



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

Proposed Rule

88 Fed. Reg. 33240 (May 23, 2023)

EPA-HQ-OAR-2023-0072

**COMMENTS OF THE ELECTRICITY CONSUMERS RESOURCE COUNCIL
(ELCON)**

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I. Introduction

The Electricity Consumers Resource Council (ELCON) appreciates the opportunity to provide the following comments in response to the Environmental Protection Agency's (EPA) May 23, 2023 proposed rule on New Source Performance Standards for Greenhouse Gas Emissions from New, Modified, and Reconstructed Fossil-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions from Existing Fossil-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule (Docket No. EPA-HQ-OAR-2023-0072). ELCON respectfully submits the following concerns regarding reliability and cost impacts due to potential early retirements of 24/7 baseload, fossil-fired generating units as a result of the proposed rule's compliance requirements and timelines.

II. ELCON's Interest in the Proceeding

ELCON is the national association representing large industrial consumers of electricity. ELCON member companies create a wide range of products from virtually every segment of the industrial community. ELCON members own and operate hundreds of major facilities and are significant consumers of electricity in the footprints of all organized markets and other regions throughout the United States. Reliable electricity supply at just and reasonable rates is essential to our members' operations. As discussed below, the EPA's proposed rule will have a direct reliability and financial impact on ELCON members.

ELCON recognizes the importance of the ongoing energy transition and commends the EPA's commitment to understanding and addressing greenhouse gas (GHG) emissions in support of the environment. Many ELCON member companies have stated commitments to reducing direct GHG emissions from their operations, procuring lower-carbon energy supplies, and investing in carbon capture and storage technologies and hydrogen production. However, ELCON is concerned that stringent and mandatory GHG reduction requirements with a compressed timeline may

jeopardize reliable and affordable energy and exacerbate the unprecedented early retirement of 24/7 dispatchable generating units.

III. Comments

The EPA, in its proposed rule, recognizes the importance of maintaining resource adequacy and grid reliability. In doing so, EPA has provided some flexibility in compliance deadlines with phased-in approaches and tiered categories. The EPA also outlines commercially viable and proven technologies to support the ongoing operation of fossil-fueled resources to meet strict carbon dioxide emissions reductions. However, even with adequate flexibility for compliance, there is a real risk of forcing early retirements of resources necessary to maintain reliable and affordable electricity that underpins the nation's economy.

Even taking into account "Remaining Useful Life and Other Factors" existing power plants may choose to shutter rather than navigate complicated and costly compliance measures. As reported by POLITICO, the ten largest utilities with significant coal and natural gas fleets have indicated there is little appetite for investing in new technologies and would rather retire those power plants than risk their capital investments with retrofitting.¹

Although the eventual phasing out of fossil-fuel generating units may assist with reduction in carbon dioxide emissions and provide opportunities for lower carbon resources, the timing and cost of such transition cannot be ignored. The balance of retirements and replacement generation is already unsteady under current electricity demands. The prospect of electrification of our economy, proliferation of large energy-consuming data centers, increasing penetration of electric vehicles and transportation, the Administration's efforts to bring manufacturing back to the U.S., and other factors

¹ Ariana Skibell, "Utilities to Biden's carbon capture money: Meh," POLITICO (July 11, 2023).

project a significant increase in electricity demand which has been relatively flat in the last decade, and will further impact the balance of retirements and replacements.

1. Reliability

Federal regulators and regional transmission operators (RTOs), among others, continue to raise the alarm regarding the pace of thermal generation retirements and the increased penetration of intermittent resources. In testimony before the House Subcommittee on Energy, Climate and Grid Security, Federal Energy Regulatory Commissioner Mark Christie stated:

[T]he core threat is this: Dispatchable generating resources, even with many years of useful life remaining, are retiring far too quickly and in quantities that threaten our ability to keep the lights on. The problem generally is not the *addition* of intermittent resources such as wind and solar, but the far too rapid *subtraction* of dispatchable resources, especially coal and gas.²

At the same hearing, Federal Energy Regulatory Commissioner James Danley warned that policy interventions are distorting market prices and now planning regions “struggle to incentivize the retention and addition of needed generation resources, and... much of the United States is heading for a reliability crisis.”³ Reliability involves more than merely keeping the lights on. Outages are costly to consumers, interrupt business operations, and can threaten the lives of individuals as demonstrated during Winter Storm Uri in February 2022.

Not only does the premature retirement of dispatchable resources threaten reliability, replacement generation is not being deployed in a timely manner due to transmission interconnection queue backlogs. Even more concerning is the fact that

² Opening Statement of Mark C. Christie, Commissioner, Federal Energy Regulatory Commission before the House Committee on Energy and Commerce, Subcommittee on Energy, Climate, and Grid Security at p. 1 (June 13, 2023) (emphasis in original) (“Comm’r Christie Testimony”).

³ Written Testimony of James P. Danly, Commissioner, Federal Energy Regulatory Commission before the Subcommittee on Energy, Climate, & Grid Security, Committee on Energy and Commerce, United States House of Representatives (June 13, 2023).

these replacement resources do not operate in the same manner as traditional thermal units and require more peak design capacity than the generation being replaced. As Commissioner Christie testified, “In terms of capacity value... one nameplate megawatt of wind or solar is simply not equal to one megawatt of gas, coal or nuclear...[t]he numbers just do not balance”⁴ PJM Interconnection (PJM), the largest RTO, has raised a similar concern, “[n]ew generation in the queue is largely intermittent, so we need multiple megawatts to replace one megawatt of retiring generation. And, new generation is coming online slower than anticipated. If these trends continue, our models show increased risk of having insufficient resources later in this decade to maintain the reliable electric service that consumers expect.”⁵

Earlier this year, PJM released its assessment on the pace of resource retirements and replacement generation sources in its service territory.⁶ PJM found that:

Maintaining an adequate level of generation resources, with the right operational and physical characteristics, is essential for PJM’s ability to serve electrical demand through the energy transition. Our research highlights four trends below that we believe, in combination, present increasing reliability risks during the transition, due to a potential timing mismatch between resource retirements, load growth and the pace of new generation entry under a possible “low new entry” scenario:

- The growth rate of electricity demand is likely to continue to increase from electrification coupled with the proliferation of high-demand data centers in the region.
- Thermal generators are retiring at a rapid pace due to government and private sector policies as well as economics.
- Retirements are at risk of outpacing the construction of new resources, due to a combination of industry forces, including

⁴ Comm’r Christie Testimony at p. 2.

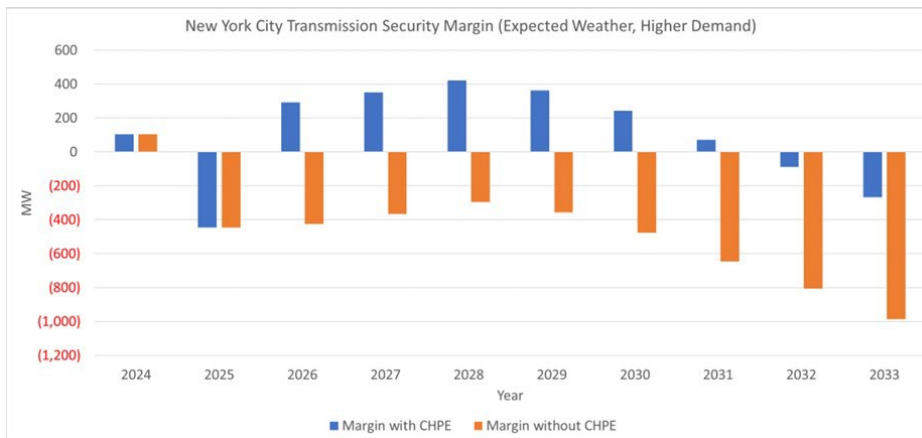
⁵ Testimony of Manu Asthana, President and CEO, PJM Interconnection before the United States Senate Committee on Energy & Natural Resources at p. 1 (June 1, 2023) (“Manu Asthana Testimony”).

⁶ *Energy Transition in PJM: Resource Retirements, Replacements & Risks* (Feb. 24, 2023) (“PJM Report”), available at <https://www.pjm.com/-/media/library/reports-notice/special-reports/2023/energy-transition-in-pjm-resource-retirements-replacements-and-risks.ashx>.

siting and supply chain, whose long-term impacts are not fully known.

- PJM’s interconnection queue is composed primarily of intermittent and limited-duration resources. Given the operating characteristics of these resources, we need multiple megawatts of these resources to replace 1 MW of thermal generation.⁷

Plant retirements are raising reliability concerns in the New York City area as soon as 2025 according to the New York grid operator, New York ISO. New York ISO projects that New York City could see a deficit of as much as 446 megawatts (MW) during peak days. Further complicating New York’s efforts to maintain resource adequacy and reliability is New York’s “Peaker Rule” that limits nitrogen oxide emissions from simple-cycle combustion turbines, known as peakers, which are often used to provide system reliability during the most stressful grid conditions. According to NYISO, as of May 1, 2023, 1,027 MW of affected peakers had deactivated or begun limiting their operations. If this trend continues, 590 MW of additional peakers are expected to no longer be available. Although shortfalls may be eased in 2026 with the expected activation of the Champlain Hudson Power Express (CHPE) transmission line, resource adequacy will continue to erode with the expected increases in future demand.⁸

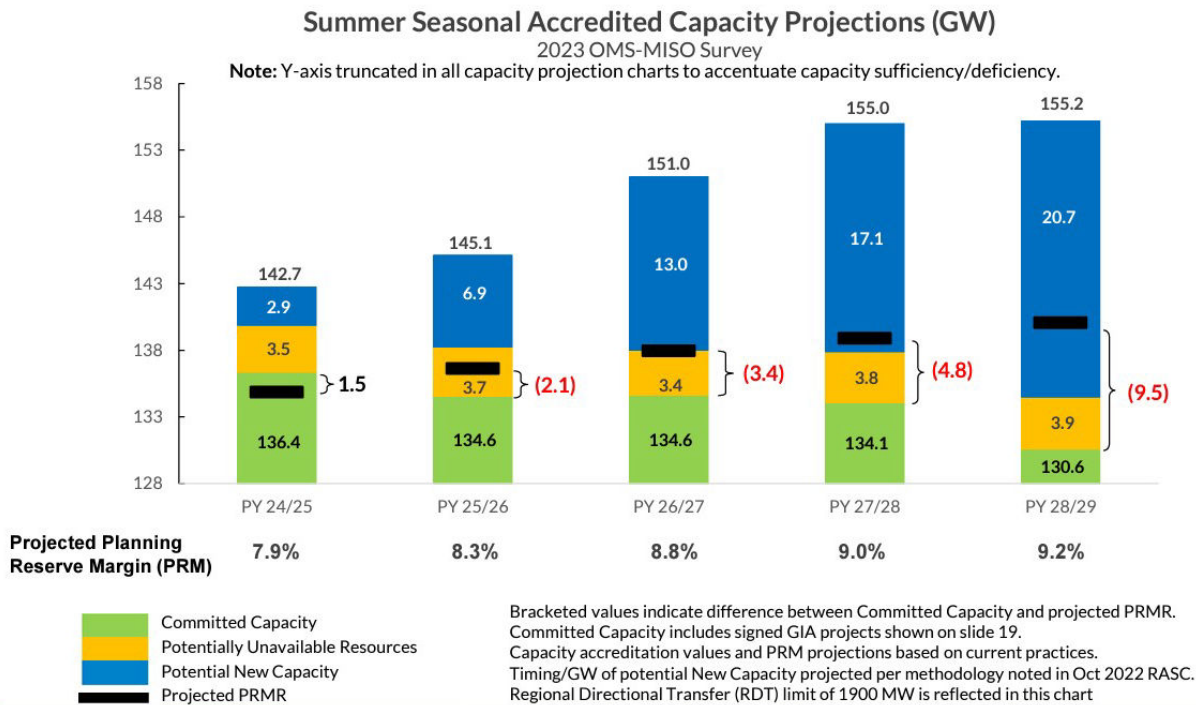


⁷ PJM Report at p. 1 (internal footnotes omitted).

⁸ New York ISO, *Short-Term Assessment of Reliability: 2023 Quarter 2* at pp. 4-5 (July 14, 2023), available at <https://www.nyiso.com/documents/20142/16004172/2023-Q2-STAR-Report-Final.pdf/5671e9f7-e996-653a-6a0e-9e12d2e41740>.

The Midwest Independent System Operator (MISO), the central US grid operator, has echoed similar concerns. MISO recently released their resource adequacy assessment indicating that potential resource adequacy shortfalls could begin in 2025 reaching a projected shortfall of 9.5 gigawatts (GW) by 2028, two years before the first proposed EPA compliance milestones begin.

Committed Capacity shows declines over survey window with potential resource deficits starting in PY 2025/26



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According to MISO CEO, John Bear, “[t]hese results continue to illustrate the reliability risk we face and reinforce the need for dispatchable, long-duration resources to be maintained and brought online to manage the transition to weather-dependent, low-carbon resources.”⁹

⁹ MISO, “OMS-MISO survey results indicate adequate electric resources for upcoming planning year. Market support, new capacity needed to avoid projected deficit in the future.” (July 13, 2023), available at <https://www.misoenergy.org/about/media-center/oms-miso-survey-results-2024-2025/>.

While the intermittency and weather dependency of wind and solar resources has long been known, some of these resources can cause instability by internal settings failing to ride through system disturbances and can actually create cascading outages. In the Federal Energy Regulatory Commission's (FERC) order directing the North American Electric Reliability Corporation (NERC) to submit a plan to register these resources due to their aggregate effect on the bulk power system (referred to in the order as inverter-based resources (IBRs)), FERC highlighted instances of adverse system conditions caused by IBRs.¹⁰ FERC noted that:

[S]imulations indicate that aggregate IBRs experiencing momentary cessation can lead to instability, uncontrolled separation, and voltage collapse. In areas of high IBR saturation, simulations indicate that this type of response may have an impact much greater than the most severe single contingency (i.e., the traditional worst-case N-1 contingency) of a balancing authority area, potentially impacting a widespread area.¹¹

This is not to suggest that IBRs (wind and solar) are not viable resources, but that regulators must keep in mind the differences in operating characteristics from thermal units that must be addressed in order to secure grid reliability.

None of this runs counter to thoughtful implementation of GHG reduction initiatives, including reducing GHGs associated with power production and consumption as a part of the comprehensive and diverse GHG reduction initiatives that ELCON member companies are already doing. However, regulators and legislators must not lose sight of the operational requirements of a well-functioning grid. While low carbon emissions energy policies are being crafted, the timing of implementation and the operational characteristics of the existing generation fleet are absolutely

¹⁰ *Registration of Inverter-Based Resources*, 181 FERC ¶ 61,124 at P 5 (2022). Specific to an incident in California "NERC found that many of the facilities that unexpectedly and adversely responded to the fault events were 'solar PV [IBRs] that had a noticeable effect on the [Bulk-Power System] performance in the aggregate.' This aggregate impact may occur when individual IBRs' controls and equipment protection settings are not configured or programmed to ride through system disturbances." (footnotes omitted).

¹¹ *Id.*

critical.¹² Jim Robb, NERC's President and CEO, offered the following recommendations:

- Until energy, capacity, and essential reliability services are fully replaced, the retirement of traditional units must be managed. This may require a new pricing construct to ensure that necessary reliability investments (e.g., winterization investments, costs to firm up fuel supply, etc.) are adequately compensated for in the competitive markets.
- It is imperative to understand and plan for the different operating characteristics of variable, inverter-based resources and take steps to ensure they contribute to reliability.
- The reliability attributes of all resources, especially fuel security and provision of essential reliability services, must be recognized and valued by the marketplace.
- Interagency coordination is absolutely needed for policies that impact generation, especially coal resources, to keep reliability at the forefront of the policy table.¹³

Thermal generation, especially natural gas, plays an important role in meeting low carbon energy goals. Rather than speed the retirement of these resources, there needs to be a balance and diversity of supply to adequately support the nation's movement toward more cost-effective and broadly deployed low carbon energy technologies.¹⁴

¹² Manu Asthana Testimony at p. 8. ("There is a critical need for integrating analysis of the reliability impact of specific state and federal policies prior to those policies being adopted. We remain concerned that compliance dates that impact the generation fleet are being chosen without such a rigorous analysis always being undertaken.").

¹³ Testimony of James B. Robb, President and Chief Executive Officer, North American Electric Reliability Corporation before the United States Senate Committee on Energy and Natural Resources at p. 8 (June 1, 2023).

¹⁴ The North American Reliability Corporation 2023 State of Reliability Technical Assessment at p. 35 (June 2023) ("Sufficient flexible resources are needed to ensure resource adequacy and energy sufficiency as the grid transforms and to reduce the exposure to energy shortfalls during times when [variable energy resource] output is lower than forecasted. Until storage technology is fully developed and deployed at scale, natural-gas-fired generation will remain a necessary balancing resource to meet the flexibility needs of the system.").

2. Cost

Large industrial and commercial customers are also concerned about the cost implications of the proposed rule. The 24/7 availability of reasonably-priced electric power is a competitive advantage to many businesses and must be maintained. This concern includes the costs of additional transmission infrastructure, costs to existing generators to meet target carbon reductions, and most importantly the costs of supply shortfalls and outages. It is important to carefully consider these costs, including as compared to other GHG reduction strategies such as Carbon Capture and Underground Storage (CCUS).

Significant transmission investment is critical to meeting low carbon energy goals, not only to connect new lower carbon energy resources, which are largely located far from populated areas where the most demand occurs, but also to connect to other regions' resources during generation resource shortages or outages. Transmission cost projections have been in the hundreds of billions of dollars and according to one study, the amount of transmission investment needed to meet net-zero carbon goals by 2050 would cost approximately \$2 trillion.¹⁵ Compounding this enormous cost is the fact that transmission costs are increasingly becoming a larger factor in utility rates.

The impacts to reliability also come at a cost. Large industrial and commercial consumers are particularly at risk from resource adequacy shortfalls and system disturbances. Manufacturers and data centers not only require 24/7 reliable power but also sustained power quality. Interruptions and variations in voltage and frequency can have disastrous and costly impacts on services.

During Winter Storm Uri in February 2021, Texas manufacturing suffered power outages and disrupted operations which affected both business revenue and consumer

¹⁵ Princeton University, *Net-Zero America: Potential Pathways, Infrastructure, and Impacts* at 108 (Oct. 29, 2021); available at: <https://www.dropbox.com/s/ptp92f65lgds5n2/Princeton%20NZA%20FINAL%20REPORT%20%2829Oct2021%29.pdf?dl=0>

prices. Texas chemical plants, which represent nearly 75 percent of chemical production in the US, also serve important supply chains ranging across disinfectants, plastic bottles, fertilizer, pesticides, and packaging. Manufacturers responsible for chemical, plastic, and rubber exports suffered an inflation-adjusted 20 percent decrease in value.¹⁶

Beyond consumer prices, Winter Storm Uri had numerous negative impacts on retail electricity customers from freezing home temperatures to the inability to run lifesaving medical equipment. Overall, it is estimated that Winter Storm Uri cost the economy between \$80 billion to \$130 billion although the extent of electricity outage direct and indirect costs is difficult to discern. The loss of life experienced due to the freezing temperatures and lack of energy access is unacceptable at any cost.¹⁷

3. Coordination

The integrated nature of the country's power system can result in clashing policy choices and unintended consequences. Therefore, policies that affect electric reliability cannot be planned and deployed in a vacuum. Reliable operation of the nation's electric grid is a primary function of the RTOs and other transmission providers and therefore, states inside and outside of RTO footprints must coordinate with transmission providers to ensure that supply adequacy and other reliability issues are addressed. However, it is acknowledged that multi-state RTOs themselves struggle to incorporate federal and state energy policies into their resource adequacy and transmission planning functions and lack sufficient coordination with other transmission planning regions to ensure reliable and least cost solutions.

Coordination at the federal level is also critical. The nation's power grid is integrated in its function but is planned in silos. Despite a balkanized grid of states

¹⁶ Jess Donald, "Winter Storm Uri 2021: The Economic Impact of the Storm," FiscalNotes (Oct. 2021), available at <https://comptroller.texas.gov/economy/fiscal-notes/2021/oct/winter-storm-impact.php#:~:text=The%20storm%20contributed%20to%20at,%2480%20billion%20to%20%24130%20billi on.>

¹⁷ *Id.*

making resource decisions and RTOs making transmission planning decisions (all without sufficient coordination), the federal government is tasked with overseeing energy market functions, incorporating reliability requirements, and mapping out transmission needs while also crafting rules and regulations to mitigate climate change and impacts of extreme weather events on the nation. In this vein, the EPA should recognize that there needs to be a fundamental shift in coordination among all regulatory bodies to ensure a stable, reliable, and affordable electric grid.

There has long been a tension between states and the federal government over jurisdictional authorities. Often the politics of individual states are diametrically opposed to the politics of the federal government under the reigning political party. Compounding this tension, energy policy has become significantly more political in recent years, despite a recognition that energy underpins the very health and strength of the nation's economy as well as the day-to-day wellbeing of a modern society. Coordination in these circumstances becomes ever more critical to ensure reliability of the grid. Left to the political environment alone, policies will continue to clash, weakening the grid and unequally impacting customers.

As environmental considerations are ever more intertwined in energy policy, reliability becomes ever more important. The policies and operations of the grid at conception, nearly 100 years ago, no longer adequately reflect the realities of a modern grid or an increasingly electrified economy with more frequent and extreme weather events. As the EPA continues to issue climate-focused policies in this Administration, FERC and the U.S. Department of Energy (DOE) must account for how these policies impact the reliability of the grid and the functions of energy markets. NERC must investigate the practical implications of new policy to determine whether additional protection to grid security is necessary. So too, when states implement environmental policies, FERC and DOE must incorporate those decisions into federal policies that respect the federal/state jurisdictional divide but with the recognition that any new federal policies affect the entire nation. In short, energy policy cannot be formed by any

single regulatory body in isolation but instead requires coordination among multiple federal and state regulators to ensure continued reliability at least cost.

State governors and public utilities commissioners have a vested interest in ensuring reliability at least cost for their constituents. The practical implications of the policies embodied in the EPA's proposal must be well understood by these groups who then may develop robust strategies to advance regional solutions through the energy transition.

IV. Conclusion

ELCON appreciates the opportunity to provide these comments on behalf of large industrial and commercial electricity consumers. We fully support a pragmatic and well-coordinated energy transition. ELCON implores the EPA to consider the timing of compliance and the unintended consequence of prematurely retiring 24/7 baseload generation. Impacts on grid reliability and costs to consumers could be catastrophic if not planned and coordinated with other state and federal entities.

Respectfully submitted,

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