

Testimony of Todd Snitchler, President & CEO, Electric Power Supply Association
Before the Subcommittee on Environment, Manufacturing, and Critical Materials
U.S. House Committee on Energy & Commerce

“Clean Power Plan 2.0: EPA’s Latest Attack on America’s Electric Reliability”

June 6, 2023

Testimony Summary

- The Electric Power Supply Association (EPSA) is the national trade association representing America’s independent power producers that compete in regions operating competitive wholesale markets. EPSA members own and operate a diverse array of assets and have a deep commitment to electric grid reliability.
- In recent communication with the full committee, EPSA noted that the priorities of policymakers in many restructured regions have profoundly changed since the early 2000s, and the zeal demonstrated to those new policy priorities needs to be equaled by a renewed commitment to reliability. The accumulated effect of many policies, including the EPA’s recent proposed carbon emissions rule, is likely to result in the premature retirement or reduced availability/capacity factor of a significant number of flexible, dispatchable resources (like natural gas resources) without a readily available replacement that can ensure grid reliability.
- Natural gas generation will be even more critical to electric grid reliability in an era of evolving climate priorities and transformation of the generation resource mix. As the nameplate capacity of wind and solar resources on the electric grid increases, the potential volatility of real-time renewable energy production increases as well.
- Grid operators will need sufficient resources – like natural gas – that are flexible and dispatchable (*e.g.*, can ramp up and down quickly) and can serve as a balancing source of generation as renewable energy output rises and falls.
- Some who dismiss concerns about the loss of dispatchable generation cite advancements in long duration battery storage and carbon capture and sequestration (CCS) technologies. As of June 2023, no commercial power plants in the United States use CCS technology and there are no megawatts of long duration, multi-day battery storage interconnected to the bulk power system.
- Electrification efforts are crucial to meeting greenhouse gas reduction goals. However, simply shifting demand from other forms of energy (*e.g.*, liquid fuels, natural gas, or home heating oil) to power provided by the electric grid without concurrently working to ensure grid reliability is not sound public policy. Any discussion of electrification must be coupled with a plan for how the electric grid will handle the increase in electricity demand and dispelling the notion that investing in weather-dependent, non-dispatchable resources alone will be sufficient to keep the lights on.
- Voices that seek to dismiss reliability concerns by arguing that the electric grid and industry has always been able to meet demand and ensure power is reliable ignore the specifics of this situation and the physics involved, thereby contradicting reliability concerns voiced by NERC and FERC.
- EPSA firmly believes that competitive wholesale markets are the most efficient way for the electric grid to meet reliability and other policy needs.

Full Testimony

Thank you for the opportunity for the Electric Power Supply Association (EPSA)¹ to appear before the Subcommittee on Environment, Manufacturing and Critical Materials to discuss the importance of flexible, dispatchable resources (particularly natural gas generation) to the nation's electric grid and the U.S. Environmental Protection Agency's (EPA) recent proposed rulemaking on carbon reduction for new and existing coal and natural gas power plants.²

EPSA is the national trade association representing America's independent power producers that compete every day – without a guaranteed rate of return – in regions operating competitive wholesale markets. EPSA members own and operate a diverse array of assets and have a deep commitment to electric grid reliability. EPSA members' assets account for roughly 20% of the nation's electricity generating capacity and are actively engaged in an “all of the above” energy strategy. EPSA members are investing billions of dollars to build, operate, and maintain assets across the generation spectrum, including natural gas, nuclear, coal, wind, solar, and battery storage.

In a May 12 letter from EPSA to Chair McMorris Rodgers and Chair Duncan, I noted that “the priorities of policymakers in many restructured regions have expanded and profoundly changed since the early 2000s, and the zeal demonstrated to those new policy priorities needs to be equaled by a renewed commitment to reliability.”³ This concern needed to be highlighted because the accumulated effect of many federal and states policies, including the EPA's recent proposed carbon emissions rule, is likely to result in the premature retirement or reduced availability/capacity factor

¹ This testimony represents the position of EPSA as an organization, but not necessarily the views of any particular member with respect to any issue.

² Docket ID No. EPA-HQ-OAR-2023-0072. *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.*

³ <https://epsa.org/filings/epsa-responds-to-chairs-rodgers-and-duncan-letter-to-ferc-on-reliability-and-wholesale-energy-markets/>

of a significant number of flexible, dispatchable resources (like natural gas resources) from the grid without a readily available replacement that can ensure grid reliability. EPSA is strongly committed to supporting an expansion of clean energy, which for the sake of reliability must be done by augmenting investment in clean resources with investment in dispatchable resources and not efforts to drive dispatchable resources from the grid.

The Importance of Natural Gas Generation to Electric Reliability Cannot be Overstated During a Time of Rapid Electric Grid Evolution

America's power grid has made tremendous progress over the two decades. The generation resource mix has changed dramatically, costs have trended down due to increasingly efficient generation technology and lower fuel costs, and emissions have meaningfully declined – particularly in regions with competitive markets. For example, a November 2021 study by the Energy Choice Coalition found that “regions with competition in their electricity sectors have done a better job at reducing carbon emissions than those regions that are under more monopoly control.”⁴ Further, the study concluded that “regions with more competition in their wholesale electricity sectors, through the Independent System Operators (ISO) construct, result in reduced carbon emissions and carbon emissions intensities faster than non-competitive regions.” EPSA's members have responded to market signals and invested in new resources – natural gas, renewables, and battery storage – and retired older, less efficient, and higher emitting resources. Federal and state policies have also had an impact on resource mix/investments and continue to drive investment decisions.

⁴ <https://www.energychoicecoalition.org/blog/2021/11/17/assessment-of-the-emissions-performance-of-wholesale-electricity-markets-sp3n4-4wz5a>

U.S. Energy Information Administration data highlights that in 2022, 60% of the nation’s “electricity generation was from fossil fuels—coal, natural gas, petroleum, and other gases.”⁵ Diving into electricity production further, roughly 40% of the nation’s overall electricity production (the vast majority of the 60% number) last year was from natural gas.

In the coming years, natural gas generation will be even more critical to electric grid reliability in an era of evolving climate priorities and transformation of the generation resource mix. The resources that power the grid will be more dependent on the wind and sun to produce electricity. As the nameplate capacity of wind and solar resources on the electric grid increases, the potential volatility of real-time renewable energy production increases as well. Grid operators will need sufficient resources – like natural gas – that are flexible and dispatchable (*e.g.*, can ramp up and down quickly) and can serve as a balancing source of generation as renewable energy output rises and falls. Of course, electric battery storage will play an increasingly important role but long duration storage solutions that can augment the multi-hour battery storage assets that exist today are not yet commercially viable.

Some who dismiss concerns about the loss of both natural gas and coal generation cite advancements in both long duration battery storage and carbon capture and sequestration (CCS) technologies to calm fears about reliability. It is important to note that – as of June 2023 – not a single commercial power plant in the United States uses CCS technology and there are no megawatts of long duration, multi-day battery storage interconnected to the bulk power system. Co-firing hydrogen with natural gas to reduce carbon emissions is another developing technology that shows promise yet does not have significant commercial adoption today. Despite these operational

⁵ <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3>

realities, there is an intense rush to disconnect existing resources vital to electric grid reliability even before more favored replacements are commercially viable.

*The Clean Energy Expansion Will Require Significant Investment in an Array of Energy Infrastructure;
Regulatory or Legislative Efforts to Unplug Existing Generation is a Step in the Wrong Direction*

In order to meet the nation's reliability and policy priorities, the electric grid is going to require a massive investment in a myriad of electric generation and storage assets. Numerous studies have concluded that a significant buildout of generation capacity will be required in the coming years, highlighting that the country will need *multiples* of the current level of capacity. For example, the U.S. Energy Information Administration's (EIA) 2023 *Annual Energy Outlook* analysis shows that, even under a scenario of high renewables penetration and low natural gas additions, the system will need 9 GW more of natural gas generation.⁶ This is the lowest outcome projected by EIA; the highest outcome is closer to 360 GW of new natural gas fired generation being required. This isn't just about building a few more power plants in key locations – the future grid will require significant upgrades in generation capabilities, making any regulatory action with even the potential to shut down or reduce availability of existing interconnected facilities a frustrating step in the wrong direction.

This electric grid transition is not about a static level of demand being met by a dynamic generation fleet. Electrification policies are going to continue to increase demand requirements for electricity generation. EPISA recognizes that electrification efforts across the economy – from transportation to home/commercial heating to appliances – are crucial to meeting greenhouse gas reduction goals. However, simply shifting demand from other forms of energy (*e.g.*, liquid fuels, natural gas, or home heating oil) to power provided by the electric grid without concurrently working to ensure grid

⁶ <https://www.eia.gov/outlooks/aeo/narrative/index.php#ExecutiveSummary>

reliability is not sound public policy. Any discussion of electrification must be coupled with a plan for how the electric grid will handle the increase in electricity demand and dispelling the notion that investing in weather-dependent, non-dispatchable resources alone will be sufficient to keep the lights on. We will need a both/and, not an either/or approach to supply for decades to come.

As a trade association representing numerous competing merchant generators, EPSA is not able to provide details on *specific* investments that will be required for *specific* member assets or the likelihood that *specific* power plants will be prematurely retired by a *specific* date under the proposed EPA greenhouse gas rule. However, EPSA can say that, at a time when policymakers and regulators should be focused on ensuring the continued operation of dispatchable, non-weather dependent resources, the EPA proposed rule will add significant pressure on merchant generators.

Our concern is that the proposed rule once again puts aspirational policy goals ahead of operational reality. If finalized, these proposed rules will likely lead to power plant retirements or reduced availability due to operational limits required to comply with the proposed rule at a time when experts (including the Federal Energy Regulatory Commission (FERC) and the North American Electric Reliability Corporation (NERC)) have warned that our nation is already facing a reliability crisis due to accelerated retirements of dispatchable resources.

Publicly recognizing the importance of dispatchable, flexible generation needed to meet demand may not be as politically appealing as directing long-term contracts for renewable energy at above wholesale market rates. However, it is vital that efforts to reduce emissions and deploy zero-emitting technology be coupled with an understanding of how the grid delivers power and how a rule like this will impact reliability. In this case, the EPA proposed rule will likely lead to both premature power plant retirements thus diminishing grid reliability and slowing the ability to integrate weather dependent renewable energy.

Past Performance Should be Fundamentally Disconnected from Future Results

It is troubling to hear the chorus of those that criticize parties drawing attention to reliability concerns and generation owners for “crying wolf” about the ability of the electric grid to meet future demand or the industry’s ability to rise to the challenge. These voices seek to dismiss reliability concerns by arguing that the electric grid and industry has always been able to meet the demands and ensure power is reliable. These arguments ignore the specifics of this situation and the physics involved, thus contradicting reliability concerns (noted above) voiced by NERC and FERC. In the world of investing there is a caution that prior returns are not guarantees of future outcomes; the same warning seems applicable here.

Asking the system and the asset owners to fundamentally transform how electricity is produced, delivered, and consumed without ensuring sufficient flexibility to achieve those goals is a recipe for a reliability crisis.

Competitive Markets Remain the More Efficient Way to Achieve Reliability and Policy Goals

EPSA firmly believes that competitive wholesale markets are the most efficient way for the electric grid to meet reliability and other policy needs – far more efficient than regulatory dictates with arbitrary and random mandates and deadlines. Well-designed markets drive innovation, competition, and efficiency, and do so without burdening ratepayers with the cost of unnecessary, inefficient, or ill-considered investments. In competitive markets, EPSA members and their investors and shareholders bear the responsibility for their investments without the safety net of a guaranteed rate of return borne by electricity customers.

Market signals don't need to be limited to reliability. EPSA has been a strong supporter of pricing carbon into wholesale markets via an economy-wide price on carbon. Well-defined markets should identify the characteristics or attributes needed for system reliability while also meeting stated goals of policymakers in order for the competitive market to deliver efficient and innovative outcomes. Desired resource characteristics should certainly include delivering on reliability (particularly dispatchable, flexible, and balancing resources) and can include environmental attributes as well. However, the market can only address stated goals which are structured into its procurement and dispatch protocols; to criticize wholesale markets for not rewarding attributes that are not currently incorporated into the market misses the point.

Conclusion

Our nation already has a sizable and difficult challenge to confront regarding electric reliability. When *proposed* regulations drove coal from the market via the original Clean Power Plan, natural gas resources were available to ensure reliability was maintained. This proposed rule could similarly provoke retirements or operational changes that this time will drive lower emitting, cleaner natural gas resources off the system or reduce their ability to run when reliability issues are critical. If it does, there are neither suitable nor sufficient generating resources available to support the existing and increasing demands of the electric grid to deliver reliably today. The performance characteristics of the resources expected to fill this looming generation gap are different from the resources they would replace; they are not interchangeable on a one-to-one basis.

We are clearly facing electric reliability challenges. EPSA believes that it is imperative that the nation's reliability needs be addressed as the electric grid undergoes a fundamental transformation. EPSA's members maintain a strong commitment to reliability and stand ready to help the nation meet its reliability and growing energy needs.

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