

U.S. House Committee on Energy and Commerce
Subcommittee on Energy, Climate, and Grid Security
“Keeping the Lights On: Enhancing Reliability and Efficiency to Power
American Homes”
[September 13, 2023]

1. Letter to Chair Duncan, Ranking Member DeGette from American Public Power Association, September 13, 2023, regarding electric grid reliability, submitted by the Majority.
2. Letter to Administrator Regan from FERC Commissioner James P. Danly, August 8, 2023, submitted by Rep. Johnson.
3. Congressional Coal Caucus Report, July 25, 2023, submitted by Rep. Johnson.
4. Letter to Chair Duncan, Ranking Member DeGette from Edison Electric Institute, September 13, 2023, submitted by the Majority.
5. Letter to Chair Duncan, Ranking Member DeGette from National Energy & Fuels Institute, September 12, 2023, submitted by the Majority.
6. Letter to Secretary Granholm from Cleveland-Cliffs, Inc., February 2, 2023, submitted by Rep. Balderson



September 13, 2023

The Honorable Jeff Duncan
Chairman, Subcommittee on Energy, Climate, and Grid Security
House Committee on Energy & Commerce
2125 Rayburn House Office Building
Washington, DC 20515

The Honorable Diana DeGette
Ranking Member, Subcommittee on Energy, Climate, and Grid Security
House Committee on Energy & Commerce
2322 Rayburn House Office Building
Washington, DC 20515

Dear Chairman Duncan and Ranking Member DeGette,

The American Public Power Association (APPA) appreciates the opportunity to submit a statement for the record for the legislative hearing before the House Energy & Commerce Committee's Subcommittee on Energy, Climate, and Grid Security titled, "Keeping the Light On: Enhancing Reliability and Efficiency to Power American Homes."

APPA is the voice of not-for-profit, community-owned utilities that power 2,000 towns and cities nationwide. APPA represents public power utilities before the federal government to protect the interests of the more than 49 million people they serve, and the 96,000 people they employ.

Distribution Transformer Supply Chain Crisis

Distribution transformers are essential for electric utilities to expand capacity, provide electricity to new communities, and restore service when existing infrastructure is damaged during a natural disaster. APPA surveys show that 80 percent of public power utilities have lower inventories of distribution transformers now than they did in 2018 and 30 percent reported a high risk they could run out of stock in a month. Average lead times to purchase new distribution transformers have grown 429 percent, from three months in 2018 to an excess of 12 months or more today. Manufacturers have stated that a lack of skilled labor and materials are the cause of supply shortages.

Shortages of distribution transformers have caused public power utilities to defer or cancel one in five infrastructure projects that would require more resources than available. Additional electric capacity is needed to power new residential and commercial developments, new manufacturing facilities, and support a rapidly expanding electric vehicle fleet. Public power utilities are

investing heavily in clean energy technologies to meet environmental goals. Simultaneously, the industry is facing more frequent and severe extreme weather events, requiring more resource-intensive response and restoration. This all requires distribution transformers.

To ensure that supply chain constraints do not impact reliability, utilities are taking extraordinary measures to meet current demand with limited supply. That includes refurbishing older equipment and identifying underutilized equipment in the field that can be swapped to generate spares. These are necessary, last-ditch efforts to protect the safety of electric customers and sustain other sectors that depend on electricity, but they move the industry further away from clean energy, efficiency, and affordability goals.

Over the last two years, the electric sector has been calling attention to a growing supply chain crisis that has hampered its ability to meet the demand for maintenance and growth of the electrical grid. Through its participation in the Electric Sector Coordinating Council (ESCC), APPA interacted with the Department of Energy (DOE) to identify several underlying causes of why production levels of distribution transformers were not meeting demand. Those causes include the lack of an available or adequately trained labor force and adequate materials necessary to immediately increase production.

Impact of Increasing a Conservation Standard in a Supply Crisis

In December 2022, APPA and other impacted organizations were dismayed when DOE announced a notice of proposed rulemaking (NOPR) seeking to amend conservation standards for distribution transformers. The NOPR would require a stricter standard that changes the material used in distribution transformers from grain-oriented electrical steel (GOES) to amorphous steel. Amorphous steel is currently used in less than five percent of distribution transformers. Requiring the expansion of amorphous steel in distribution transformers would halt current investment in production and materials, resulting in a complete retooling of manufacturing production lines, thereby exacerbating the severe shortage. DOE claims it was required to issue the NOPR due to court decisions resulting from energy efficiency interest groups' legal challenges under the Energy Policy and Conservation Act (EPCA).

APPA does not believe that the proposed efficiency standards and the analyses cited to support them meet EPCA's requirement that efficiency upgrades be technologically feasible or economically justified. More importantly, the proposed efficiency standards would worsen already critical distribution transformer supply shortages. In commenting on the NOPR, APPA urged DOE to reconsider the NOPR or delay the implementation until the transformer supply base is strengthened enough to increase supply, reduce costs, and increase the number of component suppliers.

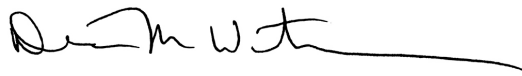
APPA supports H.R. 4167, the Protecting America's Distribution Transformer Supply Act. Introduced by Representative Richard Hudson (R-NC), this bill would prohibit DOE from increasing distribution transformer conservation standards for five years. A delay is urgently needed to give manufacturers the certainty to increase production to meet demand.

Conclusion

The electric grid's reliability and the nation's economy are threatened by critically short supplies of distribution transformers and other critical electric infrastructure materials. APPA commends the committee for holding this hearing to bring attention to the issue.

APPA looks forward to working with you on further legislative solutions that will address supply chain issues and give public power utilities certainty as they continue to provide reliable, affordable, and sustainable electricity to their communities.

Sincerely,



Desmarie Waterhouse
Senior Vice President, Advocacy and Communications & General Counsel

Links to Referenced Documents:

- [Public Powers Distribution Transformer Demand Survey Summary \(October 2022\)](#)
- [APPA Resolution 23-07, "In Support of Federal Efforts to Address the Supply Chain Crisis for Distribution Transformers"](#)
- [Coalition Letter to DOE Regarding Transformer NOPR \(February 2023\)](#)
- [APPA Comments on DOE NOPR Efficiency Standards for Distribution Transformers \(March 2023\)](#)



FEDERAL ENERGY REGULATORY COMMISSION

August 8, 2023

Hon. Michael S. Regan
Administrator
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20004

RE: Docket No. EPA-HQ-OAR-2023-0072

Dear Administrator Regan:

I submit this comment to provide a necessary correction, and to make a request in this docket concerning the Environmental Protection Agency's (EPA) proposed rulemaking on *New Source Performance Standards for Greenhouse Gas Emissions*.¹

In the Proposed Rule, the EPA states that it "evaluated the reliability implications of the proposal . . . and consulted with the [Department of Energy] and the Federal Energy Regulatory Commission (FERC) in the development of these proposals."² The EPA did not consult the Commission. I understand that consultation with Commission staff on limited subjects did indeed occur. I also understand that, in the course of that consultation, Commission staff did not provide either modeling or a substantive review of the Proposed Rule's potential reliability effects. Such limited consultation is not unusual. Communication between FERC and other federal agencies typically occurs at the staff level, subject to the supervision of the Chairman.³ The opinion of Commission staff, however, does not and cannot constitute the opinion of the Commission. The Commission is a multimember body requiring a quorum of three voting commissioners to act⁴ and only speaks

¹ *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; & Repeal of the Affordable Clean Energy Rule*, 88 Fed. Reg. 33,240 (proposed May 23, 2023) (Proposed Rule).

² *Id.* at 33,246-247 (emphasis added).

³ See 42 U.S.C. § 7171(c) ("The Chairman shall be responsible on behalf of the Commission for the executive and administrative operation of the Commission, including . . . the supervision of personnel employed by or assigned to the Commission. . . .").

⁴ See *id.* § 7171(b)(1) ("The Commission shall be composed of five members appointed by the President, by and with the advice and consent of the Senate."); *id.* § 7171(e) ("Each member of the Commission, including the Chairman, shall have one vote. Actions of the Commission shall be determined by a majority vote of the members present.").



through its orders.⁵ I was not asked what I thought of Proposed Rule's effects on electric reliability, and I am not aware of my fellow commissioners having had their feedback solicited.

FERC is the agency Congress has charged with overseeing the promulgation of the mandatory standards that ensure the reliable operation of the bulk-power system.⁶ The Commission also has jurisdiction over the tariffs for wholesale power sales, among which are the tariffs that govern the capacity markets.⁷ Those markets play a vital role in providing the economic incentives necessary to ensure resource adequacy in many of the organized markets. In a word, FERC is the agency with the jurisdiction and knowledge necessary to ensure that the bulk electric system functions and that it has sufficient generation to meet demand. The bulk electric system is complicated—even the smallest addition or loss of generation or transmission can have a profound effect on the system's stability. Every change to the bulk electric system requires an engineering study, a lengthy and complex process. The EPA is contemplating policies that promise to alter the makeup of the bulk electric system drastically and on an abbreviated timeline. When proposing a rule with such profound consequences, responsible decision-making requires hard data. Absent input from the Commission, based on detailed analyses by Commission staff, it is nearly impossible

⁵ See *Californians for Renewable Energy v. Cal. Indep. Sys. Operator Corp.*, 175 FERC ¶ 61,213, at P 13 (2021) (citations omitted).

⁶ See 16 U.S.C. § 824o(b)(1) ("The Commission shall have jurisdiction, within the United States, over the [Electric Reliability Organization, *i.e.*, the North American Electric Reliability Corporation (NERC)] certified by the Commission under subsection (c), any regional entities, and all users, owners and operators of the bulk-power system, including but not limited to the entities described in section 824(f) of this title, for purposes of approving reliability standards established under this section and enforcing compliance with this section. All users, owners and operators of the bulk-power system shall comply with reliability standards that take effect under this section."). NERC Reliability Standards apply to the bulk electric system, as defined by NERC and approved by the Commission, that affects bulk-power system reliability.

⁷ See *id.* § 824(b)(1) ("The provisions of this subchapter shall apply to the transmission of electric energy in interstate commerce and to the sale of electric energy at wholesale in interstate commerce, but except as provided in paragraph (2) shall not apply to any other sale of electric energy or deprive a State or State commission of its lawful authority now exercised over the exportation of hydroelectric energy which is transmitted across a State line. The Commission shall have jurisdiction over all facilities for such transmission or sale of electric energy, but shall not have jurisdiction, except as specifically provided in this subchapter and subchapter III of this chapter, over facilities used for the generation of electric energy or over facilities used in local distribution or only for the transmission of electric energy in intrastate commerce, or over facilities for the transmission of electric energy consumed wholly by the transmitter."); *id.* § 824d(a) ("All rates and charges made, demanded, or received by any public utility for or in connection with the transmission or sale of electric energy subject to the jurisdiction of the Commission, and all rules and regulations affecting or pertaining to such rates or charges shall be just and reasonable, and any such rate or charge that is not just and reasonable is hereby declared to be unlawful.").



to imagine that the EPA could be in a position to reach an informed conclusion regarding the reliability consequences of its Proposed Rule.

Which brings me to my request. On August 3, 2023, the Secretary of the Commission issued a notice announcing the Commission's annual Reliability Technical Conference for Thursday, November 9, 2023.⁸ The Notice states that "[t]he purpose of this conference is to discuss policy issues related to the reliability and security of the Bulk-Power System" and that "[t]he conference will also discuss the impact of the Environmental Protection Agency's proposed rule under section 111 of the Clean Air Act on electric reliability."⁹ The Commission is convening this technical conference, and discussing this specific subject matter, because we must consider the substantial consequences of the EPA's Proposed Rule. While the Proposed Rule could, by itself, significantly impair reliability, the Commission must also consider the Proposed Rule amidst the numerous other public policies that increasingly jeopardize the reliable operation of the bulk electric system.¹⁰

Given FERC's unmatched experience in overseeing the development of mandatory reliability standards, and its role in promoting resource adequacy in the organized markets, I urge the EPA to extend the comment period in this docket in order to afford FERC the opportunity to lodge the record of its upcoming technical conference, including the comments FERC receives from the public, in the administrative record for this proceeding. The conference's testimony and written submissions will provide necessary information, received from a wide variety of sources, regarding the likely effect of the Proposed Rule on bulk electric system reliability. This would provide both the EPA and the public an opportunity to consider the Proposed Rule with a fuller understanding of its probable consequences. Until the record of FERC's technical conference is submitted in the docket, the EPA will lack the record evidence necessary to make an informed decision.

Very respectfully,

A large, handwritten signature in black ink, appearing to read "James P. Danly", is written over the typed name and title.

James P. Danly
Commissioner
Federal Energy Regulatory Commission

⁸ *2023 Annual Reliability Technical Conference*, FERC, Docket No. AD23-9-000 (Aug. 3, 2023), <https://www.ferc.gov/news-events/events/2023-annual-reliability-technical-conference-11092023> (Notice).

⁹ *Id.* (citing EPA's Proposed Rule).

¹⁰ See, e.g., *Fed. "Good Neighbor Plan" for the 2015 Ozone Nat'l Ambient Air Quality Standards*, 88 Fed. Reg. 36,654 (June 5, 2023).

SPECIAL REPORT: EPA'S THREAT TO GRID RELIABILITY

Introduction

The 118th Congress has held eighteen hearings on power generation and grid reliability in the House of Representatives and the Senate. We have heard from electricity reliability experts from the Federal Energy Regulatory Commission (FERC), the North American Electricity Reliability Corporation (NERC) as well as regional transmission operators (RTOs) and independent system operators (ISOs) such as PJM Interconnection (PJM), the Midcontinent Independent System Operator (MISO), the Southwest Power Pool (SPP) and the Electric Reliability Corporation of Texas (ERCOT). They are all in agreement: the U.S. is running into dangerous grid reliability challenges, that experts including members of FERC, now call a crisis. The loss of dispatchable fossil fuel generation is happening far faster than reliable alternatives and essential enabling infrastructure is being added to take its place. Instead of working to address this problem and heed the warnings of experts, the Environmental Protection Agency (EPA) is promulgating and finalizing regulations that will accelerate plant closures and decimate the nation's fossil fuel fleet, most notably the nation's coal power plants.



“The evidence is straightforward. Due to onerous government regulations, reliable and affordable baseload coal fired power is coming off the grid too quickly with no replacement. America is headed for a reliability crisis that threatens not only our electric grid, but also public health, national security, and the economic freedom of the American people. The EPA is the tip of the spear for the Biden Administration’s anti-coal agenda, and the Congressional Coal Caucus is working to bring much needed accountability. This isn’t an ideological debate, this is about keeping America’s lights on.”

Congressional Coal Caucus Co-Chair Bill Johnson (R-Ohio)

Early Indicators

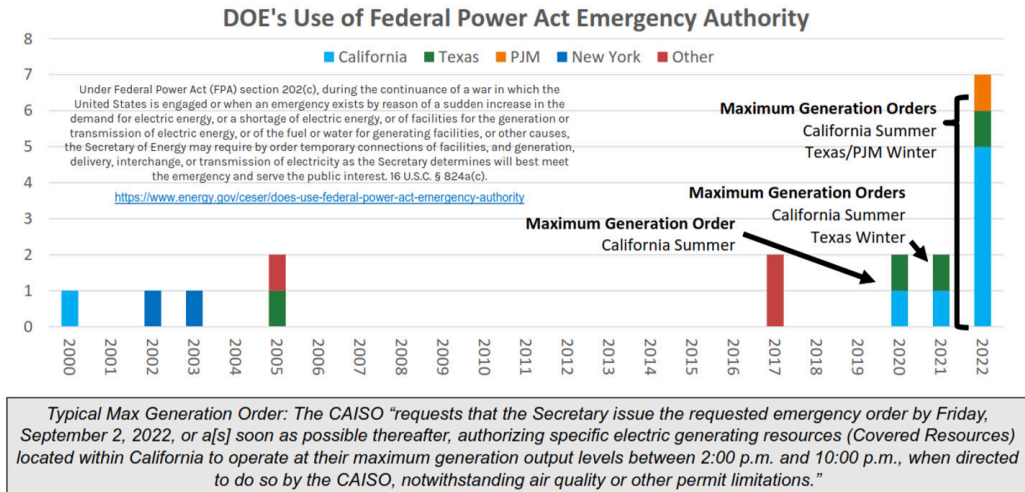
A little-noticed but substantial piece of evidence of the sensitivity of the reliability of our grid is the continued utilization of Section 202(c) of the Federal Power Act (FPA) by the Biden Administration’s Department of Energy (DOE) more than any previous administration.^{1,2} The FPA’s Section 202(c) grants DOE the authority to issue emergency orders to address critical situations on the electric grid. This is the equivalent of the Federal government regularly breaking the glass and pulling the fire alarm. While this provision is vital in mitigating potential power outages and preserving grid stability, its increasing use signals a situation that is becoming untenable.

¹ <https://www.energy.gov/ceser/does-use-federal-power-act-emergency-authority>.

² <https://www.energy.gov/ceser/does-use-federal-power-act-emergency-authority-archived>.

Use of Federal Power Act Emergency

On Marginal Days System is Stretched to Limits



Building the Problem

The regulatory landscape shaped by the EPA targeting the fossil fuel industry is a significant factor influencing the deteriorating grid reliability and growing dependence on FPA Section 202(c). EPA Administrator Michael Regan has been clear about his intention to reshape the nation’s power mix using a “suite of authorities” and closing power plants when possible in order to drive “decarbonization.” At an energy conference in March of 2022, he said, “The industry gets to take a look at this suite of rules all at once and say, ‘Is it worth doubling down on investments in this current facility or operation, or should we look at the cost and say no, it’s time to pivot...?’” He added, “If some of these facilities decide that it’s not worth investing in [control technologies] and you get an expedited retirement, that’s the best tool for reducing greenhouse gas emissions.”³

“We have a suite of regulations that we can present to the power sector in one fell swoop,” Regan said.

Administrator Regan’s comments make clear that the EPA is determined to exploit whatever authority it can to accelerate fossil fuel power plant closures regardless of the negative impact on our grid reliability.

The EPA’s regulations, particularly those targeting emissions reduction and environ-



3 What the EPA’s New Plans for Regulating Power Plants Mean for Carbon - Scientific American

mental compliance, play a substantial role in power generation dynamics and impact grid reliability. It is apparent from the congressional testimony and comments filed in the regulatory dockets that regulatory officials should be coordinating with states and grid reliability experts to develop and promulgate power generation regulations. Currently, they are not.

The EPA's regulations are prompting the retirement or reduced use of fossil-fueled power plants, which are the very lynchpins of the dispatchable generation needed for reliable power delivery. This has left the grid with an increasingly alarming shortage of reliable generation capacity, making it more vulnerable to disruptions and emergencies. The EPA's regulations also impose financial burdens on utility companies, making investing in grid infrastructure upgrades and resilience measures more difficult. This further contributes to the grid's vulnerability to disruptions and emergencies.



“EPA’s power generation regulations further risk the security and reliability of our country’s electric grid, which could lead to energy shortages and rolling blackouts like those experienced across several states this past winter. The EPA must take a more balanced approach when setting new regulations, as Americans still rely on these types of baseload power for most of their energy needs.”

Congressman Morgan Griffith (R-Va.)

The reactive nature of Section 202(c) interventions can lead to challenges in maintaining a consistent and predictable power supply. These measures are implemented as a response to critical situations. They cannot be used, however, to address the root causes of the problems or provide long-term solutions for enhancing grid reliability. Instead, they perpetuate a cycle of emergency interventions where the grid is repeatedly pushed to its limits before corrective measures are taken. This can undermine the grid's resilience and hinder proactive regulation, planning and investment in infrastructure upgrades and modernization.

A balanced approach that considers both environmental goals and grid reliability is essential to safeguard a sustainable and responsible energy future. Achieving this balance means having reliability experts, states, grid operators and utilities work with the EPA to develop regulations tailored to the grid's specific needs that do not impose unnecessary financial burdens on utility companies or exacerbate electricity reliability shortfalls. It also means investing in grid infrastructure upgrades and resilience measures, regardless of whether they directly reduce emissions. By taking these steps, we can minimize the reliance on emergency interventions, preserving a reliable and resilient electric grid for generations.



“We’re going to be shutting these [coal] plants down all across America.”

President Joe Biden, at a campaign event in Carlsbad California, November 2022

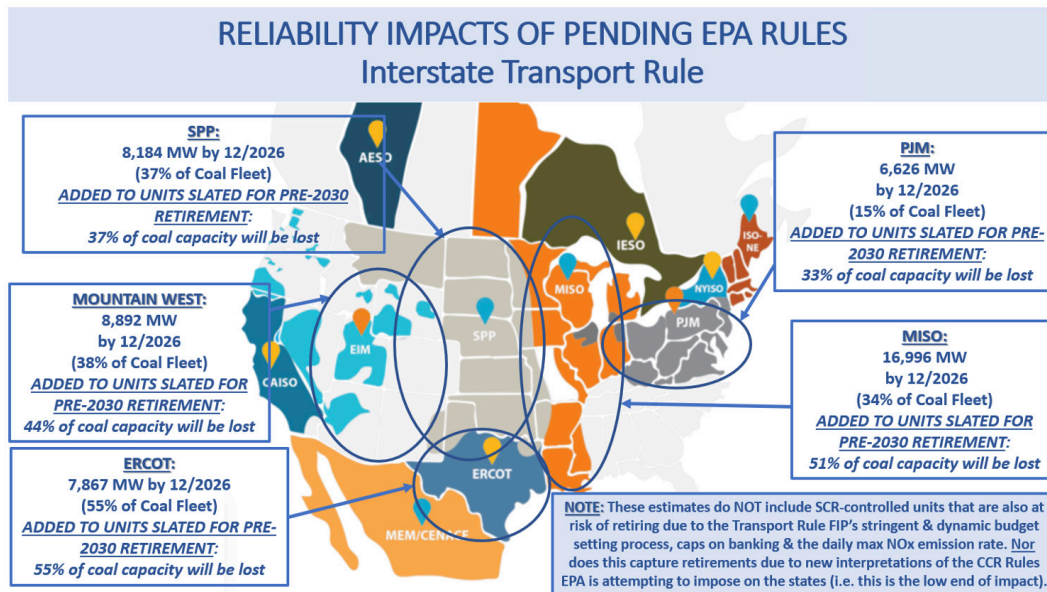


“We are reaching a reliability crisis... Any engineer... will tell you that to keep the lights on, on a 24/7, 365-day basis... you absolutely have to have what is called dispatchable generation... you cannot run a system strictly on intermittents. There’s a role for intermittents... this is not anti-wind or anti-solar. It’s just a position that we have to deal with reality, and you have to have a mix in your system of dispatchable resources as well as intermittents.”

Commissioner Mark Christie, Federal Energy Regulatory Commission

EPA Regulations at Issue

Good Neighbor Plan for 2015 Ozone NAAQS



Under the Clean Air Act (CAA), the EPA is required to set National Ambient Air Quality Standards (NAAQS) for several pollutants, including ozone. The CAA also includes a “good neighbor provision which requires the EPA and states to address interstate transport of air pollution that affects downwind states’ ability to attain NAAQS.⁴ Specifically, the CAA requires each state in a State Implementation Plan (SIP) to prohibit emissions that will significantly contribute to the nonattainment of a NAAQS, or interfere with maintenance of a NAAQS in a downwind state.⁵ If a state fails to submit or EPA disapproves of a state’s SIP, EPA can promulgate a Federal Implementation Plan (FIP) that will be enforceable upon the state.⁶

4 <https://www.epa.gov/interstate-air-pollution-transport/interstate-air-pollution-transport>.

5 *Id.*

6 *Id.*

Under this authority, EPA has recently denied the SIPs of over twenty states and, in March 2023, issued a final Good Neighbor FIP enforcing the reduction of nitrogen oxide (NOx), which contributes to the formation of ozone, for power plants in twenty-six states.^{7,8} The rule would effectively result in the premature closure of over 40,000 megawatts (MW) of coal-fired units, enough capacity to power 30 million U.S. homes, by 2026 unless they install cost-prohibitive selective catalytic conversion (SCR) technology to the unit. These losses, as depicted above, are projected by grid reliability experts including affected RTOs and ISOs, to severely threaten electricity reliability.

Last June, the Electric Reliability Council of Texas (ERCOT), the Midcontinent Independent System Operator (MISO), PJM Interconecion, and the Southwest Power Pool (SPP), the largest RTOs and ISOs in the country, submitted joint [comments](#) in response to EPA's Good Neighbor Plan. Specifically, the comments read,

“The Joint ISO/RTOs are concerned that the Proposed Rule could cause generator retirements due to the limitations on operations and/or the cost of installing Selective Catalytic Reduction (“SCR”) by 2026. However, to the extent units do not retire, their ability to operate could be limited by the Proposed Rule, which depending on the region and level of flexibility within the rule, could present a distinct reliability challenge.”⁹

These comments have resurfaced in bipartisan oversight letters from members of Congress to the Administration over concerns with EPA's Good Neighbor FIP. For example, in early March, Senator Joe Manchin (D-W.Va.), Chairman of the U.S. Senate Energy and Natural Resources Committee, in a [letter](#) to EPA Administrator Michael Regan, referenced the comments while expressing concern over the rule's impacts and urged EPA to postpone finalizing the rule.¹⁰ Rather than heeding the warnings of industry experts, EPA moved ahead, finalizing the rule in late March. The widespread industry opposition to the rule has resulted in introductions in both the [House](#) and [Senate](#) of Joint Resolutions of disapproval.



“West Virginia’s natural resources power the world and have become a target of the Environmental Protection Agency,” said Congresswoman Miller. “Constant and needless regulations on our coal and gas fired power plants are hindering the United States from being energy independent and dominant. Regardless of what the Biden Administration says, coal is not going away anytime soon and if we aren’t producing it, we’ll be buying it from our adversaries. The United States does energy production cleaner and more efficiently than anywhere else in the world and the coal caucus will ensure we continue to do so.”

Congresswoman Carol Miller (R-W. Va.)

Not only is Congress fighting back against the implementation of the rule, but many states have joined the fight as well, with twelve states (Alabama, Arkansas, Kentucky, Louisiana, Mississippi, Mis-

7 88 Fed. Reg. 9,336 (February 13, 2023).

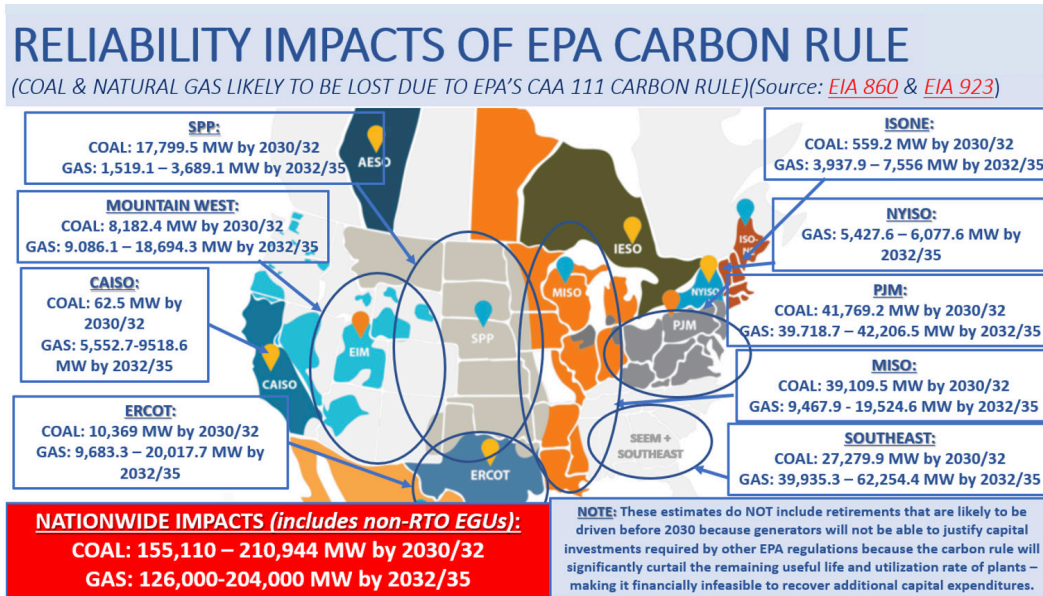
8 88 Fed. Reg. 36,654 (June 5, 2023).

9 <https://nma.org/wp-content/uploads/2023/06/20220621-Joint-ISORTOs-Comments-EPA-Ozone-NAAQS-Proposed-Rule-SPP-ERCOT-MISO-PJM.pdf> at 1-2.

10 <https://nma.org/wp-content/uploads/2023/06/Interstate-Transport-Good-Neighbor-Letter-.pdf>.

souri, Nevada, Oklahoma, Texas, Utah, West Virginia, and Wyoming) having filed lawsuits defending their state’s SIPs in eight federal circuit court of appeals and four lawsuits in four federal circuit court of appeals challenging EPA’s FIP, with more challenges expected to be filed. These lawsuits could have been avoided if EPA had worked with states to modify and approve each state’s SIP rather than issue SIP denials and enforce a nationwide FIP, which states are required to adhere to. EPA’s actions violate cooperative federalism and infringe upon state authority over their power mix.

New Greenhouse Gas Regulations for Fossil Fuel-Fired Power Plants – “Clean Power Plan 2.0”



EPA has again proposed CAA Section 111 authority to promulgate regulations addressing power plant greenhouse gas (GHG) emissions. If finalized, EPA’s recently proposed GHG emissions rule under this authority would have dire consequences for electricity reliability.

As proposed, this rule would require utilities to determine the fate of their existing coal power plants within the next few years to meet unrealistic timelines for compliance. It’s all but certain to force the closure of the nation’s coal fleet.¹¹

Specifically, the proposed rule would require the following:

- Existing coal plants that plan to continue operation past 2040 would be required to employ carbon capture and sequestration (CCS) technology at a 90% capture rate by 2030;¹²
- Plants retiring before 2040 would be permitted to keep operating only if they co-fire with 40% natural gas; plants retiring by 2035 would be required to operate at less than or equal to 20% capacity by 2030 and maintain current emission rates;¹³

11 https://d1dth6e84htgma.cloudfront.net/06_06_23_Testimony_Nasi_511b15e65c.pdf?updated_at=2023-06-05T14:32:28.133Z at 11.

12 <https://eelp.law.harvard.edu/2023/05/epa-proposes-new-rules-to-combat-climate-changing-pollution-from-power-plants/>.

13 *Id.*

- *Plants retiring before 2032 can maintain current emissions rates through closure.*¹⁴

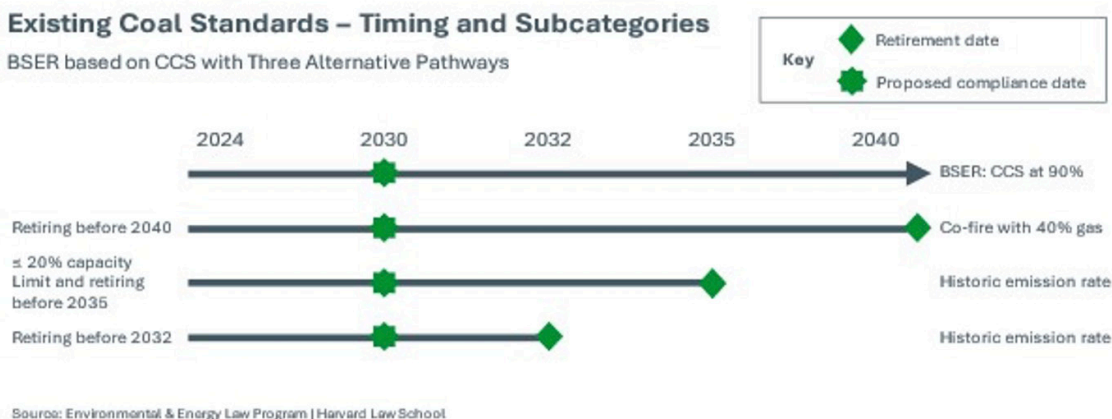
Should this proposed rule be finalized, states will have to submit SIPs placing 155,000 MW of coal-generated electricity into one of these three categories - enough electricity to power over 116 million U.S. households - all but sealing the fate of the coal fleet by 2027 without regard to replacement generation and reliability of the grid.^{15,16}

While development and funding of CCS is critically important to the nation’s energy future, EPA’s CCS mandate is unlawful. By no definition is CCS economically and commercially viable at scale, as required by the CAA as use as a Best System of Emissions Reduction. Further, it is unrealistic for current coal plants to be able to employ CCS technology by 2030. At present, there is no single U.S. commercial-scale coal power plant



retrofitted with CCS technology that operates at a 90% capture rate, as required in the proposed rule. Additionally, the vast majority of electric generating units (EGUs) cannot easily switch to or co-fire with natural gas due to lack of access to sufficient gas pipeline capacity; doing so would require significant new pipeline infrastructure.¹⁷ Requiring natural gas co-firing forces electricity generation shifting, which was deemed beyond the scope of EPA’s authorities under *West Virginia v. EPA*.¹⁸

EPA must not constrain the state’s authority under the CAA to set performance standards for existing units and to consider the remaining useful life of such units. Additionally, EPA must allow states sufficient time to develop plans to comply with CAA limits. Otherwise, rather than take on substantial risk by retrofitting coal plants with CCS or co-firing with 40% natural gas, the result of this regulation will likely be the forced retirement of a substantial amount of coal-powered electricity generation in the U.S. well before enough alternative and reliable electricity sources are able to replace it, further exacerbating the nation’s grid reliability crisis



14 *Id.*
 15 https://d1dth6e84htgma.cloudfront.net/06_06_23_Testimony_Nasi_511b15e65c.pdf?updated_at=2023-06-05T14:32:28.133Z at 11.
 16 <https://www.nrc.gov/docs/ML1209/ML120960701.pdf>
 17 <https://nma.org/wp-content/uploads/2023/07/Final-NMA-Comments-on-EPA's-CPP-Pre-Rule-Docket-Submitted.pdf> at 9.
 18 *Id.* at 11.

Experts have already weighed it on the rule’s potential impacts to electricity reliability, which will be felt across the country. In testimony before a Congressional hearing on the proposed rule in June, Michael Nasi, Partner at Jackson Walker, LLP, explained that the rule threatens the retirement of 155,110 MWs of coal-generated power and could kneecap the nation’s supply of dispatchable generation.¹⁹ He warned that “beginning in 2030, culminating in 2040, America’s grid will have lost almost all of its fuel-resilient, dispatchable backbone provided by coal due to EPA’s suite of new regulations (most prominently, EPA’s New Carbon Rule)”.²⁰ Patrick O’Loughlin, President & CEO of Buckeye Power, Inc. and Ohio Rural Electric Cooperatives, issued a similar warning during the hearing:

“If enacted, it will jeopardize nearly every coal-fired power plant by 2039 and most by 2030. In our case, Buckeye supplies more than 80% of our annual energy requirements from coal-fired power plants. Buckeye Power will be required to shut down all of our coal-fired units by 2030 with no hope of nearly replacing this energy within that timeframe.”²¹

Steam Electric Power Generating Effluent Guidelines

EPA has also continued to ignore serious threats to grid reliability by charging ahead with its rulemaking to revise the effluent limitation guidelines and standards (ELGs) for the steam electric power sector.²² If finalized as proposed, this rule would set more stringent treatment technology standards for several waste streams from coal-fired EGUs. Unfortunately, this rule is not about setting technologically available and economically achievable technology standards, as the Clean Water Act (CWA) requires. Rather, this rule is an attempt to reshape American energy policy by setting standards that have not been proven in U.S. facilities and are not economically achievable, forcing coal plants to close prematurely. During this rulemaking, EPA repeatedly flouted warnings from Congress and the nation’s reliability regulators and grid operators that the grid is at a crisis point and will not be able to withstand the accelerated rate of coal plant closures.²³

In comments on the proposed rule, stakeholders from across the entire power sector all raised serious concerns with EPA’s proposed action, including how this rule will threaten grid reliability, the unproven technology basis upon which EPA has based these new standards, the fact that EPA just revised the steam electric ELGs three years ago and has not justified the need to revise these standards again so quickly after utilities already invested in and began complying with the 2020 Rule, and other legal, technical, and policy concerns. The Public Service Commission of West Virginia strongly opposed EPA’s shortsighted strategy, writing that the proposed rule “seriously threatens the reliability and resilience of electricity supplies to U.S. customers.”²⁴

In response to EPA’s ELG rule, many stakeholders submitted comments in the docket warning about the rule’s impacts on electricity reliability. In their comments, the Utility Water Act Group (UWAG) expressed particular concern, saying:

“But hasty plant closures and costs to comply with new ELG requirements

¹⁹ https://d1dth6e84htgma.cloudfront.net/06_06_23_Testimony_Nasi_511b15e65c.pdf?updated_at=2023-06-05T14:32:28.133Z at 11.

²⁰ *Id.* at 12.

²¹ https://d1dth6e84htgma.cloudfront.net/06_06_23_Testimony_O_Loughlin_a1b32514ac.pdf?updated_at=2023-06-05T13:27:30.695Z at 3.

²² 88 Fed. Reg. 18,824 (March 29, 2023).

²³ See U.S. Senate Energy and Natural Resources Committee, Full Committee Hearing to Conduct Oversight of FERC (May 4, 2023) available at <https://www.energy.senate.gov/hearings/2023/5/full-committee-hearing-to-conduct-oversight-of-ferc> (last visited May 30, 2023).

²⁴ Cite to PSC WV comments at 3.

could cause broad disruptions with unintended impacts, such as reduced grid reliability, diversion of resources away from transition to new generation, and increased electricity costs to consumers.”²⁵

These concerns were echoed by additional industry stakeholders, including the National Rural Electric Cooperative Association (NRECA) and the American Public Power Association (APPA):

NRECA: *“This Proposed Rule has significant economic and operational implications for affected steam electric power plants and broader ramifications for electric reliability and affordability in the United States.”²⁶*

APPA: *“As EPA knows, the suite of requirements affecting the power sector must be coordinated to ensure new regulatory regimes do not disturb the power sector’s obligation to provide affordable, reliable electric service to customers. As such, APPA has concerns that the Proposed Rule does not adequately address concerns about maintaining electric reliability and diverts resources that could be utilized to support the energy transition to a requirement that, if finalized, would generate stranded assets and increase costs for communities that can ill-afford to make new investments as contemplated under the Proposed Rule.”²⁷*

Industry has urged EPA to refrain from finalizing and implementing the proposed rule without first adequately analyzing the rule’s impacts on grid reliability in addition to the cumulative impacts to reliability that would result from the implementation of EPA’s entire power sector strategy.

Coal Combustion Residuals

In 2020, EPA regulations went into effect governing the disposal of coal ash from electric utilities into landfills and surface impoundments for the purpose of addressing risks of contamination due to failure of current coal ash surface impoundments. In those regulations, EPA established a deadline of April 2021 to close unlined CCR surface impoundments.²⁸ Due to the potential electricity reliability impacts of the regulation, EPA finalized two alternative closure provisions to grant utilities additional time to develop alternative capacity to manage their waste streams before they are required to cease receipt of coal ash and close their surface impoundments. The CCR Part A rule granted facilities the option to submit a demonstration to EPA for an extension to the deadline for unlined CCR surface impoundments to stop receiving waste.²⁹ The CCR Part B rule allowed a limited number of facilities to request EPA approval to use an alternate liner demonstration to continue operating unlined surface impoundments if they could show the operation would pose no reasonable probability of adverse effects to human health or the environment.³⁰

Fifty-nine coal-fired power plants applied for deadline extensions under the CCR Part A rule.³¹ While

25 UWAG comments at 9.

26 NRECA comments at 1.

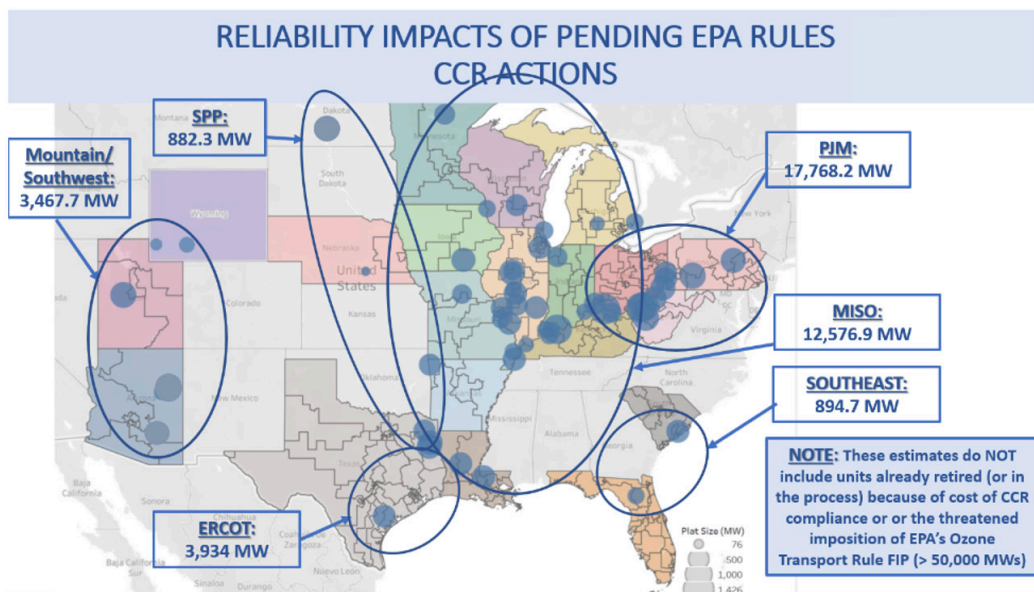
27 APPA comments at 6.

28 85 Fed. Reg. 53,516 (August 28, 2020).

29 <https://www.epa.gov/coalash/coal-combustion-residuals-ccr-part-implementation>.

30 <https://www.epa.gov/coalash/coal-combustion-residuals-ccr-part-b-implementation>.

31 <https://www.epa.gov/coalash/coal-combustion-residuals-ccr-part-implementation>.



some utilities have chosen to withdraw their applications, the EPA has not approved a single extension request, nor issued determinations on many proposals.³² EPA granted two conditional approvals based on new interpretations of the Resource Conservation and Recovery Act (RCRA), which has resulted in lawsuits. For the CCR Part B Rule, EPA has proposed the denial of all but two demonstrations submitted, with the other two having withdrawn their submissions.³³ Members of Congress and RTOs have already issued public comments questioning the denial of EPA's extensions and raising concerns about direct threats to electricity reliability in states served by the utilities impacted. The map above depicts the potential electricity reliability impacts from EPA's CCR regulations originally threatening as much as 55,000 MW, or enough capacity to power over 41 million U.S. households.

Congressman Bill Johnson, co-chair of the Congressional Coal Caucus, advocated on behalf of several Ohio utilities requesting extensions for the proposed rule, and one that received a proposed denial of their application to comply with the rule, urging EPA Administrator Michael Regan to accept the extension requests and to consider the rules electricity reliability implications.³⁴ In the letter, Congressman Johnson emphasized, "MISO and PJM both have commented that implementation of the current rule may affect electric grid reliability."³⁵ Specifically, in their comments, MISO claimed, "The loss of any significant portions of [the five plants in MISO's original comments, not to mention other plants in MISO's service area] would push resource adequacy coverage of regional demands into dangerous territory."³⁶ PJM additionally provided comments to the Rule, warning that 29,000 MW or 16% of PJM's capacity resources may be impacted by the CCR Rule.³⁷

Electricity providers have fought back against the rule, challenging EPA's decision to deny the deadline extension request submitted by Gavin Power, LLC for the General James M. Gavin Power Plant in Cheshire, Ohio, and related actions by filing a lawsuit against EPA.³⁸ Petitioners in the suit, *Electric Energy, Inc. v. USEPA*, include nine power generation companies, who argue that EPA's interpretation of the CCR rule amounts to legislative rulemaking that violates the Administrative Procedures Act

32 *Id.*

33 <https://www.epa.gov/coalash/coal-combustion-residuals-ccr-part-b-implementation>.

34 <https://nma.org/wp-content/uploads/2022/06/B-Johnson-CCR-docket-EPA-Letter-Ohio-plants.pdf>.

35 *Id.* at 1.

36 *Id.* at 1-2.

37 *Id.* at 2.

38 <https://www.lexology.com/library/detail.aspx?g=82a733fe-1296-40a2-81b3-3445c6dc583b>.

because EPA established a binding rule disguised as rule guidance.^{39, 40}

Congressional Hearings Focused on Electricity Reliability

The current Congress has shed additional light on the current state of America's grid reliability. There have been multiple hearings focused on electricity reliability, ranging from oversight hearings of FERC to hearing testimony from industry experts on the impact of EPA's proposed regulations to oversight hearings of the EPA to hear testimony from EPA Administrator Michael Regan.

In addition to Congressional hearings shining a spotlight on electricity reliability, bipartisan members of Congress who support the importance of maintaining electricity reliability came together this Congress to establish the 118th Congress Congressional Coal Caucus, co-chaired by Congressman Bill Johnson (R-Ohio), Congressman Dan Meuser (R-Pa.), Congresswoman Harriet Hageman (R-Wyo.), Congressman Morgan Griffith (R-Va.), and Congresswoman Carol Miller (R-W.Va.) Members of the Caucus have held briefings for their colleagues from industry experts about the importance of coal-powered generation and the impacts of EPA's regulations on the industry and on electricity reliability. The members have been champions in advocating for policies that will protect the coal industry from EPA's explicit desire to strangle it, while also advocating the need for industry and stakeholders to come together to do more to fight back against EPA's punitive regulations.

The hearings and Congressional Coal Caucus meetings provide undisputable evidence that the cumulative impacts of EPA's regulations targeting the fossil fuel industry will exacerbate the electricity reliability crisis and will be felt by Americans nationwide. The following is a list of the congressional hearings in the last six months evaluating EPA's threats to electric reliability:

Thursday, January 26: House Energy and Commerce Committee Roundtable on American Energy Security

Tuesday, January 31: House Energy and Commerce Committee Full Committee Hearing: "American Energy Expansion: Strengthening Economic, Environmental, and National Security"

Monday, February 6: House Ways and Means Committee Hearing: "The State of the American Economy: Appalachia"

Tuesday, February 7: House Energy and Commerce Committee Joint Energy, Climate & Grid Security Subcommittee and Environment, Manufacturing & Critical Materials Subcommittee hearing: "Unleashing American Energy, Lowering Energy Costs, and Strengthening Supply Chains"

Wednesday, February 8: House Natural Resources Full Committee hearing: "Unleashing America's Energy and Mineral Potential"

Monday, February 13th: House Natural Resources Energy and Mineral Resources Subcommittee hearing: "Federal Energy Production Supports Local Communities"

³⁹ *Id.*

⁴⁰ <https://www.uschamber.com/assets/documents/U.S.20Chamber20Amicus20Brief20-20Electric20Energy2C20Inc.20v.20EPA2028D.C.20Circuit29.pdf> at 1.

Thursday, February 16th: House Energy and Commerce Committee Energy, Climate, and Grid Security Subcommittee hearing: “American Energy Expansion: Improving Local Economies and Communities’ Way of Life”

Tuesday, March 28th: House Oversight & Accountability hearing: “Fueling Unaffordability: How the Biden Administration’s Policies Catalyzed Global Energy Scarcity and Compounded Inflation”

Tuesday, April 18th: House Oversight and Accountability Committee Economic Growth, Energy Policy, and Regulatory Affairs Subcommittee oversight hearing: “Spending on Empty: How the Biden Administration’s Unprecedented Spending Increased Risk of Waste, Fraud, and Abuse at the DOE”

Wednesday, April 26th: House Energy and Commerce Committee Environment, Manufacturing, and Critical Materials Subcommittee hearing: “Exposing the Environmental, Human Rights, and National Security Risks of the Biden Administration’s Rush to Green Policies”

Thursday, May 4th: Senate Energy and Natural Resources Committee full committee hearing to conduct oversight of FERC

Wednesday, May 17th: House Oversight Committee Economic Growth, Energy Policy, and Regulatory Affairs Subcommittee hearing titled: “Driving Bad Policy: Examining EPA’s Tailpipe Emissions Rules and the Realities of a Rapid Electric Vehicle Transition”

Tuesday, May 23rd: House Energy and Commerce Committee Oversight and Investigations Subcommittee hearing: “Growing the Domestic Energy Sector Supply Chain and Manufacturing Base: Are Federal Efforts Working?”

Thursday, June 1st: Senate Energy and Natural Resources full committee hearing: “To Examine the Reliability and Resiliency of Electric Services in the U.S. in Light of Recent Reliability Assessments and Alerts”

Tuesday, June 6th: House Energy and Commerce Committee Environment, Manufacturing and Critical Materials Subcommittee hearing: “Clean Power Plan 2.0: EPA’s Latest Attack on America’s Electric Reliability”

Tuesday, June 13th: House Energy and Commerce Committee Energy, Climate, and Grid Security Subcommittee hearing: “Oversight of FERC: Adhering to a Mission of Affordable and Reliable Energy for America”

Friday, June 16th: House Energy and Commerce Energy, Climate, and Grid Security Subcommittee field hearing: “Enhancing America’s Grid Security and Resilience”

Wednesday, June 21st: House Oversight and Accountability Economic Growth, Energy Policy, and Regulatory Affairs Subcommittee hearing: “Clearing the Air: Examining the EPA’s Proposed Emissions Standards”

In a June House Energy and Commerce Committee Subcommittee on Energy, Climate, and Grid Security oversight [hearing](#) of FERC, Full Committee Chair Cathy McMorris Rodgers (R-Wash.) stated in her opening statement, “nearly every grid operator across the country has warned it is facing an energy adequacy crisis *now*, which will continue in the near future.”⁴¹

During the hearing, FERC Commissioner Mark Christie, in response to a question from Rep. Morgan Griffith (R-Va.), a Congressional Coal Caucus Co-chair stated:

“[T]he biggest problem we have right now is we’re losing existing generation capacity that could be running and it’s shutting down prematurely...”


When asked if the country can rely on a system run by intermittent power, FERC Commissioner James Danly said, “no way, and it has never been tested to have a large-scale electric system run on intermittents; there has to be some amount of backup.”

Recent weather events have proven that not only is the loss of reliable and resilient coal-powered electricity a threat to reliability, but that coal has proven an essential backup when our electricity grid fails us. [Testimony](#) from Michael Nasi for an Energy and Commerce Committee Subcommittee on Environment, Manufacturing, and Critical Materials [hearing](#) on EPA’s Greenhouse Gas Standards and Guidelines for Fossil Fuel-Fired Power Plants, also known as the “Clean Power Plan 2.0,” highlights that important fact. During a winter storm in February 2021, ERCOT, SPP, and MISO experienced massive electricity generation failures that resulted in 4.5 million power outages in Texas alone and tragic casualties.⁴² As Mr. Nasi’s testimony points out, the Texas section of the American Society of Civil Engineers (ASCE, 2022), in an analysis of the storm, found that:

“ASCE Texas section identified two primary and related problems: 1) a failure to support reliable dispatchable power generation, and 2) the negative impact from sources of intermittent electric power generation.”⁴³

FEDERAL ENERGY REGULATORY COMMISSION (FERC)

Commissioner James Danly



Q: Do you think it's possible to eliminate coal today or in the near future and be able to maintain a reliable [electric grid] system — is coal irreplaceable at this time?

“No, as things stand — coal is required. It make up just under a quarter of all the installed capacity in America....it would be impossible given the locations and realities of the electric system to replace it.”

Senate Committee Energy & Natural Resources
Oversight Hearing on FERC | May 4, 2023

41 <https://energycommerce.house.gov/events/energy-climate-and-grid-security-subcommittee-hearing-oversight-of-ferc>.

42 https://d1dth6e84htgma.cloudfront.net/06_06_23_Testimony_Nasi_511b15e65c.pdf?updated_at=2023-06-05T14:32:28.133Z at 4.

43 <https://www.texasce.org/wp-content/uploads/2022/02/Reliability-Resilience-in-the-Balance-REPORT.pdf> at 5.

Furthermore, data from the Energy Information Agency (EIA) shows that coal and nuclear power nearly doubled in the grid during the storm when needed most, while weather-dependent resources like wind and solar were unreliable during the entirety of the weather event.⁴⁴ Oklahoma Governor Kevin Stitt, after the event, stated, "...I've talked to several other Governors and coal was really bailing us out in the production."⁴⁵

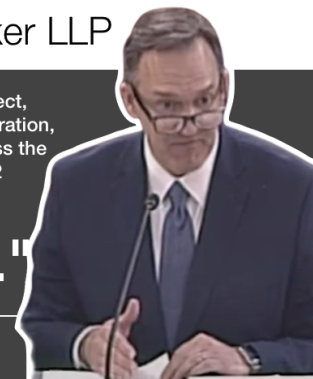
In his testimony, Mr. Nasi stated that the committee should be gravely concerned about the elimination of "the fuel-secure, dispatchable coal capacity" that will result from EPA's rulemaking in the coming few years.⁴⁶

Mr. Mike Nasi | Jackson Walker LLP

Q: If this [EPA Clean Power Plan 2.0] rule goes into effect, along with the litany of other EPA rules on power generation, can my constituents in the PJM grid and families across the country expect equal to or better grid reliability in 2032 than they do right now?

"There is no way..."

House Committee on Energy and Commerce Hearing on EPA's Clean Power Plan 2.0 | June 6, 2023



Putting it more bluntly, FERC Commissioner Mark Christie, during the June Energy and Commerce Committee oversight hearing of FERC in response to an allegation from a Representative that there is "fearmongering going on" about the impacts of premature retirements of dispatchable resources by reliability experts such as FERC, ISOs and RTOs, and NERC, said:

"I don't think that the head of NERC is fearmongering when he repeatedly says that this is a coming danger. I don't think the head of PJM is fearmongering when he has said we're losing dispatchable resources at a rate we cannot sustain. I don't think the head of MISO is fearmongering when he says we're losing dispatchable resources at a rate we can't sustain. I don't think its fearmongering when the head of NYISO last week said the same thing."⁴⁷

When asked in a May Senate Energy and Natural Resources Committee oversight [hearing](#) of FERC whether the grid can eliminate coal and maintain a reliable system, all four FERC commissioners responded that it cannot.⁴⁸

A June Senate Energy and Natural Resources Full Committee [hearing](#) to "Examine the Reliability and Resiliency of Electric Services in the U.S. in Light of Recent Reliability Assessments and Alerts," also highlighted industry expert's concern over the electricity reliability impacts of EPA's regulations targeting fossil fuels. Notably:

NERC President and CEO, James Robb: *"the pace of change is overtaking the reliability needs of the system." He added, "We must manage the pace of the transformation in an orderly way, which is currently not happening. Conventional generation is retiring at an unprecedented rate."⁴⁹*

44 https://d1dth6e84htgma.cloudfront.net/06_06_23_Testimony_Nasi_511b15e65c.pdf?updated_at=2023-06-05T14:32:28.133Z at 5.

45 *Id* at 5-6.

46 *Id* at 6.

47 <https://www.youtube.com/watch?v=BZu41UWWwrl&t=9314s>

48 <https://www.energy.senate.gov/hearings/2023/5/full-committee-hearing-to-conduct-oversight-of-ferc>

49 <https://www.energy.senate.gov/hearings/2023/6/full-committee-hearing-to-examine-the-reliability-and-resiliency-of-electric-services-in-the-u-s-in-light-of-recent-reliability-assessments-and-alerts>.

PJM Interconnection President and CEO Manu Asthana: *“we need to slow down the retirement or restriction of existing generation until replacement capacity is deployed and operational... frankly, we see this as the single largest risk in the energy transition.”*⁵⁰

David Tudor, CEO of Associated Electric Cooperative Inc.: *“The accelerated pace of retirements of on-demand, dispatchable coal generation in particular will put reliability in serious jeopardy.”* He added, *“We need more time. We need to get control of the EPA who doesn’t seem to care about reliability or cost.”*⁵¹

In addition to congressional hearings, the Congressional Coal Caucus has hosted briefings to inform Members of Congress and their staff about the dire electricity implications resulting from EPA’s rules targeting the fossil fuel industry and to develop strategies to challenge EPA’s regulatory onslaught collectively. The industry experts who participated in the meetings include Brian Rich, President of Reading Anthracite Company, Michael Nasi, and Michael Caravaggio, Director of Thermal Fleet at the Electric Power Research Institute (EPRI). During his presentation, Mr. Caravaggio emphasized how coal-generated electricity primarily matches and provides total electricity generation demand in the U.S. as compared to other sources of electricity.

**THE FEDERAL ENERGY REGULATORY COMMISSION
ON THE IMPORTANCE OF COAL
FOR THE RELIABILITY OF OUR NATION'S
POWER GRID**

Chairman Willie Phillips

Q: If you pulled it [coal] off right now, would it give you the certainty that the system would give you the reliability needed?

"It would not."



Commissioner James Danly

Q: Do you think it's possible to eliminate coal today or in the near future and be able to maintain a reliable [electric grid] system — is coal irreplaceable at this time?

"No, as things stand — coal is required."



Commissioner Allison Clements

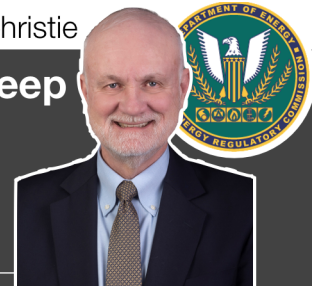
Q: Do you think it's possible to eliminate coal today or in the near future and be able to maintain a reliable [electric grid] system — is coal irreplaceable at this time?

"Right now, today — no."



Commissioner Mark Christie

"...we need to keep coal generation available for the foreseeable future"



Senate Committee Energy & Natural Resources
Oversight Hearing on FERC | May 4, 2023

Watch the the responses:



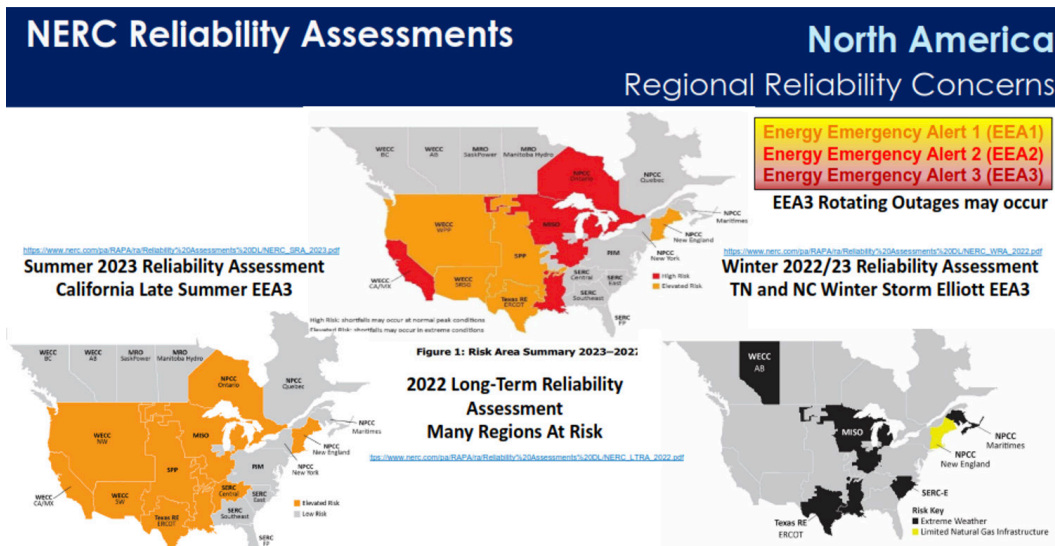
⁵⁰ *Id.*

⁵¹ *Id.*



“By overreaching its authority, the Environmental Protection Agency is jeopardizing the reliability of our grid,” said Congressman Dan Meuser (R-PA). “The EPA’s regulations imposed on our energy infrastructure, specifically coal-fired power plants, undermine grid stability and reliability, particularly as we face energy uncertainty thanks to the Biden Administration’s policies. Allowing ideology that is blind to reality to force a transition away from natural resources and toward unproven energy alternatives that on their own cannot produce enough electricity to sustain our usage needs is reckless. We must promote the most responsible all-of-the-above and all-of-the-below energy independence solutions and stop the EPA’s overreach to safeguard the reliability of our energy system and ensure an uninterrupted and affordable power supply for American households and businesses. That means responsibly supporting American natural resources that have the lowest carbon emissions in the world, like coal, natural gas, oil, and thermal.”

Additional Grid Expert Concern

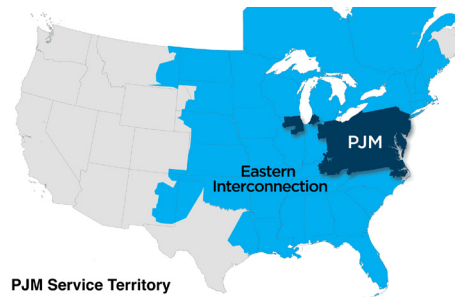


NERC has warned EPA about the increased reliability risks from the pace of the grid transformation away from traditional sources of electricity and the need to evaluate EPA’s policies on reliability, stating in March of 2023:

“As federal and state policies continue to advance rapid transformation of the electric grid, NERC’s annual reliability assessments have shown a steady increase in reliability risk associated with the pace at which the transformation of the grid is occurring. We believe that the energy transition that is occurring can work reliably but the pace of change needs to be

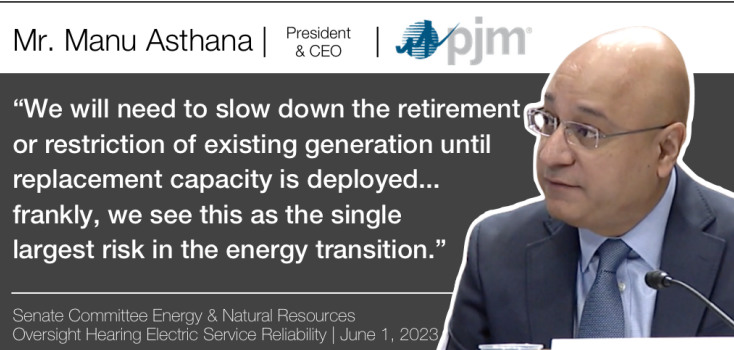
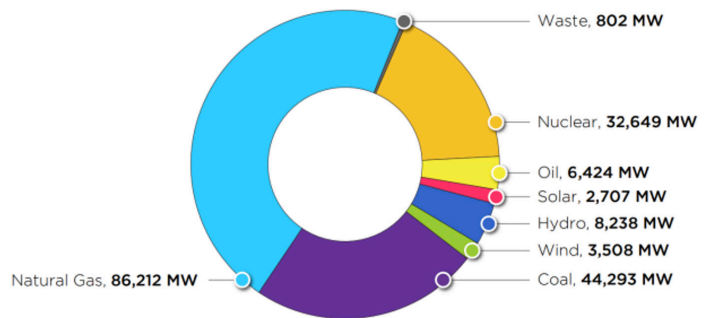
managed and we have stressed the critical need to evaluate the impacts of the policies on reliability.”⁵²

NERC also recently released its [2023 Summer Reliability Assessment](#), which found that two-thirds of the country is at elevated risk of outages should we see widespread heat waves this summer. The assessment specifically pointed to EPA’s Good Neighbor Plan as restricting the operation of coal and gas plants in 23 states:



“New environmental rules that restrict power plant emissions will limit the operation of coal-fired generators in 23 states, including Nevada, Utah, and several states in the Gulf Coast, mid-Atlantic, and Midwest. Coal and natural-gas-fired generators in states affected by the Good Neighbor Plan will likely meet tighter emissions restrictions primarily by limiting hours of operation in this first year of implementation rather than through adding emissions control equipment. RCs in summer-peaking areas typically are not able to authorize extended outages to upgrade systems during this summer season in order to ensure sufficient resources for high demand.”⁵³

Figure 3. PJM Existing Installed Capacity (Nameplate as of Dec. 31, 2022)



In his presentation to the Congressional Coal Caucus, Mr. Caravaggio referenced NERC’s reliability assessment and presented the slide depicting just how much of the U.S. faces regional reliability concerns in the short and long term due to the loss of dispatchable resources.

To add to the growing list of industry experts raising the alarm, PJM Interconnection, in its report titled “Energy Transition in PJM: Resource Retirements, Replacements & Risks” released on February 24, 2023, has warned of a significant capacity shortfall by 2030.⁵⁴ This projection is primarily due to the closure of coal plants driven by EPA regulations and state clean energy targets. However, the planned additions to capacity mainly consist of intermittent renewable sources, which may not provide reliable

52 <https://www.nerc.com/news/Pages/Statement-on-EPA,-DOE-Agreement-Supporting-Electric-Reliability.aspx>.

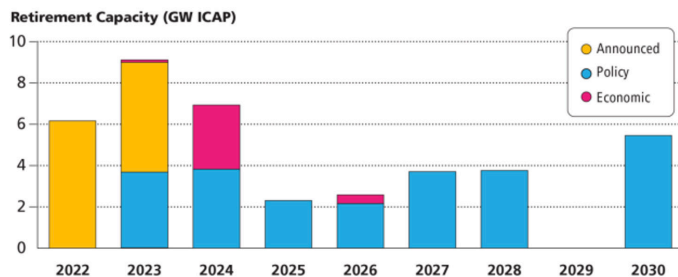
53 https://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/NERC_SRA_2023.pdf at 6.

54 <https://insidelines.pjm.com/pjm-details-resource-retirements-replacements-and-risks/>

power when needed.

The report emphasizes the uncertainty surrounding the timely arrival of replacement generation resources.⁵⁵ While the retirement of existing generation is well-defined by policy objectives, external factors such as the pace of new entry under the Inflation Reduction Act, post-pandemic supply chain

Figure 1. Total Forecast Retirement by Year (2022–2030)



EPA Coal Combustion Residuals (CCR): The U.S. Environmental Protection Agency (EPA) promulgated national minimum criteria for existing and new coal combustion residuals (CCR) landfills and existing and new CCR surface impoundments. This led to a number of facilities, approximately 2,700 MW in capacity, indicating their intent to comply with the rule by ceasing coal-firing operations, which is reflected in this study.



EPA Effluent Limitation Guidelines (ELG): The EPA updated these guidelines in 2020, which triggered the announcement by Keystone and Conemaugh facilities (about 3,400 MW) to retire their coal units by the end of 2028.¹⁴ Importantly, but not included in this study, the EPA is planning to propose a rule to strengthen and possibly broaden the guidelines applicable to waste (in particular water) discharges from steam electric generating units. The EPA is expecting this to impact coal units by potentially requiring investments when plants renew their discharge permits, and extending the time that plants can operate if they agree to a retirement date.



EPA Good Neighbor Rule (GNR): This proposal requires units in certain states to meet stringent limits on emissions of nitrogen oxides (NOx), which, for certain units, will require investment in selective catalytic reduction to reduce NOx. For purposes of this study, it is assumed that unit owners will not make that investment and will retire approximately 4,400 MW of units instead. Please note that the EPA plans on finalizing the GNR in March, which may necessitate reevaluation of this assumption.



“More than any administration in history, the Biden administration has used a combination of executive orders, rulemaking, and agency guidance as de facto lawmaking to bypass Congress and enact crippling, and often unconstitutional, policies. The energy sector has been a prime target in this process, as Biden pushes his “green bad deal” agenda that forces more of our citizens into energy poverty conditions and attempts to eliminate coal and oil production. America will always need fossil fuels to provide continuous and reliable electricity – something that wind and solar cannot do.”

Congressional Coal Caucus Co-Chair Harriet Hageman (R-Wyo.)

issues, and other unknowns could impact the replacement process. PJM acknowledges that the retirement of generation is more certain than the availability of suitable alternatives.⁵⁶

This warning from PJM highlights a broader crisis unfolding in the energy transition, with various regions already experiencing blackouts, price spikes, and capacity losses. Despite the crucial role that the coal fleet has traditionally played in ensuring grid reliability, its significance is being downplayed. Policymakers and regulators have received long-standing warnings about the impending loss of dependable capacity, necessitating urgent action to bridge the growing gap between demand and available supply.

PJM President and CEO Manu Asthana reiterated many points raised in the report during his testimony before a Senate Energy and Natural Resources Committee [hearing](#). He emphasized the rapid shift towards intermittent renewable energy sources in the U.S., driven by climate change concerns and government policies.⁵⁷

The frequent and resolute warnings from industry experts call attention to the sheer magnitude of the threats to electricity reliability that will surely become reality without action taken to prevent EPA’s damaging regulations targeting the fossil fuel industry.

55 *Id.*

56 *Id.*

57 <https://www.energy.senate.gov/hearings/2023/6/full-committee-hearing-to-examine-the-reliability-and-resiliency-of-electric-services-in-the-u-s-in-light-of-recent-reliability-assessments-and-alerts>.

Looking Ahead:

What Actions Should Congress Take to Address the Electricity Reliability Crisis?

The electricity grid is one of our most important infrastructure assets. It is critical to all Americans' economic well-being, health and security. Protection and enhancement of the grid must be given the same level of focus as environmental goals. There is a critical need to analyze the impact of EPA regulations affecting the electric grid's reliability before promulgating those policies.

The EPA's regulations have been met with skepticism and have revived concerns about the agency's regulatory approach. The recent Supreme Court ruling in *West Virginia v. EPA* limited the EPA's authority to dictate fuel use at power plants under the Clean Air Act.⁵⁸

However, on top of questions raised over EPA ignoring the restrictions imposed against it under *West Virginia v. EPA*, electricity grid experts and utilities have spoken: EPA's onslaught of regulations threatens the reliability of the electric grid. The debate surrounding these regulations underscores the importance of striking a balance between environmental goals and the stability of the power sector.

Mandatory Coordination to Protect Grid Reliability: To stop EPA from further exacerbating the electricity reliability crisis, it is necessary for Congress to intervene. Congress should mandate coordination through the FPA among electricity experts like NERC, FERC, and EPA to ensure that EPA actions do not compromise electricity reliability.

Good Neighbor Plan for 2015 Ozone NAAQS: Prevent implementation of the rule through the appropriations process and support the [House](#) and [Senate](#) Congressional Review Act (CRA) joint resolutions of disapproval. Final Rule June 5, 2023.

New Greenhouse Gas Regulations for Fossil Fuel-Fired Power Plants – Or New Clean Power Plan 2.0: Prevent finalization of the rule through the appropriations process, support legislation that would require FERC, NERC, or RTOs/ISOs, in consultation with the states, to analyze the electricity reliability implications of the rule before finalization and urge Members of Congress to conduct oversight of the proposed rule or additionally introduce CRA resolutions of disapproval against the proposed rule. Proposed Rule May 23, 2023; Comment deadline July 24, 2023; Estimated Final Rule Apr. 2024.

Steam Electric Power Generating Effluent Guidelines: Prevent finalization of the rule through the appropriations process and support legislation that would require FERC, NERC, or RTOs/ISOs, in consultations with the states, to analyze the electricity reliability implications of the rule before finalization and urge Members of Congress to conduct oversight of the proposed rule or additionally introduce CRA resolutions of disapproval against the proposed rule. Proposed Rule Jan. EPA, 2023; Estimated Final Rule Apr. 2024.

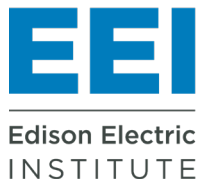
Coal Combustion Residuals: Prohibit funding through the appropriations process for denying Closure Part A extension requests and Closure Part B alternate liner demonstrations until FERC, NERC, or RTOs/ISOs, in consultation with the states, completes comprehensive resource assessment to ensure grid reliability is protected.

FERC Technical Conferences: Strongly advocate for the FERC to hold Technical Conferences to assess the negative impact of EPA's "Suite of Regulations" on grid reliability, allowing stakeholders to provide feedback and insights on the reliability implications. This approach was suc-

cessfully used in 2015 to evaluate the potential impacts of the Clean Power Plan proposed by the EPA, which was later stayed by the Supreme Court of the United States in *West Virginia v. EPA*. On June 30th, 2023, Senators John Barrasso (R-Wyo.) and Shelley Moore Capito (R-W.Va.) urged FERC, in a [letter](#), to hold Technical Conferences on the EPA's "Clean Power Plan 2.0."

Considering the numerous hearings and expert testimonies, it is evident that grid reliability is at a critical juncture. As the EPA continues to promulgate regulations affecting baseload dispatchable power plants, the risks to the stability of our electricity grid are only becoming more alarming. The growing reliance on the FPA's Section 202(c) to address emergency situations highlights the urgency of the moment. The delicate balance between environmental concerns and grid reliability requires careful consideration and collaboration between the EPA, States, DOE, FERC, NERC, and other stakeholders.

As we move forward, it is imperative for the 118th Congress to take decisive action to stand against EPA's regulatory onslaught against the fossil fuel industry by pursuing the necessary policies and Congressional oversight to safeguard our electricity grid's reliability.



September 13, 2023

The Honorable Jeff Duncan
Chairman, Subcommittee on Energy,
Climate, and Grid Security
Committee on Energy & Commerce
United States House of Representatives
Washington, D.C. 20515

The Honorable Diana DeGette
Ranking Member, Subcommittee on Energy,
Climate, and Grid Security
Committee on Energy & Commerce
United States House of Representatives
Washington, D.C. 20515

Dear Chairman Duncan, and Ranking Member DeGette:

Thank you for the opportunity to submit this statement for the record regarding today's hearing, "Keeping the Lights On: Enhancing Reliability and Efficiency to Power American Homes." As the Subcommittee holds this important legislative hearing, we urge members to consider the national security and grid reliability implications of the Department of Energy's (DOE's) proposed amendments to its efficiency standards for distribution transformers. The proposed standards would require the use of amorphous steel cores and would become effective January 1, 2027. While electric companies support increased efficiency for all equipment that uses energy, increased efficiency must be balanced against standards that would limit access to and supply of critical infrastructure components. At this time, access to distribution transformers can be considered a crisis.

Since 2021, EEI and its members—America's investor-owned electric companies—have been engaged with DOE at all levels regarding the severe and ongoing supply chain challenges that have impacted transformer production process and overall availability. Companies' inability to access these critical grid components in appropriate time frames threatens the ability of the electric sector to provide reliable resilient electricity to all customers, to swiftly recover and restore service following natural disasters, and to deliver the benefits of economy-wide electrification. It also challenges companies' ability to provide service to new customers in support of economic growth and domestic industrial expansion. Despite this engagement with DOE and our collective efforts to explore short and long-term solutions to this crisis, on December 28, 2022, DOE issued the Notice of Proposed Rule (NOPR) that would, through its various requirements, further exacerbate the supply chain crisis, while increasing the efficiency of these grid components, which currently are no less than 97.7 percent energy efficient, by a mere one tenth of a percentage point.

The challenge lies in the fact that the NOPR would require all distribution transformers to shift from the industry standard grain oriented electrical steel (GOES) cores to amorphous steel cores. GOES currently accounts for more than 95 percent of the domestic distribution transformer market and, therefore, manufacturers' production lines are tooled for designs that use GOES. A final rule that adopts DOE's current proposal would worsen the current supply chain shortage by requiring manufacturers to change production lines to the less available amorphous steel and increase reliance on foreign sources of steel and foreign producers of distribution transformers.

Additionally, EEI and its members have partnered with the Electric Power Research Institute (EPRI) to study the deployment of amorphous core transformers. These transformers are larger, heavier, and may require new pole infrastructure while posing installation challenges that need to be understood. The EPRI pilot study will illuminate the actual efficiency benefits of a shift to amorphous core transformers, while also helping the industry develop leading practices for their installation, operations, and maintenance. A rush to amorphous core transformers without fully understanding their benefits, impact, and challenges could impact reliability of this most critical infrastructure.

EEI commends Representative Hudson for his leadership in addressing the severe supply chain challenges facing high-efficiency distribution transformers. The Protecting America's Distribution Transformer Supply Chain Act provides additional time for the electric power industry to work with our government partners to assess the costs and benefits of a significant shift away from the electrical steel that currently is being used for transformer cores. Moreover, the bill sends a strong market signal to manufacturers that there is demand for their existing products, which enables manufacturers to determine that investments to expand production capacity to address the shortages are prudent.

Establishing a stronger and more sustainable domestic market for high-efficiency distribution transformers, while ensuring the reliability, resilience, and efficiency of the energy grid, are goals that we all share. EEI's member companies are eager to continue collaborating with Congress, and with all stakeholders, to identify short-term and long-term solutions to overcome this crisis. This Act provides the necessary time to accomplish this. Thank you for holding this important hearing and for considering H.R. 4167. We stand ready to work with the Subcommittee, and all stakeholders, on addressing the distribution transformer supply chain challenges facing our industry and the customers we serve.

If you or the committee staff have any questions or need additional information regarding our statement, please feel free to reach out to me or have your staff contact Eric Grey (egrey@eei.org; (202) 508-5471).

Sincerely,

A handwritten signature in black ink, appearing to read "Tom Kuhn". The signature is fluid and cursive, with a long horizontal stroke at the end.

Thomas R. Kuhn
President & Chief Executive Officer
Edison Electric Institute



National Energy & Fuels Institute, Inc. - NEFI
DC Office: 1629 K Street NW, Ste. 300, Washington, DC 20006
MA Billing Office: 36 Jonspin Rd, PO Box 822 Wilmington, MA 01887
Phone: (617) 924-1000 • Fax: (508) 373-2740 • www.nefi.com

September 12, 2023

The Honorable Jeff Duncan
Chair, Subcommittee on Energy, Climate
& Grid Security
U.S. House of Representatives
2125 Rayburn House Office Building
Washington, D.C. 20515

The Honorable Diana DeGette
Ranking Member, Subcommittee on
Energy, Climate & Grid Security
U.S. House of Representatives
2322A Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Duncan and Ranking Member DeGette:

On behalf of the National Energy & Fuels Institute (NEFI), I am writing in strong support of the “DOE Appliance and Equipment Standards Reform and Consumer Protection Act” which will be examined during tomorrow’s subcommittee hearing titled *Keeping the Lights On: Enhancing Reliability and Efficiency to Power American Homes*.¹

NEFI represents mostly small, independent Main Street businesses that deliver essential heating fuels and sell, service, and install related appliances and equipment for millions of American homes and businesses. We believe this timely legislation will responsibly balance objectives around grid reliability and security and residential energy efficiency with the critical need to maintain equitable consumer choice and access to affordable home energy solutions.

The “DOE Appliance and Equipment Standards Reform and Consumer Protection Act” includes provisions to require technologically feasible and economically justified standards, while considering the cost implications for hard working Americans - especially low-income families. Providing greater choice with respect to heating, ventilation, and air conditioning (HVAC) appliances and equipment will empower these households with the ability to select the most efficient options that align with their budgets, needs, and regional climate considerations.

The U.S. Department of Energy (DOE) seeks to make non-electric home appliances less competitive or no longer viable through stringent new efficiency rules on products including liquid-, gas-, and biofuel-fired (or “fuel-fired”) water heaters, furnaces, and boilers.² Lacking the authority to ban these appliances outright, it appears the agency is attempting to prevent consumer access by making them prohibitively expensive. Meanwhile, the Environmental Protection Agency (EPA) has announced plans to eliminate furnaces and boilers, central air conditioners, and gas clothes dryers from the ENERGY STAR[®] program by the end of 2024.³

The administration’s stated goal is to compel consumers towards expensive electric heat pump technologies without regard for the short- and long-term implications for household costs, reliability, and equitable access. For homeowners, conversion costs to air source heat pumps can easily exceed \$20,000 per household, according to pre-pandemic estimates.⁴ This is an impossible burden for low- and moderate-income families. Operational costs are also likely to rise significantly in many parts of the country due to higher electric rates.

Reliability is another major concern. Rapid economywide electrification will push grids to the brink, increasing the risk of winter blackouts when heating demand peaks. Importantly, air source heat pumps often do not perform efficiently in extremely cold temperatures. As a result, even homes that utilize heat pumps will frequently require a conventional furnace or boiler as a secondary heating system when temperatures drop below freezing. To put it simply, for our nation to have all its eggs in the proverbial “heat pump” basket is a recipe for disaster. It exposes consumers to potential blackouts, system inefficiencies, higher costs, and potentially even national security risks.

Administration policies also ignore exciting innovations in liquid heating fuel combustion. Liquid heating fuel burners rated for B100 (pure biodiesel) are now hitting the market, which is facilitating the deployment of furnaces and boilers capable of efficiently utilizing high concentrations of renewable fuels. Ohio-based R.W. Beckett Corporation began shipping the first UL listed burners for use with concentrations up to 100% renewable liquid heating fuels earlier this year.⁵ On June 22, 2023, Carlin Combustion Technologies, Inc. of North Haven, Connecticut also announced it will soon offer its own UL-listed 100% renewable liquid heating fuel burner to American consumers.⁶

Modern, high-efficiency heating systems running on renewable fuels represent an equitable, pragmatic path to dramatic emissions reductions while protecting consumers and lowering their energy costs. These systems deserve recognition within appliance efficiency regulatory policies and should continue to have access to ENERGY STAR performance labels. As your subcommittee examines challenges around grid reliability and security, preserving fuel- and technology-neutral policies will be paramount. Reliable home energy requires a common sense, consumer-focused, and equitable approach.

Thank you for your consideration of this matter. We would be happy to answer any questions you may have or provide any additional information you may require.

Respectfully submitted,



Sean Cota
President and CEO
sean.cota@nefi.com

¹ Scheduled for Wednesday, September 12, 2023, at 10:00am EDT.

² See RIN #1904-AD34, 1904-AE82, and 1904-AD91.

³ U.S. Environmental Protection Agency’s ENERGY STAR Products Partner Public Notices published on May 18, 2023 (Furnace and CAC Proposal) and June 5, 2023 (Residential Boiler Proposal), available at: https://www.energystar.gov/partner_resources/products_partner_resources/public_notices (accessed Sept. 12, 2023).

⁴ Cost of Residential Air-source Heat Pumps, Diversified Energy Solutions, September 24, 2021. Given its date of publication, this study uses pre-pandemic cost estimates that, given high inflation, increased labor costs, and ongoing supply chain disruptions, are likely now significantly higher.

⁵ <https://www.beckettcorp.com/product-announcements/r-w-beckett-af-afg-oil-and-renewable-fuels-burner-the-industrys-first-b100-ul-listed-burner>

⁶ Announcement at the NEFI Heating & Energizing America Trade Show or “HEAT Show” in Springfield, MA.



LOURENCO GONCALVES
Chairman, President & Chief Executive Officer
Cleveland-Cliffs Inc.

February 2, 2023

The Honorable Jennifer Granholm
U.S. Secretary of Energy
U.S. Department of Energy
1000 Independence Ave., SW
Washington, DC 2058

Dear Secretary Granholm:

It was an honor to have you visit Cleveland-Cliffs' state-of-the-art Toledo Direct Reduction plant in August 2022 and to meet with you at your office on October 3, 2022. I valued the discussion we had on a host of topics, including Cleveland-Cliffs' partnerships with the Department of Energy's (DOE) Better Climate Challenge Initiative and Better Plants program. We did not, however, have an opportunity to discuss Cleveland-Cliffs' important role as the current sole supplier of Grain Oriented Electrical Steel (GOES) and Non-Oriented Electrical Steel (NOES) in North America. GOES is used to form the cores of electric distribution and power transformers that support the U.S. electricity grid. NOES is used in the most highly efficient electric motors, including electric vehicle motors¹. Cleveland-Cliffs produces these electrical steels at its Butler Works mill in Pennsylvania and Zanesville Works facility in Ohio. These mills provide 1,500 good-paying, middle class, union jobs with workers represented by the **United Auto Workers (UAW)** and support countless jobs in the transformer supply chain.

The electrical steel production capabilities of Cleveland-Cliffs' Butler Works and Zanesville Works operations serve a critical role in supporting U.S. energy and national security. These mills ensure that the United States is not reliant on foreign countries for materials needed to power our electric grid and to support vehicle electrification. The Department of Commerce has twice identified the preservation of these facilities as a national security imperative². In early January, we were surprised to learn of a DOE *Notice of Proposed Rulemaking* (NOPR) containing a new distribution transformer efficiency standard. DOE's press release on the proposal included the following statement: "Almost all transformers produced under the new standard would feature amorphous steel cores, which are significantly more energy efficient than those made of traditional, grain-oriented electrical steel³." Cleveland-Cliffs will be an active participant

¹ <https://www.clevelandcliffs.com/news/news-releases/detail/564/cleveland-cliffs-introduces-new-motor-max-non-oriented>

² https://www.commerce.gov/sites/default/files/the_effect_of_imports_of_steel_on_the_national_security_-_with_redactions_-_20180111.pdf
<https://www.federalregister.gov/documents/2021/11/18/2021-24958/publication-of-a-report-on-the-effect-of-imports-of-transformers-and-transformer-components-on-the>

³ <https://www.energy.gov/articles/doe-proposes-new-efficiency-standards-distribution-transformers>

in the comment period on this NOPR, correcting the flawed assumptions about the purported benefits of amorphous metals over GOES.

If this rule is implemented as proposed, it will mean the end of the highest efficiency electrical steel production in the United States. **Nearly 70% of the electrical steels that Cleveland-Cliffs produces are used in distribution transformer cores. Without a market for this GOES, Cleveland-Cliffs production of both GOES and NOES would be completely unsustainable. The Company would have no choice but to discontinue the production of GOES for this market, GOES for the power transformer market and NOES needed for electric vehicles and other applications.** Such an outcome would handicap the investments in greening and modernization of the electric grid and would result in supply chain failure as bad or worse than what we have witnessed in microchips over recent years. In short, if promulgated, this efficiency standard would make the U.S. critically dependent on imports of foreign materials, weakening the resiliency of the electric grid and its transformer supply chain, ultimately threatening President Biden's critically important energy and climate goals. **This proposed standard also jeopardizes 1,500 livelihoods associated with GOES and NOES production in Pennsylvania and Ohio.**

Given all that is at stake, I respectfully request a meeting with you as soon as practicable to discuss this important matter. We at Cleveland-Cliffs value our partnerships with the Department of Energy and I am confident that we can work toward a solution that will increase distribution transformer efficiency while maintaining and further enhancing domestic GOES and NOES production.

Thank you for your consideration.

Most Sincerely,



Lourenco Goncalves
Chairman, President & Chief Executive Officer
Cleveland-Cliffs Inc.

cc: Mr. Wendell Carter, Executive Vice President, Technology
Ms. Traci Forrester, Executive Vice President, Environmental & Sustainability
Ms. Bridget Bartol, Deputy Chief of Staff, Office of the Secretary