



FLORIDA DEPARTMENT OF Environmental Protection

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, FL 32399

Ron DeSantis
Governor

Jeanette Nuñez
Lt. Governor

Shawn Hamilton
Secretary

Via Electronic Submittal (<https://www.regulations.gov/>)

August 8, 2023

Michael S. Regan
Administrator, U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460 – Mail Code 28221T

Re: Comments by the Florida Department of Environmental Protection
Docket ID No. EPA-HQ-OAR-2023-0072

Administrator Regan,

On May 23, 2023, the United States Environmental Protection Agency (EPA/Agency) proposed regulations establishing New Source Performance Standards (NSPS) for Greenhouse Gas Emissions from New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units (EGUs); Emission Guidelines for Greenhouse Gas Emissions from Existing Fossil Fuel-Fired Electric Generating Units; and a Repeal of the Affordable Clean Energy Rule (proposed rules).

The Florida Department of Environmental Protection (Department) is one of several state-level agencies with jurisdiction over energy policy in Florida and is the primary agency charged with overseeing the protection of Florida's air resources. Following review of the proposed rules and comments from the Florida Public Service Commission (FPSC), the Florida Reliability Coordinating Council (FRCC), and the Florida Municipal Power Agency (FMPA), **the Department formally requests the Agency terminate rulemaking and decline to adopt the proposed rules.** If the Agency continues with rulemaking, it should extend the comment period by at least six to nine months to ensure all affected entities are able to comment on the impacts of the proposed rules.

As detailed in the Department's comments, **the EPA relies on a "hydrogen economy" that does not currently exist to expedite the "transition" of the nation's power grid through unfounded technologies.** By prioritizing the use of unfounded technologies to force a reduction in readily available generation assets, the Agency places the reliability, affordability, and capacity of the nation's energy supply at risk. This risk is especially concerning given Florida's geographic position and natural susceptibility to hurricanes and natural disasters.

Additionally, the EPA provided a mere 77 days for stakeholders to review and comment on the proposed rules which attempt to disrupt the nation's electric grid in an unprecedented fashion. Given this timeline and the complexity of the proposed rule, this comment period is woefully

insufficient, and **it is unclear if the EPA is truly seeking constructive feedback or if it is attempting to expedite rule adoption to support the “net-zero world” that the World Economic Forum so desires.**¹

The American public should not be kept in the dark—in terms of both the lack of scientific evidence in the “solutions” the EPA is relying upon and the exorbitant costs that come along with them. For these reasons, the Department is providing comments **to shed light on the risks the rule presents to Floridians.**

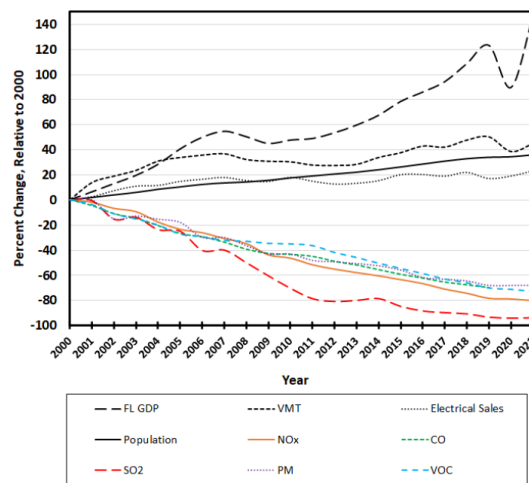
The Department’s comments focus on Florida’s superior air quality that already exists today; the lack of evidence that the sequestration and co-firing strategies mandated by the proposed rules would even be workable or meet the capacity needs for a state like Florida; the proposed rules’ inconsistency with existing federal law; and the harms the rule presents to Floridians, especially in times of widespread power outages resulting from natural disasters.

(1) Florida’s Superior Air Quality

As you may be aware, Florida is a national leader in economic growth and conservation, managing one of the most robust air quality monitoring networks in the country. As outlined in the table below, Florida’s efforts are working as the state’s key economic indicators continue to soar at record pace while emissions continue to fall.²

Florida now has the cleanest air on record and is the most populous state to meet or exceed the EPA benchmarks.³ **The state has accomplished this through ingenuity and smart governance—rather than instituting arbitrary mandates.**

Florida’s Economic Growth and Pollutant Reduction Trends



¹ See World Economic Forum, "Accelerating Clean Hydrogen Initiative".

² Florida Department of Environmental Protection (DEP), Air Quality Trends Frequently Asked Questions.

³ Florida DEP, DEP Announces Cleanest Air on Record (2020).

(2) Carbon Capture and Sequestration Has Not Been Adequately Demonstrated

EPA's determination that carbon capture and sequestration (CCS) for existing coal units and existing large, frequently used gas turbines has been adequately demonstrated is incorrect for two reasons. First, the EPA's determination relies on demonstration projects that **have failed to reliably capture carbon at efficiencies comparable to the levels in the proposed rule** (i.e., approximately 90% capture efficiency). Secondly, the EPA's determination that hundreds of EGUs could implement CCS within the proposed timelines **does not properly account for the scale and complexity of efforts needed to implement those decisions**.

The EPA's reliance on a handful of CCS demonstration projects cannot become the basis for determining that CCS is the best system of emission reduction (BSER) nationwide, especially given that these projects **have only demonstrated that application of CCS technology is costly, unreliable, and raises significant concerns regarding operational flexibility**. As proposed, the EPA's rule will only steer affected EGUs away from being required to install CCS by either retiring, limiting capacity, or **relying on the "hydrogen economy" the EPA attempts to create by way of government-instituted regulations**.

The fact that CCS has not been adequately demonstrated is evidenced by the EPA's regulation on new coal-fired EGUs promulgated in 2015 (40 CFR Part 60, Subpart TTTT). The 2015 rule required that new coal-fired EGUs implement partial CCS at an approximately 20 percent capture rate. However, no new coal-fired EGUs have been constructed in the U.S. subject to Subpart TTTT, which demonstrates that the EPA's CCS requirement has functioned only as a prohibition on building new coal-fired EGUs.

The Department also has significant concerns about the proposed schedule for the deployment of the CCS infrastructure needed for existing units to have the flexibility to select CCS as an available control technology. Without reasonable implementation timelines, owners and operators of affected EGUs will be precluded from selecting those control options, **effectively shutting down those facilities or restricting their usage prematurely without any consideration of the costs to ratepayers or system reliability**.

The EPA has assumed that "deployment of CCS technology at EGUs involves a project schedule that can be completed in roughly five years."⁴ This assumed timeline relies on additional assumptions concerning "opportunities to compress schedules, expedite certain portions of the project schedule that are amenable to faster timetables, and conduct various components of the schedule concurrently."⁵ The EPA admits "the timelines (up to this point) never contemplated rapid deployment of the technology,"⁶ and yet the EPA's proposed schedule for implementation of the BSER relies on these assumptions as part of its finding that this technology is adequately demonstrated.

⁴ Greenhouse Gas Mitigation Measures for Steam Generating Units, Technical Support Document, p. 36

⁵ *Id.*

⁶ *Id.* at p. 35.

The EPA's proposed BSER implementation timeline also disregards whether site-specific considerations unique to individual sources may influence project timelines. The EPA cannot simply rely on State Plan flexibility to consider "remaining useful life and other factors" as a way of sidestepping concerns that the proposed BSER timeline is unworkable as proposed. The compressed implementation schedule also does not adequately address supply chain issues that are likely to arise when numerous utilities all seek to purchase **new equipment to meet the mandates that, to date, has never been manufactured at scale**. Further, the timeline does not account or provide for adequate flexibility for states and utilities to permit, contract, build, and utilize carbon capture technologies, build pipelines needed to transport captured CO₂, and install Class VI sequestration wells.

The EPA's assessment that a compressed schedule could be completed in five years disregards the fact that the State Plan development process will not be complete until mid-2026 at the earliest and the EPA's approval, or disapproval, **would follow a year later at the earliest**. Requiring large CCS infrastructure investments before the State Planning and approval processes are complete compromises the regulatory certainty upon **which utilities, and their ratepayers, rely**.

Lastly, **the EPA fails to place grid reliability above the targeted emissions reductions**. The EPA must consider the reliability of CCS at affected units by allowing operations to continue should any of the components of the carbon capture system be subject to an outage. Without this needed flexibility, grid reliability may be threatened when a CCS unit cannot operate in compliance with the CO₂ emission standards if an outage occurs at any point in the carbon capture, transport, or sequestration process. This is especially important in a state which is both the second largest producer of electricity and the fourth largest consuming-state in the nation.⁷

(3) Hydrogen Co-Firing Has Not Been Adequately Demonstrated

The EPA's determination that hydrogen co-firing is adequately demonstrated for large, frequently used gas turbines does not properly account for the scale and complexity of efforts needed to provide the required quantity of hydrogen to the nation's power sector. The EPA's optimistic projections of a new "hydrogen economy" will force owners to instead limit electrical generation at those facilities to avoid becoming affected EGUs. This will lead to increased costs to ratepayers and threatened system reliability.

The Department does not believe that the infrastructure needed to support firing large quantities of hydrogen is adequately demonstrated. At present, Florida has no large hydrogen production facilities, hydrogen pipelines, or hydrogen storage facilities – each of which would be essential to implementation of the BSER. Florida also does not have sufficient renewable energy resources to produce the volume of low-GHG hydrogen that this proposed rule would require.

The EPA cannot simply project the existence of a fully formed "hydrogen economy" to justify its proposed BSER. The EPA's proposal acknowledges that "[b]lending or combusting such high volumes of hydrogen presents challenges to fuel availability because of limited

⁷ U.S. Energy Information Administration - EIA - Independent Statistics and Analysis.

production and demand from other sectors, infrastructure (i.e., distribution and transportation pipelines, storage), turbine design capabilities, and safety.”⁸

The EPA then seemingly dismisses these challenges by invoking its belief that “[a]s the demand for bulk hydrogen storage grows, it is likely to incentivize accelerated research, design, and development and first-of-its-kind deployments of such innovative technologies[.]”⁹ **The EPA’s reliance on these “first-of-its-kind deployments” and “innovative technologies” as the basis for setting a BSER is not consistent with Section 111 of the Clean Air Act.**

The EPA has proposed to allow *new* combustion units to be constructed without implementing the BSER of low-GHG hydrogen co-firing or CCS until a later date (what the EPA calls “Phase 2” and “Phase 3” of the NSPS). **This underscores the fact that both CCS and hydrogen co-firing are not currently adequately demonstrated. If they were currently adequately demonstrated, the EPA would require that these units immediately implement the BSER technology.** The proposed NSPS appears to be the first time that the EPA has required the BSER for a newly constructed unit to be phased in well after construction.

The EPA states that “[s]uitable volumes of low-GHG hydrogen are expected to be produced by the 2032 and 2038 timeframes to satisfy the demand driven by this proposed rule.”¹⁰ The EPA cites U.S. Department of Energy (DOE) projections that 10 million metric tons will be produced by 2030 and 20 million metric tons will be produced by 2040.¹¹ The EPA also projects that only 37 GW of large, frequently used combustion turbines will be operating in 2035.¹² Presumably, the EPA’s projections for low-GHG hydrogen production and gas turbine capacity, which will need low-GHG hydrogen, are rationally related (i.e., there is enough production to satisfy demand). The Department is concerned that if either (or both) of these projections are inaccurate, the proposed rule will result in a mismatch between production and demand, posing a risk to reliability and costs.

The Department has analyzed Florida’s fleet of combustion turbines and made a preliminary determination that there are 28 combined cycle units with 68 combustion turbines representing approximately 27 GW of capacity. Not all of these units are currently over the 50 percent capacity factor threshold, but as discussed below, these units have the potential to be affected units in the State Plan. The Department is concerned that the production of hydrogen (especially low-GHG hydrogen) will not match the demand for hydrogen from the fleet of affected large gas turbines.

This is important context as Florida is especially dependent on natural gas fired turbines; **the FMPA notes that approximately 75 percent of Florida’s electrical generation comes from**

⁸ Hydrogen in Combustion Turbine Electric Generating Units, Technical Support Document at p. 3.

⁹ *Id.* at p. 30.

¹⁰ 88 Fed. Reg. 33,364.

¹¹ *Id.*

¹² *Id.* at 33,367.

these types of units, the highest in the nation,¹³ which would present an extraordinarily large demand for low-GHG hydrogen in Florida under the EPA's proposed rule. Given Florida's unique peninsular geography, most of the demand would have to be generated in Florida.

The EPA's proposal **relies on several complex projections and expectations that must work in unison to make implementation of this rule even possible.** It would require the expansion of renewables needed to power production of low-GHG hydrogen, expansion of manufacturing of electrolyzers to convert water to hydrogen, construction of hydrogen pipelines and storage facilities, and decreases in capacity factors from most existing gas turbines. If any of these projections are inaccurate, the balance needed for successful implementation of the proposed rule will lead to non-compliance, increased costs to ratepayers, and grid reliability concerns.

Lastly, the EPA's determination of BSER does not provide a pathway for all affected units to comply with its choice of standard under the Emission Guidelines. EPA's **mere expectation** that various economic and technological developments **will steer units towards a certain outcome** (e.g., retirements or limiting/reducing capacity factors) cannot be the basis for a BSER, especially when the EPA itself recognizes it cannot be met by *all* of the affected units, only a fraction of the affected units.

(4) Required Use of Low-GHG Hydrogen Is Inconsistent with *West Virginia v. EPA*

The EPA's determination that BSER requires use of low-GHG hydrogen raises significant legal concerns. This requirement appears to move well beyond the traditional legal authority that the EPA cites as a basis for fuel switching as a BSER technology. In *W. Virginia v. Env'tl. Prot. Agency*, 142 S. Ct. 2587 (2022), the United States Supreme Court stated that the EPA's traditional regulatory authority has been limited only to those technologies applied to or at the affected source. The EPA's proposed requirement to use only low-GHG hydrogen, however, creates a regulatory mandate on the *sources of an alternative fuel*, not merely the usage of an alternative fuel. EPA's proposed rule can only apply to the emissions from an affected EGU. The source of the hydrogen is outside the scope of the EPA's authority under the Section 111 of the Clean Air Act as it reaches beyond the fenceline to regulate fuel production, not emissions associated with fuel consumption. If the EPA moves ahead with finalization of hydrogen co-firing as part of its BSER determination, it cannot require operators to fire only low-GHG hydrogen.

The EPA mistakenly justifies the requirement for low-GHG hydrogen by citing the "Inflation Reduction" Act (IRA) and its legislative history. The EPA notes that the IRA "enacted or expanded tax credits to encourage the production and use of low-GHG hydrogen."¹⁴ Although these tax credits are intended to encourage production of low-GHG hydrogen, **the proposed rule replaces that encouragement with a mandate.** Rather than side-stepping congressional intent, the EPA should remove itself from the equation and allow the incentive programs to stand on their own,

¹³ Florida Municipal Power Agency's Comments on EPA's Proposed GHG Rules for Electric Utilities

¹⁴ *Id.* at 33, 316.

allowing the GHG emission standards in this proposed Clean Air Act rule remain neutral as to the source of hydrogen.

(5) Florida Risks

In addition to the clear lack of evidence that the technologies the EPA seeks to force into the marketplace are even feasible in a state like Florida, the proposed rules repeal the flexibility for states to utilize dispatchable generation facilities in times of high demand. This is significant for hurricane-prone states like Florida, where meeting demand both during blue and gray skies **is not merely an expectation but a requirement to ensure public safety and that our vulnerable populations, including the state's high senior population, are protected and cared for.**

By forcing existing facilities to reduce generating capacity to meet arbitrary thresholds and tying the hands of states to bring dispatchable facilities online at times of high demand, the proposed rules seek to **prioritize a “hydrogen economy” of tomorrow ahead of the needs of consumers today.** Doing so will stifle the energy sector's ability to meet consumer demands when it matters most, like in the aftermath of a major hurricane or when record high and low temperatures increase capacity needs. **The concept that emergency response personnel would not tap into all available resources to restore power following mass outages to support emissions thresholds places arbitrary targets above public safety and welfare.**

Furthermore, as highlighted by an estimate by the FRCC, the proposed rules may require the replacement of 23 million MWh of annual energy supply needed to serve their projected loads in 2032. This would have a significant impact to energy providers and their ratepayers. The FRCC found that this projected shortfall totals approximately 8 percent of the projected demand. Based on estimates, FRCC projects that the shortfall is equivalent to blacking out about **1.8 million residential customers for the entire year, or all residential customers for about two months.**¹⁵

Further, the FPSC notes¹⁶ the importance for EGUs to use diversified fuel sources to support emergency response finding that in 2021 alone, “nearly two-thirds of Florida's natural gas EGUs were capable of switching to other fuels in the event of disruptions to the natural gas supply.”

Finally, the EPA fails to provide the flexibility that states need to develop viable State Plans. If EGUs are not able to select from a set of available pathways during implementation, plans will be subjected to an unending series of State Plan revisions. Only a “multi-path approach” would allow an affected EGU to switch between certain subcategories without needing a State Plan revision.

As an example, large, frequently used combustion turbines should be given an option to reduce their capacity factors to less than 50 percent by a certain date to avoid becoming an affected unit under the rule. For owners of combustion turbines that do not know whether they should limit their capacity factors during the State Planning process, the multi-path approach discussed above would allow an owner of a combustion turbine to be classified as an affected unit, but the unit could opt-

¹⁵Comments submitted by the Florida Reliability Coordinating Council.

¹⁶Comments submitted by the Florida Public Service Commission.

out of that subcategory by accepting a federally enforceable limit on its capacity factor by a certain date and notifying the state of its desired compliance pathway.

(6) Conclusion

In conclusion, it is clear the EPA has placed an emphasis on transitioning to a “net-zero world” above the electric needs of Americans. Florida’s superior air quality is a result of ingenuity and smart governance. The proposed rules put states like Florida at greater risk, by attempting to force unproven transitional energy practices ahead of generating the energy capacity necessary to meet the demand of our residents, visitors, and businesses.

Given these facts, and for the foregoing reasons, the EPA’s proposed rules are in violation of the Administrative Procedure Act. Specifically, the proposed rules are arbitrary, capricious and go well beyond the bounds of Congressionally authorized agency discretion. The Agency has failed to demonstrate any authority allowing for the legal underpinnings of this rulemaking and has relied on a haphazard technical analysis in an attempt to justify the Agency’s flawed proposals. This is nothing more than another instance of the EPA attempting to usurp Congressional authority under the guise of discretion. Further, the EPA has significantly limited the universe of public input by providing vital technical documents during the public comment period without also providing an extension of the public comment period itself, providing a public participation process that is simply inadequate.¹⁷ When these types of monumental government actions are taken behind closed doors and without the opportunity for sufficient public review and input, it becomes even more clear that they are likely based on flawed technical analyses and insufficient legal authority.

Therefore, the Department requests that the EPA terminate rulemaking and decline to adopt the proposed rules to maintain the reliability, affordability, and capacity of the nation’s energy supply.

Sincerely,

A handwritten signature in blue ink, appearing to read "Shawn Hamilton", with a stylized flourish at the end.

Shawn Hamilton
Secretary
Florida Department of Environmental Protection

¹⁷ Administrative Procedure Act, 5 U.S.C. § 553; 5 U.S.C. §706.