and the state determines that progress on infrastructure/technology development is not occurring as EPA predicted; and (3) self-implementing off-ramps that trigger alternative greenhouse gas compliance levels (or suspend greenhouse gas reduction obligations) during adverse grid reliability situations, such as a lack of sufficient dispatchable generation to meet demand.

II. Background

As we explained in our initial comments, EPA's Proposal raises serious reliability concerns by proposing systems of emission reduction that have not been adequately demonstrated and are not achievable in the timeframes presented, in violation of section 111(d).[11] In the short time since we submitted our comments, several developments have exacerbated these concerns and undermined projections that EPA relied upon in formulating its initial Proposal, including projections related to the timing of the massive infrastructure buildout needed to achieve compliance.

[10] 42 U.S.C. § 7411.
[11] Comments of U.S. Chamber *et al.* at 10-34.

In the preamble to its Proposal, EPA cited two proposed projects as evidence that the carbon dioxide ("CO_2") pipeline network is "primed" to expand throughout the United States, resulting in carbon capture and sequestration ("CCS") being widely available in time to meet EPA's deadlines.[12] Those proposed projects include the (1) the Midwest Carbon Express, which would consist of 2,000 miles of CO_2 pipeline traveling through the Midwest; and (2) the Navigator Heartland Greenway project, which would consist of 1,300 miles of CO_2 pipeline also traveling through the Midwest.[13] In support of its Proposal, EPA stated that the Midwest Carbon Express is "projected" to be operational in 2024 and that Navigator would start its "initial system commissioning for the Heartland Greenway Project in the second quarter of 2025."[14]

But both projects have been met with fierce opposition and substantial permitting challenges that have resulted in delays and a cancellation.[15] In October 2023, Midwest Carbon's CEO announced that the company was pushing back the estimated operational date of its proposed CO_2 pipeline from 2024 to 2026, citing "regulatory hurdles and environmental and landowner opposition."[16] Just days later, Navigator cancelled its proposed CO_2 pipeline project, noting that its development "has been challenging" in light of the "unpredictable nature of the regulatory and government processes involved."[17] And last month, another pipeline company withdrew its application for a proposed 206-mile CO_2 pipeline in Illinois,

[12] 88 Fed. Reg. 33,240, 33,923 (May 23, 2023).
[13] *Id*. at 33,294.
[14] *Id*.
[15] *See, e.g.*, Coco Liu, *Growing Number of CO2 Pipelines Face Major Opposition in Midwest*, BLOOMBERG LAW (Aug. 16, 2023), https://news.bloomberglaw.com/environment-and-energy/growing-number-of-co2-pipelines-face-major-opposition-in-midwest.
[16] Donnelle Eller, *Summit pushes back start date for carbon pipeline two years, citing regulatory hurdles*, DES MOINES REGISTER (Oct. 20, 2023), https://www.desmoinesregister.com/story/money/agriculture/2023/10/20/summit-carbon-solutions-pushes-back-start-of-carbon-capture-pipeline-across-iowa-north-south-dakota/71239984007/; *see also* FERC Hearing Tr. at 196 (East Kentucky Power Cooperative's ("EKPC") CEO discussing cancellation of "the Heartland [G]reenway CCS pipeline project relied upon by the EPA in its analysis" and adding that "[c]lean hydrogen is even further behind than CCS").
[17] Press Release, Navigator CO_2, Heartland Greenway Project Update (Oct. 20, 2023), https://navigatorco2.com/press-releases/heartland-greenway-project-update.

to address concerns that had led staff at the Illinois Commerce Commission to recommend denying a permit for the project.[18]

These and other recent developments confirm that EPA's fast-approaching timelines for implementing its proposed regulations are unrealistic. Indeed, the delays and cancellations above relate to just 3,500 miles of proposed CO_2 pipeline, whereas EPA indicates in its Proposal that "20,000 miles to 25,000 miles" of such pipeline would be needed to "capture over 1,000 million metric tons per year of CO_2 emissions from large, frequently operated coal and natural gas EGUs."[19] As discussed below, these developments only heighten the significant reliability concerns that EPA failed to consider.

III. EPA Did Not Adequately Consider Reliability in its Proposal

In particular, the record in this proceeding does not address the Proposal's adverse impacts on resource adequacy and reliability on an energy system already in distress. Even without EPA's Proposal, the North American Electric Reliability Corporation ("NERC") has explained in recent studies that many areas of the United States are under threat of blackout risks.[20] Regional transmission organizations and independent system operators face capacity shortfalls, resulting in a heightened risk of failures to meet resource adequacy requirements and reliability planning standards during emergencies. Accordingly, "the supply of electricity for these areas is more likely to be insufficient in the forecast period," and "more firm resources are needed."[21] In its 2023-2024 Winter Reliability Assessment, NERC found that more than half of the U.S. could be without electricity during extreme weather this winter.[22] In its December 2023 Long-

[18] Nara Schoenberg, *Wolf Carbon Solutions pauses its bid for Illinois approval of a controversial 260-mile CO2 pipeline*, CHICAGO TRIBUNE (Nov. 26, 2023), https://www.chicagotribune.com/news/environment/ct-wolf-carbon-pipeline-illinois-20231126-img63h2herd2reweypb23yh6zm-story.html.

[19] 88 Fed. Reg. at 33,369.

[20] NERC, 2022 Long-Term Reliability Assessment (Dec. 2022), https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_2022.pdf.

[21] *Id*. at 5.

[22] NERC, 2023-2024 Winter Reliability Assessment at 5 (Nov. 2023), https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_WRA_2023.pdf ("Prolonged, wide-area cold snaps threaten the reliable performance of [bulk power systems ("BPS")] and the availability of fuel supplies."); *id.* at 5-6 & Fig. 1 (identifying "[e]levated" risk in the Mid-Atlantic, Midwest, and Texas); *id*. at 5-6 (detailing risks in each region).

Term Reliability Assessment, NERC likewise found "clear evidence of growing resource adequacy concerns over the next 10 years."[23] According to NERC, "[c]apacity deficits are projected in areas where future generator retirements are expected before enough replacement resources are in service to meet rising demand forecasts."[24] NERC identified large swaths of the country at a "high" or "elevated" risk of failing to meet demand, including areas covered by MISO, SERC-Central, NPCC-Maritimes, NPCC-New England, NPCC New York, Southwest Power Pool, Texas RE-ERCOT, WECC U.S. Assessment Areas, Northwest (WECC-NW), and Southwest (WECC-SW).[25] Citing EPA's Proposal under section 111, NERC explained that "[r]egulations that have the potential to accelerate generator retirements or restrict operations must have sufficient flexibility and provisions to support grid reliability."[26]

In a December 5, 2023 letter, PJM Interconnection ("PJM") warned that the shutdown of just one power plant—Brandon Shores in Curtis Bay, Maryland—would jeopardize the reliability of electricity of over 1 million consumers, including the residents of the entire city of Baltimore, for an extended period.[27] According to PJM, "renewable resources and grid enhancing technologies … cannot resolve the reliability conundrum" at this time.[28] Operation of Brandon Shores is "needed to preserve electric reliability … until the required transmission is built" for alternative sources.[29] In its recent biennial Comprehensive Reliability Plan, the New York Independent System Operator highlighted "several risk factors that could adversely affect system reliability in the months and years ahead," including "rising demand due to continued electrification."[30] And these reliability risks are not limited to generation plants, but also extend

[23] NERC, 2023 Long-Term Reliability Assessment at 6 (Dec. 2023), https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_LTRA_2023.pdf.
[24] *Id*.
[25] *Id*. at 7-9.
[26] *Id*. at 32.
[27] Letter from M. Asthana, President and CEO, PJM, to Sierra Club Maryland Chapter (Dec. 5, 2023), https://www.pjm.com/-/media/about-pjm/who-we-are/public-disclosures/20231205-pjm-board-response-to-sierra-club-letter-regarding-pjm-interconnections-role-in-the-maryland-energy-transition.ashx, ("PJM Letter").
[28] *Id*. at 4.
[29] *Id*. at 3.
[30] Dave Kovaleski, *NYISO releases its ten-year comprehensive reliability plan*, DAILYENERGYINSIDER (Dec. 1, 2023), https://dailyenergyinsider.com/featured/41951-nyiso-releases-its-ten-year-comprehensive-reliability-plan/.

to the nation's natural gas pipeline system.[31] Such "energy delivery disruptions can have devastating consequences for electric and gas consumers in impacted areas."[32]

EPA's Proposal only exacerbates these reliability concerns. EPA's own modeling and regulatory impact analysis predict widespread fossil retirements and near negligible adoption of CCS or hydrogen co-firing at coal- and natural gas-fired EGUs. The agency's Proposal is only projected to (1) increase coal-based CCS capacity by 1 GW by 2040 compared to EPA's projected baseline estimates; and (2) increase hydrogen co-firing by 13 GW by 2040 compared to EPA's projected baseline estimates.[33] By contrast, EPA's Proposal is projected to result in 168 GW of coal retirements by 2040.[34] EPA's Proposal does not explain how this massive amount of retired capacity can or will be replaced by other resources at current dispatch levels, notwithstanding strong evidence that electricity demand is growing rapidly through widespread electrification of the transportation sector, building heating and cooling systems, data centers and other facilities and infrastructure, and even the production of the hydrogen necessary for one of the primary compliance pathways for natural gas generation units set forth in the Proposal.

Many generation assets taken offline in recent years have been replaced with sources providing less capacity or capacity that is intermittent and not always available. Reliability is seriously threatened as a result. In the 15 states covered by MISO, for example, "the number of warnings issued when electric supply is at risk of not meeting demand quadrupled from 2020 to 2021."[35] As the CEO of EKPC explained at FERC's 2023 reliability technical conference: "[t]he disorderly retirement and elimination of baseload

[31] NERC, 2023-2024 Winter Reliability Assessment at 6 ("Generator fuel supplies remain at risk during extreme, long-duration cold weather events.").
[32] *Id*.
[33] EPA, EPA-452/R-23-006, *Regulatory Impact Analysis,* at Tbl. 3-14 (May 2023), EPA-HQ-OAR-2023-0072-0007.
[34] *Id.* at 3-25.
[35] NRECA, Reliability and Affordability, https://www.electric.coop/issues-and-policy/reliability-and-affordability (last visited Dec. 19, 2023).

generation will leave the electricity grid with a significant deficit of dispatchable generation that cannot be replaced by intermittent resources, especially during a time of economic growth."[36]

Expert regional transmission operators share these concerns. In joint comments on EPA's Proposal, MISO, PJM, the Electric Reliability Council of Texas, and the Southwest Power Pool explained that EPA's Proposal "could result in material, adverse impacts to the reliability of the power grid."[37] "These reliability concerns primarily arise from the possibility that the significant technological advances in low-greenhouse gas (GHG) hydrogen production, transport and generation, as well as in carbon capture and storage (CCS) that are identified as [best system of emission reduction ("BSER")] under the Proposed Rule may not occur as anticipated, or may not occur at the pace anticipated by the EPA."[38] In particular, "[i]f the technology and associated infrastructure fail to timely materialize, then the future supply of compliant generation—given forced retirements of non-compliant generation—would be far below what is needed to serve power demand, increasing the likelihood of significant power shortages."[39]

A recent report similarly observed that "policies intended to meet climate targets must be informed by grid reliability," but that the "reality … in the United States is that no one is in charge of setting decarbonization targets in the electricity sector while also maintaining grid reliability."[40] According to the report: "the United States does not have a plan to manage the reliable transition of its electricity sector."[41] For example, EPA "has proposed binding power plant emission reduction targets, but fully decarbonizing the electricity sector requires coordinated, regional planning and targeted investments for specific types of resources, many of which are not yet commercially available."[42]

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[36] FERC Hearing Tr. at 196.
[37] Joint Comments of Electric Reliability Council of Texas, Inc.; Midcontinent Independent System Operator, Inc.; PJM Interconnection, L.L.C.; and Southwest Power Pool, Inc. at 4 (Aug. 8, 2023), EPA-HQ-OAR-2023-0072-0673.
[38] *Id.*
[39] *Id.*
[40] World Resources Institute, Working Paper, *Meeting the Reliability Challenges of the Clean Energy Transition*, https://www.wri.org/research/meeting-reliability-challenges-clean-energy-transition (last visited Dec. 19, 2023).
[41] *Id.*
[42] *Id*.

That type of coordinated regional planning has clearly not occurred. As suggested in EPA's Proposal and confirmed at FERC's 2023 annual reliability conference, EPA did not consider reliability prior to issuing its Proposal.[43] As FERC Commissioner Danly noted during his questioning of EPA, while EPA's technical support documents may have attempted to address "resource adequacy," the distinct concept of "reliability" was not a "subject that was independently examined" by EPA in its Proposal.[44] In a November 8, 2023 letter to United States Senators Barrasso and Capito, Commissioner Danly explained that EPA's "Resource Adequacy TSD acknowledges the difference between resource adequacy and reliability, explaining that 'the term resource adequacy is defined as the provision of adequate generating resources to meet projected load and generating reserve requirements in each power region, while reliability includes the ability to deliver the resources to the loads, such that the overall power grid remains stable.'"[45] At the same time, the Resource Adequacy TSD "state[s] that it is 'meant to serve as a resource adequacy assessment' of the Proposed Rule."[46] According to Commissioner Danly, "[t]he unavoidable conclusion to draw from this is that the Resource Adequacy TSD *does not analyze the reliability impacts of the Proposed Rule*."[47]

This "unavoidable conclusion" is consistent with interagency comments that EPA received on the Resource Adequacy TSD. One commenter noted that EPA's analysis in the draft TSD "focuse[d] on resource adequacy," and that "reliability … attributes" such as "operational considerations in real time and stability analysis or very short time scale" were "not in scope for this analysis."[48] The commenter thus

[43] *See, e.g.*, FERC Hearing Tr. at 166-68, 175-76.
[44] *Id*. at 175 ("[W]e also have the problem that some of these assets are not a matter of resource adequacy, which is what your [Technical Support Document ("TSD")] talked about, but instead they're a matter of reliability which seems not to have been a subject that was independently examined in the aggregation of the record to date, right?").
[45] Letter from FERC Comm'r Danly to Senators Barrasso and Capito at 2 (Nov. 8, 2023), https://www.ferc.gov/sites/default/files/2023-11/Danly%20Initial%20Response%20to%20Barrasso%20and%20Capito%2020231108.pdf.
[46] *Id*.
[47] *Id*. (emphasis in original).
[48] EPA, Resource Adequacy and Reliability Analysis Technical Support Document at 2 (Comments) (Mar. 2023), EPA-HQ-OAR-2023-0072-0027-Attachment 16 ("Draft Resource Adequacy TSD").

suggested that EPA "only us[e] resource adequacy … throughout the [final] document," while noting that "resource adequacy … is a key component of reliability."[49] EPA agreed with this commenter—the agency deleted the word "Reliability" from the title of the final TSD and confirmed that it was "*limited to an analysis of resource adequacy within the context of this rulemaking*."[50]

But even here, EPA's resource adequacy analysis contains numerous flaws. EPA's analysis is grounded on the aggressive assumption that thermal generation retirements will occur in an orderly way.[51] This assumption is contrary to experience and to the entirety of the relevant testimony that was provided at the recent FERC reliability conference. Every witness who addressed the issue said the retirement process has been fraught with surprises.[52] MISO and PJM have seen retirement expectations frustrated by the rapid exit of coal-fired and older natural gas-fired resources, while replacements—nearly exclusively in the form of intermittent resources—are not close to keeping pace with retirements.[53]

Nor does EPA's Proposal acknowledge that it is adding economic burdens to a national electric system that is already in distress. As noted above, resource adequacy is already barely sufficient to meet peak energy needs, placing the nation at risk of system failure—particularly in the winter. Moreover, it will take significant capital to render generation resources compliant with the rule, but EPA does not address where this capital will come from. At the 2023 FERC reliability conference, EPA conceded it has

[49] *Id*.
[50] EPA, Resource Adequacy Analysis, Technical Support Document at 2 (Apr. 2023), EPA-HQ-OAR-2023-0072-0034 ("Resource Adequacy TSD") (emphasis added).
[51] *Id*. at 3 ("The Agency … expects that any resulting unit retirements will be carried out through an orderly process in which RTOs, balancing authorities, and state regulators use their powers to ensure that electric system reliability is protected.").
[52] *See, e.g.*, FERC Hearing Tr. at 60-61 ("it's not orderly"), 190-91 ("[T]he pace of retirements and the orderly retirements is something that concerns me very much."), 207 ("We agree with Commissioner Danly that there has not been a proper analysis looking at the disorderly retirement of coal plants."), 216-17 ("So I do have concerns about doing it in an orderly way."), and 260-63 ("They see the retirement trajectory outpacing new resources, and the most they can do is say that this is a problem.").
[53] *See, e.g.*, *id*. at 190-91.

not analyzed whether it expects financing to be available for this purpose.[54] Nor has EPA analyzed the cost to consumers of adding the necessary new or modified generation to the customer rate base.[55]

Compounding these problems, EPA's Proposal does not grapple with the fact that interconnection costs have increased significantly, that project completion rates are very low, and that significant opposition to major infrastructure projects has become a fact of life. EPA seemed to acknowledge its failure to consider these critical issues, explaining at the FERC reliability conference that its proposed rule is "very much a work in progress," that EPA was merely in the "fifth inning" of a baseball game, and that "further discussion" was needed on reliability issues.[56] To that end and despite failing to do so earlier, EPA emphasized the need to engage with FERC and other stakeholders on reliability as EPA's proposed rule is finalized.[57]

IV. EPA Has a Statutory Obligation to Evaluate the Reliability Impacts of its Proposal

EPA's failure to consider "energy requirements" such as reliability in developing its proposed rule violates section 111(a)(1) of the CAA. For this reason alone, EPA's Proposal is unlawful. In administrative law terms, EPA's failure to consider reliability in determining the "best system" of emission control is a failure to consider an important aspect of the matter.[58] Failure to consider a critical issue like ensuring the reliability of this nation's power supply is the "first and most obvious reason for finding [agency action] arbitrary and capricious."[59] And this requirement is not satisfied by EPA's say-so. Even where the agency

[54] *Id.* at 187 ("I think it would be an overstatement if I said we analyzed whether or not they could get financing….").
[55] *Id*. ("I don't think … we looked specifically at that question.").
[56] *Id*. at 164, 167, 178.
[57] *Id*. at 164-65 ("We plan continued engagement with FERC …, with grid operators, balancing authorities and reliability institutions to guarantee that we have detailed and up to date information on the reliability implications of the proposed rule."). EPA also confirmed the 2032 FERC annual reliability conference would be made part of the record in this rulemaking. *Id*. at 185; *see also* Letter from Joseph Goffman, Principal Deputy Assistant Administrator, EPA, to FERC at 2 (Nov. 29, 2023) (confirming EPA has "plans to incorporate a transcript from FERC's November 9, 2023, Technical Conference into the docket of the Carbon Standards Proposal").
[58] *See, e.g., Motor Vehicle Mfrs. Ass'n of the U.S., Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 43 (1983) ("an agency rule would be arbitrary and capricious if the agency … entirely failed to consider an important aspect of the problem").
[59] *Id.* at 46.

insists that it "carefully considered" an issue, a court must review the record and satisfy itself that the agency actually did.[60]

Administrative law likewise provides that a court "may uphold agency action only on the grounds that the agency invoked when it took the action."[61] The court "will neither supply [its] own justifications for an order nor uphold an order based on [the agency's] post hoc rationalizations."[62] This promotes accountability by demanding that the agency "turn square corners in dealing with the people."[63] Limiting agencies to their actual rationales instills confidence that new rationales are not merely "convenient litigating position[s]."[64] It also ensures that parties are not forced to "chase a moving target."[65]

Rather than undertake a detailed analysis of reliability consistent with section 111 and these key principles, EPA seeks to skip that step and shift the burden to regulated parties to develop solutions to a proposed standard that will create adverse reliability impacts. According to EPA's supplemental notice, regulated and other affected entities should comment on "whether the Agency should include a specific mechanism or mechanisms to address grid reliability needs that may arise during the implementation of its final rules."[66] This is contrary to section 111. Consistent with its obligation to consider "energy requirements," EPA must (1) undertake a thorough and robust analysis of the reliability impacts of its Proposal; (2) make any revisions to its best system and proposed standards to account for that analysis; and (3) provide that analysis for public comment before proceeding with any further rulemaking.

Not only is this approach required by section 111, but it would also provide key expert reliability stakeholders—such as FERC, NERC, regional and state transmission organizations and utilities—the

[60] *Encino Motorcars, LLC v. Navarro*, 579 U.S. 211, 223 (2016) (internal quotation marks omitted).
[61] *Michigan v. EPA*, 576 U.S. 743, 758 (2015) (citing *SEC v. Chenery Corp*., 318 U.S. 80, 87 (1943)).
[62] *Nat'l Fuel Gas Supply Corp. v. FERC*, 468 F.3d 831, 839 (D.C. Cir. 2006).
[63] *Dep't of Homeland Sec. v. Regents of the Univ. of Cal.*, 140 S. Ct. 1891, 1909 (2020) (internal quotation marks and citation omitted).
[64] *Christopher v. SmithKline Beecham Corp.*, 567 U.S. 142, 155 (2012).
[65] *Regents of the Univ. of Cal.*, 140 S. Ct. at 1909.
[66] 88 Fed. Reg. at 80,684.

opportunity to offer their expertise through comments on EPA's reliability analysis once completed. That reliability analysis and any associated revisions to EPA's regulatory approach which result from it are necessary prerequisites to any meaningful, effective discussion of reliability mechanisms.

For these reasons, EPA must provide a robust analysis of reliability impacts, revise its Proposal as appropriate based on consideration of those impacts, and then repropose the rule to allow an opportunity and adequate time for public review and comment. In the meantime, to be responsive to EPA's supplemental notice, we offer below potential mechanisms to address grid reliability for consideration as part of EPA's future analysis of reliability impacts as a starting point for discussion and evaluation, and subject to review and consideration of any detailed reliability analysis conducted by EPA, as required by section 111.

V. EPA's Proposed Contingency Plans Are Not Workable

Before discussing those proposed reliability mechanisms, we note at the outset that EPA's proposed options for addressing reliability are not workable. In particular, rather than address reliability concerns at the outset in its Proposal, EPA takes a wait-and-see approach, suggesting that any reliability concerns raised by its Proposal can be addressed at some point in the future through: (1) rebalancing by grid operators; (2) emergency must-run orders from the U.S. Department of Energy ("DOE"); or (3) the exercise of EPA enforcement discretion.[67] As discussed below, such contingency plans are costly to ratepayers and are subject to substantive restrictions and process delays that make them inadequate to address the significant reliability problems created by EPA's Proposal.

A. Reliance on future rebalancing is not a workable solution.

Should EGUs select retirement in lieu of EPA's proposed systems, EPA claims that grid operators may have the authority to rebalance the output of the remaining EGUs to ensure continued grid reliability. As noted above, however, regional transmission organizations are already facing capacity shortfalls even

[67] *See, e.g.*, 88 Fed. Reg. at 33,265, 33,306, 33,401-02, 33,415-16.

without EPA's Proposal. Moreover, after the deadlines in EPA's Proposal, only compliant generation would be available for rebalancing. Operation of a non-compliant unit after EPA's proposed compliance deadlines could violate the CAA and face potential civil penalties of over $100,000 per day for violations. Under such circumstances, regional transmission organizations and state regulators could not address system shortfalls through rebalancing, particularly in light of current capacity challenges and delays associated with construction and permitting of major infrastructure projects. Furthermore, many non-compliant units would likely be forced into retirement, thereby no longer being available to rebalance the system even during grid emergencies.

B. Reliance on DOE emergency orders is not a workable solution.

To the extent EPA suggests that emergency must-run orders from DOE could authorize continued generation to address reliability issues, such orders are not a workable response either. While must-run orders may be sufficient for isolated, short-term grid emergencies, the must-run order process is not designed to address a nationwide shortfall of electricity generation impacting grid reliability in multiple regions. As PJM explained in the recent letter addressing capacity shortfalls in Maryland:

> An emergency order from the USDOE only allows for the units to continue in operation for 90 days at a time. We need much more than 90 days to have the necessary transmission solutions in place. Further, these orders are typically only issued during emergencies. Once we are in an emergency, it may be too late to ensure that Maryland customers can continue to have reliable electric service.[68]

Moreover, both the application for such an order and DOE's approval process are burdensome and complicated, requiring information on more than 20 different topics, including modeling projections, historical data and impending obligations.[69] As we understand it, only ten DOE must-run orders have ever been issued since 2017, and the vast majority of those have lasted only a week or less to address

[68] PJM Letter at 4.
[69] *See* 10 C.F.R. § 205.373.

temporary storm or heat-related emergencies.[70] DOE must-run orders are not an effective response to the widespread nature of the disorderly and permanent retirements that would predictably result from EPA's Proposal.

C. Reliance on EPA enforcement discretion is not a workable solution.

Finally, EPA's suggestion that the agency could use its "enforcement discretion" and "administrative compliance orders" to address any reliability issues is not a viable solution. Even with an administrative compliance order, the party may remain in violation of the CAA, facing an uncertain future that may involve fines of over $100,000 per day per violation. Once executed, administrative compliance orders may not bar citizen suits or state enforcement proceedings. Each administrative compliance order must contain individualized terms and could include enforceable milestones with additional penalties for failure to comply. Such milestones are particularly inappropriate for compliance deadlines largely dependent on the completion of significant infrastructure not controlled by the owner or operator, such as pipelines, CO_2 sequestration sites, and green hydrogen electrolyzers. Quite simply, it is patently unfair, as well as unworkable, for regulated entities to be subject to "enforcement discretion" when the Proposal's BSER is essentially designed to fail.

VI. Potential Reliability Mechanisms

As an alternative to EPA's proposed contingency plans, we offer the following mechanisms to address reliability as a starting point for further discussion and evaluation, subject to review and consideration of any detailed reliability analysis conducted by EPA.

[70] *See* DOE, Order No. 202-22-4 , PJM Interconnection, L.L.C. 202(c) Order (Dec. 24, 2022); DOE, Order No. 202-22-3, Electric Reliability Council of Texas, Inc. 202(c) Order (Dec. 23, 2022); DOE, Order No. 202-22-2, Balancing Authority of Northern California 202(c) Order (Sept. 4, 2022); DOE, Order No. 202-22-1, California Independent System Operator Corporation 202(c) Order (Sept. 2, 2022); DOE, Order No. 202-21-2, California Independent System Operator Corporation 202(c) Order (Sept. 10, 2021); DOE, Order No. 202-21-1, Electric Reliability Council of Texas 202(c) Order (Feb. 14, 2021); DOE, Order No. 202-20-2, California Independent System Operator 202(c) Order (Sept. 6, 2020); DOE, Order No. 202-20-1, CenterPoint Energy Houston Electric, LLC 202(c) Order (Aug. 27, 2020); DOE, Order No. 202-17-2, PJM Interconnection, L.L.C. and Dominion Energy Virginia 202(c) Order (June 16, 2017); DOE, Order No. 202-17-1, Grand River Dam Authority 202(c) Order (Apr. 14, 2017).

As a threshold matter, EPA must clearly identify each of the major assumptions on which its proposed systems of emission reduction are based. Having done so, states will then have the information they need to develop appropriate standards of performance and compliance schedules for their existing sources considering remaining useful life and other factors, as contemplated under section 111(d)(1). In connection with this process, EPA should reaffirm that states have the primary authority and expertise to review EPA's proposed systems in the context of source and site-specific factors, including how reliability for that state is impacted by application of EPA's proposed system to a facility, the impacts of EPA's rule on local and disadvantaged communities, and the interplay of EPA's rule with other state environmental and energy requirements affecting the regulated source. EPA should make clear that it will not second-guess state determinations as long as they are adequately explained and supported. Consistent with its statements at FERC's annual reliability conference, EPA should reaffirm that state and federal planning and reliability organizations (including FERC and NERC) have a key role to play regarding the energy impacts of EPA's proposed rule for specific sources and sites, and that the views of these expert agencies are entitled to deference from EPA with regard to economic and reliability impact assessments.[71]

EPA should also revise the provisions of its Proposal regarding the role of "increments of progress" in state plans, in light of the uncertainty surrounding the development of the nationwide infrastructure that is integral to EPA's Proposal. As EPA recognizes, much of the infrastructure on which the rule is based is "complicated by the fact that … decision-making" under the Proposal "may not be solely within the purview of the owners or operators of those sources."[72] States should not be required to guess as to

[71] *See, e.g.*, FERC Hearing Tr. at 164-65 ("We plan continued engagement with FERC …, with grid operators, balancing authorities and reliability institutions to guarantee that we have detailed and up to date information on the reliability implications of the proposed rule."); *see also id.* at 182-83 ("I mean I kind of see us between now and final … going through the circuit several different times. Looking at the record. Looking at questions that commenters raised. Going to the RTOs, the ISOs, the utilities and the balancing authorities and then coming back to [FERC] … to get your insights and feedback in terms of helping us interpret what we're hearing, and how we can then translate that into the provisions in the final rule.").

[72] 88 Fed. Reg. at 33,402.

infrastructure development and impose an enforceable "increment of progress" on sources based on matters over which they have no control. An alternative approach to increments of progress could be for states to use them to establish timeframes for review of infrastructure development and to undertake any necessary course-correction and state plan revision to address the consequences of infrastructure that has not developed.

EPA must also recognize that a critical consideration in the development of state plans is the preservation of dispatchable generation. In formulating a section 111(d) plan, a state must be able to consider the extent to which there is a need to maintain dispatchable fossil capacity to ensure grid reliability, the extent to which that fossil generation would be displaced by the planned construction of additional renewable or other types of generation, and how the states' overall integrated resource plans and projected generation mix could be used to promote achievement of the ultimate emission reduction goals of EPA's Proposal. Such an approach would aid the transition to non-emitting generation consistent with state and utility planning and address the critical need to maintain grid reliability until long-term energy storage or other similar technology is widely available. EPA's rule should also provide an expedited process for state plan revision where the regulated source shows and the state concludes that progress in infrastructure/technology development is not occurring as predicted. The rule should provide that any compliance deadlines would be suspended while state plan revision and associated EPA approval is pending.

Finally, any EPA rule should include self-implementing off-ramps that suspend obligations or trigger alternative compliance levels during adverse grid reliability situations, such as a lack of dispatchable generation to meet demand. The key to such an off-ramp is a metric that is measurable in real time and available to regional transmission organizations, independent system operators, and sources so that they can act quickly to avoid the devastating impacts of forced outages. In all cases, EPA's rule should not apply to any resources that are (1) subject to a Department of Energy emergency

generation order under the Federal Power Act, Section 202(c), 16 U.S.C. § 824a(c); or (2) operating under a reliability-must-run agreement administered by a Regional Transmission Operator or Independent System Operator and accepted by FERC.

VII. Conclusion

CAA section 111 imposes important and meaningful constraints on EPA's authority to propose standards of performance, designed in part to ensure the reliability and affordability of electricity to consumers in the United States. Because EPA's Proposal goes beyond these constraints, it must be withdrawn and reconsidered in its entirety, with a particular focus on ensuring that its proposed systems have been adequately demonstrated; that EPA's proposed standards are achievable based on realistic timelines; and that the reliability and affordability of the nation's electricity will not be compromised.

As part of its reconsideration, EPA must undertake a thorough analysis of reliability, consistent with its obligation to consider "energy requirements" in the first instance under section 111, and then publish that analysis and any concomitant revisions to its Proposal for public comment. In enacting section 111, Congress made clear that it "wanted assurances from EPA that the new standards would not exacerbate existing problems."[73] As explained above, threats to reliability are an "existing problem[]" that is certain to grow worse over time, and EPA has provided no "assurances" that its Proposal would not "exacerbate" that problem.

We appreciate EPA's consideration of our comments and look forward to working with the agency as it continues its consideration of these critical issues.

[73] *Sierra Club v. Costle*, 657 F.2d 298, 331 (D.C. Cir. 1981).