UNITED STATES OF AMERICA
ENVIRONMENTAL PROTECTION AGENCY

NEW SOURCE PERFORMANCE STANDARDS FOR GREENHOUSE GAS EMISSIONS FROM NEW, MODIFIED, AND RECONSTRUCTED FOSSIL FUEL-FIRED ELECTRIC GENERATING UNITS; EMISSION GUIDELINES FOR GREENHOUSE GAS EMISSIONS FROM EXISTING FOSSIL FUEL-FIRED ELECTRIC GENERATING UNITS; AND REPEAL OF THE AFFORDABLE CLEAN ENERGY RULE
(ACTION: SUPPLEMENTAL PROPOSED RULE)

Docket EPA-HQ-OAR-2023-0072

COMMENTS OF THE ELECTRIC POWER SUPPLY ASSOCIATION

DECEMBER 19, 2023

These comments are presented by the Electric Power Supply Association (EPSA)[1] in response to the November 20, 2023 Supplemental Notice of Proposed Rulemaking ("NOPR") issued by the U.S. Environmental Protection Agency (EPA),[2] *New Source Performance Standards for Greenhouse Gas Emissions From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions from Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule*, (Docket EPA-HQ-OAR-2023-0072) ("proposed 111 Rules").

EPSA is the national trade association representing America's competitive power suppliers. EPSA advocates for well-functioning competitive wholesale electricity markets and believes that markets provide the best foundation to reliably power our nation at the lowest cost while fostering the innovation necessary to achieve critical environmental

[1] These comments represent the position of EPSA as an organization, but not necessarily the views of any particular member with respect to any issue.
[2] https://www.federalregister.gov/documents/2023/11/20/2023-25580/new-source-performance-standards-for-greenhouse-gas-emissions-from-new-modified-and-reconstructed

progress. EPSA members own and operate approximately 150,000 megawatts (MW) of reliable and competitively priced, environmentally responsible generation facilities using a diverse mix of fuels and technologies, including natural gas, wind, solar, hydropower, battery storage, nuclear, and coal. EPSA members' assets represent approximately 20% of the nation's installed capacity.

EPSA is pleased that the EPA's Supplemental NOPR highlights feedback received during a formal stakeholder outreach process. However, at its core, the proposed 111 Rules are squarely focused on the ability of power plants to successfully invest in carbon capture and sequestration (CCS) or hydrogen co-firing infrastructure (identified by the EPA as the Best System of Emissions Reduction (BSER)). EPSA, as the trade association representing 150,000 MW of generation, is discouraged that it was not engaged by the EPA during that outreach process as EPSA members own much of the generation that will be affected under the proposed 111 Rules as currently written. Rather than engaging a limited scope of stakeholders, or third parties that may claim to know the response of merchant generation to a final EPA rulemaking, the EPA should seek a dialogue directly with the owners and operators of the facilities that the proposed 111 Rules are targeting. This would offer the EPA the opportunity to hear from those that will directly determine the success of its proposal – owners of affected generation facilities (like EPSA members).

I. THE HURDLES TO A NATIONWIDE BUILDOUT OF CARBON AND HYDROGEN PIPELINES MAKE THE BSER TIMELINE (AND THE UNDERLYING PROPOSAL) UNREALISTIC AND UNACHIEVABLE

In earlier comments to the EPA, EPSA outlined the numerous challenges to the buildout of carbon or hydrogen pipelines envisioned in the proposed 111 Rules.[3] While not a definitive list, the challenges identified by EPSA bear restating as we see estimates of just how significant an investment will be required to successfully build to the EPA's expectations (discussed in greater detail below).

A. Permitting and Siting

In formal comments to the Council on Environmental Quality (CEQ) in September, EPSA stated that the "permitting and siting process is difficult, time consuming, expensive, and remains one of the most daunting barriers to the nation's clean energy expansion."[4] EPSA noted that the federal permitting process is "fraught with inefficiencies, delays, and the never-ending threat of litigation furthered by those whose concerns are not focused on electric grid reliability or the effect that the rising cost of electricity has on millions of American households." In its formal policy position on the importance of permitting reform, EPSA highlights that a "better balance must be struck between energy project development and environmental goals. The current permitting process often renders the projects needed to meet energy independence and clean energy goals nearly impossible to build in a reasonable timeframe, if at all."[5] One need not look further for evidence of this view than recent announcements from two

[3] https://epsa.org/wp-content/uploads/2023/08/EPSAComments_EPA111_August2023.pdf
[4] https://epsa.org/wp-content/uploads/2023/09/EPSA_CEQNEPAPhase2_Sept142023_Final.pdf
[5] https://epsa.org/wp-content/uploads/2023/02/EPSA_PermittingReform-2023.2.8_FINAL.pdf

carbon pipeline developers (Navigator CO_2 and Wolf Carbon Solutions U.S.) that they have cancelled or temporarily withdrawn applications for major carbon pipeline investments citing the "unpredictable"[6] or "stringent"[7] nature of the regulatory process.

Compounding an already laborious siting and permitting process is the pending "Phase 2" rulemaking from CEQ to modify the current federal review process under the National Environmental Policy Act (NEPA).[8] In formal comments to CEQ, EPSA noted that the NEPA changes envisioned by CEQ will make the federal permitting process more difficult for the dispatchable, flexible resources (and associated fuel infrastructure) needed to solidify reliability and lower emissions. While the EPA is trusting that generation owners can blanket the nation in carbon and hydrogen pipelines as the lynchpin of its proposed 111 Rules, the EPA's counterparts at CEQ are simultaneously working to make energy investments (particularly in thermal generation and pipelines) even more difficult.

Permitting difficulties alone would force a substantial number of affected generators to make a choice between retiring their facilities or choosing to operate less frequently to avoid applicability thresholds. Bluntly, both choices result in a less reliable, less efficient, higher emitting, and more expensive electric supply for the nation's consumers.

[6] https://navigatorco2.com/press-releases/heartland-greenway-project-update
[7] https://wolfcarbonsolutions.com/wp-content/uploads/2023/11/WOLF_MediaStatement_11_20_2023.pdf
[8] https://www.federalregister.gov/documents/2023/07/31/2023-15405/national-environmental-policy-act-implementing-regulations-revisions-phase-2

B. Development of a Supply Chain and Trained Workforce in a Compressed Timeframe

EPSA members are some of the nation's leading investors in a variety of clean energy technologies, including carbon capture and hydrogen. Our concern about the unrealistic expectations for widespread commercial adoption of CCS and hydrogen as the BSER is not a belief that the technology is fictional or should not represent a significant tool to reducing carbon emissions. EPSA's concern is that neither CCS nor hydrogen co-firing industries exist on any meaningful scale, and certainly not at the needed capacity, to build the required nationwide network outlined in the proposed 111 Rules.

The materials required to retrofit thousands of turbines (along with the pipelines to transport captured carbon away from power plants or hydrogen to power plants) to comply with the proposed 111 Rules will require a substantial supply chain of physical materials. For all intents and purposes, the CCS/hydrogen industry will be built from scratch, requiring years to develop the supply chain for both the manufacturing of materials and a transportation network to deliver them. Even if physical materials are available, a trained, skilled workforce with the requisite knowledge to successfully install these upgrades doesn't exist.

Compounding the supply chain and workforce challenges is the compressed timeframe envisioned by the EPA. If the EPA holds to its current timeframe to finalize the rule in April 2024, and state compliance plans will be finalized in 2026, the compliance timeframe would be insufficient even if upgrades could be made year-round. However, generators do not want to go offline for scheduled maintenance during the Summer and Winter seasons. Power plant owners typically schedule foreseeable outages, like those required to install CCS/hydrogen technologies, for the Spring and Fall during periods of lower electricity demand to minimize concerns about overall electric grid reliability. So, no matter how many calendar years are allowed for compliance, BSER upgrades will not take place outside of the two "shoulder" seasons, thus further limiting the compliance timeframe.

C. Financing

Challenges to financing required BSER upgrades were recently highlighted by a member of the Federal Energy Regulatory Commission (FERC). At its November 9, 2023 technical conference, FERC Commissioner Mark Christie articulated concerns about the financing of BSER investments and its associated costs to consumers.[9] Commissioner Christie noted the challenges faced by asset owners in both competitive markets and vertically integrated regions in securing financing or receiving regulatory approval for the investments, respectively. Commissioner Christie underscored this concern in a November 21, 2023 letter, noting that during the technical conference the EPA "indicated that [it] had not done much if any serious, in-depth analysis, for either

[9] https://www.ferc.gov/news-events/events/2023-annual-reliability-technical-conference-11092023

financing scenario. This was a critical admission, since timelines for compliance are utterly irrelevant if the affected [Electric Generating Unit] cannot obtain financing for the compliance costs."[10]

As supporters of the proposed 111 Rules continue to tout the recent federal incentives created to boost carbon capture, it is important to note that the 45Q tax credit requires construction to commence by the end of 2032, which is years before several compliance deadlines proposed by the EPA. It is also worth highlighting that tax incentives like 45Q are subject to modification based on the priorities of political leaders, which could extend or curtail the 2032 expiration date.

Just one of these hurdles should be sufficient for the EPA to reconsider using CCS and hydrogen as the keystone of its entire proposed 111 Rules. However, assuming that all of these hurdles will be overcome in sufficient quantities to ensure that electric reliability and affordability are not compromised is unrealistic and unachievable. If the EPA finalizes the proposed 111 Rules as written, insisting that CCS and hydrogen cofiring are "adequately demonstrated," many generation owners will be forced to choose between retiring interconnected, operational facilities that are flexible and can ramp output to match power demands, or proactively limiting their runtime to avoid being exposed to any final rule.

[10] https://elibrary.ferc.gov/eLibrary/filelist?accession_num=20231122-4000

II. FLAWED ASSUMPTIONS REGARDING BSER ADOPTION IN THE PROPOSED 111 RULES ADVERSELY AFFECTS *ALL* GENERATION, REGARDLESS OF LOCATION OR OPERATING ENVIRONMENT

In the Supplemental NOPR, the EPA solicits comments on whether the BSER identified in the proposed 111 Rules might not be feasible for *some* affected generation given the size of the company that owns the asset or if the asset is located in a host community with identified characteristics. The EPA notes that in discussions with a specified subset of energy industry stakeholders that the EPA became aware that it "should further evaluate potential increased energy costs, transmission upgrade costs, and infrastructure encroachment which may directly affect the disproportionately impacted communities." In addition, the EPA highlights stakeholder feedback whether "hydrogen co-firing nor carbon capture and storage…can be BSER because neither technology is commercially available or viable in very rural areas" and asks for feedback on "whether 'rural electric cooperatives and small utility distribution systems (serving 50,000 customers or less) can expect to have access to hydrogen or CCS infrastructure, and if a subcategory for these units is appropriate.'"

EPSA applauds the EPA for its (albeit limited) recognition of the shortcomings of relying on a nationwide, commercial-scale buildout of CCS/hydrogen cofiring technologies during the proposed 111 Rules' compliance period. In a recent study, the EFI Foundation, an organization led by former U.S. Secretary of Energy Ernest Moniz, estimated the potential buildout required for compliance.[11] The study noted that its "results show that, by 2035, roughly 150 large CO_2 transmission pipelines covering over 50,000 miles would be needed…Other studies suggest that the United States will need

[11] https://efifoundation.org/wp-content/uploads/sites/3/2023/10/EPA-H2-Infrastructure-1.pdf

30,000 to 66,000 miles of CO_2 pipelines by 2050 to meet net-zero targets, allowing for another two decades to sort through permitting and other issues."

While EPSA appreciates the acknowledgement of BSER shortcomings, specific to the question in the Supplemental NOPR, EPSA strongly disagrees with the notion that the difficulties in building BSER infrastructure will be limited to generators operating as part of rural electrical cooperatives. The serious flaws identified by EPSA in the BSER (noted above) are not limited to generation in any specific part of the country. Local communities, counties, states, or federal agencies will not base their opposition to a generator, a carbon/hydrogen pipeline, or a Class VI well on whether that generator is operating as part of a rural electrical cooperative, a merchant generator operating in a competitive market (like EPSA members), or as part of an investor-owned utility (IOU) in a vertically integrated region. Opposition to the infrastructure necessary to successfully carry out the proposed 111 Rules will be fierce, and opponents of energy infrastructure furthering the use of thermal generation do not base their opposition on who owns the power plant or how it is being financed. To make such a distinction would represent a gross misunderstanding of the current permitting environment. Similarly, daunting challenges relating to supply chain development, workforce availability, timing, and financing don't disappear under various economic models for generation owners.

Of course, there will be examples where carbon emissions will be captured close to an appropriate repository, and in those instances the siting and building of pipelines may not be an impediment to project development. However, the farther away a power plant is from a carbon storage location (or from a point of production for hydrogen), the greater the number of communities and jurisdictions the pipeline may affect. The greater that distance, the greater the likelihood that opposition will render the project unachievable. To reiterate, *the challenge to the BSER is not ownership of the generator or the economic environment in which it operates* (rural co-op, IOU, or merchant generation, etc.), and it would be inappropriate to make a formal distinction for one of these economic environments without recognizing the BSER challenges faced by all affected generation.

III. INCLUSION OF RELIABLITY MECHANISMS

Electric grid reliability is – and will remain – EPSA's top priority. We remain concerned that implementation of the proposed 111 Rules will adversely affect the ability of grid operators across the country to maintain reliability as dispatchable, flexible resources retire (or choose to run less frequently) and are not adequately replaced. In the Supplemental NOPR, the EPA seeks comment on "measures to mitigate reliability concerns," presumably beyond the actions presently afforded under Section 202(c) of the Federal Power Act, which have been used by grid operators several times in the last few years.[12]

[12] https://www.energy.gov/ceser/does-use-federal-power-act-emergency-authority

While EPSA broadly supports the ability of electric grid operators to maintain reliability, we are cautious that new reliability mechanisms are not so far reaching as to meaningfully distort wholesale electric markets over longer periods of time.

EPSA emphasizes the importance of limiting the scope of any new initiatives focused on alleviating targeted, short-term reliability challenges. Wholesale market design is the appropriate venue to encourage and reward attributes or characteristics critical to maintaining electric grid reliability over the long run. It is important to provide grid operators with tools to mitigate short-term reliability challenges without veering into long-term agreements (*e.g.,* multi-year Reliability Must Run contracts) with resources that would otherwise leave the system. Market administrators across the country (and FERC) are exploring a variety of changes to their energy, capacity, or ancillary services markets to address expected reliability gaps. EPSA supports integrating longer-term incentives for reliability attributes (like dispatchability and ramping capabilities) into wholesale markets while strongly discouraging public policies (like the proposed 111 Rules) from distorting wholesale markets and exacerbating existing reliability concerns.

IV. CONCLUSION

As we noted in our earlier comments, EPSA remains a strong supporter, and investor in, the nation's clean energy expansion. EPSA members are excited about investing in technologies, including carbon capture and hydrogen, that will result in a cleaner, more efficient, and reliable electric grid. However, a final rule that relies on the BSER technologies and timelines outlined in the proposed 111 Rules will result in substantial adverse effects to reliability and delay clean energy investments.

In conclusion, EPSA wants to reiterate our initial comments to the EPA on the proposed 111 Rules urging the EPA "to strongly consider the significant detrimental effects on electric grid reliability of the proposed 111 Rules and begin initial engagement with stakeholders on the reliability challenges facing the grid."

Respectfully Submitted,

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