



August 4, 2023

Administrator Michael S. Regan U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Submitted to the Federal eRulemaking Portal, <u>www.regulations.gov</u>

Re: 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 ID No. EPA-HQ-OAR-2023-0072); 88 Fed. Reg. 33, 240 (May 23, 2023)

Dear Administrator Regan,

On behalf of The Electric Cooperatives of South Carolina, Inc. and Central Electric Power Cooperative, Inc. and their members, we are submitting the following comments in response to The U.S. Environmental Protection Agency's proposed rules to limit greenhouse gas emissions from new and existing fossil fuel-fired electric generating units (EGUs).<sup>1</sup>

The Electric Cooperatives of South Carolina, Inc. and Central Electric Power Cooperative, Inc. are both members of the National Rural Electric Cooperative Association ("NRECA") and endorse the comments that NRECA submitted on this proposal.

# **Executive Summary:**

EPA's proposed power plant regulations carry untold consequences for the people of rural South Carolina, including the potential to inflate the price of electricity, supercharge the cost of living, drive away much-needed industry and good jobs, render our power grid susceptible to blackouts and brownouts, stymie the ongoing electrification of the economy, and throw a wrench into two decades' worth of good-faith progress by S.C. utilities in reducing carbon emissions.

As representatives for South Carolina's electric cooperatives and the nearly 2 million mostly rural people who rely on their power, our organizations are duty-bound to voice our opposition to this EPA proposal.

<sup>&</sup>lt;sup>1</sup> 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, 88 FR 33240 (May 23, 2023) (Proposed Rules).

The Electric Cooperatives of South Carolina ("ECSC") is a not-for-profit trade association of 18 distribution electric cooperatives in South Carolina. Central Electric Power Cooperative, Inc. ("CEPCI") is a not-for-profit generation and transmission cooperative that purchases and provides wholesale electricity to all 20 S.C. electric cooperatives over more than 800 miles of transmission lines.

The electric cooperatives we serve cover 70% of the state's land mass, providing power to consumermembers in all 46 S.C. counties. Our service territory is mostly rural and largely agrarian. Many of the people at the end of our electric lines live in poverty or on fixed incomes.

Our role is to keep the lights on and the power bills low for these consumer-members, who worked together some 80 years ago to form their cooperatives when for-profit utilities deemed them too rural and thus too expensive to serve.

We do that by purchasing and selling electricity at the lowest costs possible. We do it by piloting innovative programs that help our consumer-members save money by reducing their energy consumption. We do it by returning any extra revenue to our members in the form of capital credits. And we do it by pushing back against ill-considered policies that would harm our consumer-members and the communities we serve.

EPA's power plant proposal is unquestionably one of those policies.

The proposed regulations would effectively force the closure of large coal- and natural gas-fired power plants that make up the backbone of America's power generation while also making it nearly impossible to build the new natural gas-fired generation units we urgently need. As an alternative to closure, EPA offers a pair of unfeasible solutions: Carbon Capture and Sequestration ("CCS") and co-firing with "Clean Hydrogen." Neither of these technologies exists today on a commercial scale, nor have they been proven as the industry-saving solutions EPA holds them up to be. CCS, in particular, cannot be performed in South Carolina at all, as the state's geology does not support underground carbon storage.

These alternatives would cost significantly more than today's generation technologies. They would require the construction of infrastructure that does not exist today, including a massive pipeline network to transport hazardous hydrogen fuel across the country. Given the regulatory challenges and delays associated with building pipelines, it would be nearly impossible to create such a network from scratch in time to meet EPA's aggressive deadlines for compliance.

EPA's proposal seeks to make it too costly and impractical for utilities to continue to operate their dependable fossil fuel-fired power plants. It is clear EPA's true goal in enforcing these regulations is not to encourage the widespread adoption of two unproven technologies, but to coerce utilities into the widespread closure of coal- and natural gas-fired power plants. This is the very kind of EPA-enforced "generation shifting" that the U.S. Supreme Court struck down as unlawful just last year.

To make matters worse, EPA has rushed its proposed rule through a historically brief public comment period. Despite numerous requests for extensions, EPA has allowed just 75 days for industry stakeholders to decipher hundreds of pages of rules, review the agency's modeling, study the regulation's potential impacts and craft a response. EPA further exacerbated the challenge by issuing a significant update to its modeling on July 7, halfway through the comment period. The brevity of EPA's public comment period has made it impossible to confidently model the projected cost of compliance with these regulations. However, it is difficult to envision a scenario in which these rules would not result in significant electric rate hikes for our consumer-members.

People in rural South Carolina simply cannot afford to pay the price of EPA's large-scale science experiment. Nor can they be made to live under the threat of blackouts, brownouts and economic upheaval that come with regulations that prevent power producers from keeping pace with our state's burgeoning demand for electricity.

To be clear, South Carolina's electric cooperatives share EPA's stated goal of reducing carbon emissions. For years, our cooperatives have been ahead of the curve in exploring ways to do so. In fact, the carbon density of the cooperatives' generation portfolio has decreased by 40% since 2005, mostly thanks to our commitment to replacing coal-fired generation with cleaner natural gas-fired power.

The cooperatives anticipate further reductions to greenhouse gas (GHG) emissions as our partner utilities retire more coal-fired plants in favor of natural gas-fired ones. But these EPA regulations threaten that progress. EPA's rule would render it nearly impossible to build the large natural gas-fired power plants that utilities need in order to finally shutter their remaining coal-fired units. By preventing utilities from expanding their natural gas-fired generation portfolios, EPA is thwarting a proven pathway to reducing emissions.

EPA's proposal comes at an inopportune time, to put it mildly. The regulations would effectively force energy producers to abandon two of the country's most reliable sources of power generation – coal and natural gas represent 60% of America's power capacity – even as demand for electricity is projected to climb dramatically in both the near future and long term. In South Carolina, studies show we may need to double or even triple our supply of electricity just to keep up with demand in the coming decades.

We need more electricity in part due to population growth. South Carolina is the third-fastest growing state in the country. Demand is also driven by the electrification of the economy, including the proliferation of electric vehicles. And finally, demand is projected to grow as South Carolina continues to win economic development projects, many of them in cooperative service territory. The state attracted more than \$10 billion in outside investment last year.

Many of these projects have been tied to electrification of the economy – including a parade of plants that manufacture EVs and the components that power them. These facilities offer hundreds, sometimes thousands, of high-paying jobs. They also require large amounts of electricity, and these massive loads help electric cooperatives keep electric rates low for the rest of their consumer-members.

Rural South Carolina has waited a long time for these economic development opportunities. But these projects require a reliable supply of affordable electricity. EPA's proposed regulations put that supply at risk.

Already, we are seeing a growing tension between electric supply and demand in South Carolina. Our cooperatives narrowly avoided rolling blackouts during several days of extremely cold temperatures around Christmas 2022. Other nearby utilities weren't so fortunate and had to curtail power for both residential and industrial customers.

We need more electricity, not less. We need to build new natural gas-fired power plants – and soon – to keep up with the demands of a growing state that is attracting new industry and electrifying its economy.

Yet instead of throwing us a life ring, EPA has tossed South Carolina an anvil. Now is not the time to abandon two of our most reliable sources of electricity, and certainly not in favor of a pair of alternatives that are closer to science experiments than industry best practices.

Our concerns regarding EPA's proposed regulations are spread across three major topic areas that will be detailed below: (i) concerns about the legality of EPA's proposal, (ii) concerns about the technical feasibility of complying with the proposed rule, and (iii) concerns about the harm the regulations would cause in South Carolina.

We urge the EPA to come back to reality and consider the real-world consequences these regulations carry for working South Carolinians and our economy as we all look for ways to better safeguard our environment.

# Section I. Legal concerns

# The proposed rule doesn't comply with the requirements of the Clean Air Act for establishing performance standards for natural gas generation.

EPA has proposed new standards of performance for new sources of emissions from fossil generation under Section 111 of the Clean Air Act ("CAA"). "Standard of performance" is a defined term in the CAA:

The term "standard of performance" means a standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.<sup>2</sup>

In its proposed rules for new electricity generation units, EPA seeks to adopt standards of performance that include the determination that Carbon Capture and Sequestration ("CCS") and co-firing with "Clean Hydrogen" are the best system of emissions reductions ("BSERs") and therefore must be deployed for all new natural gas generation. The proposed determination is flawed and unlawful because CCS and clean hydrogen co-firing are not BSERs, have not been adequately demonstrated, and their costs are unknown and therefore cannot be weighed against their purported efficacy.

The term standard of performance was analyzed in *Essex Chemical Corp. v. Ruckelhaus*, 486 F.2d 427 (D.C. Cir 1973). That court explained that the CAA does not "...allow the EPA to set the standards solely on the basis of its subjective understanding of the problem or 'crystal ball inquiry.' An adequately demonstrated system is one which has been shown to be reasonably reliable, reasonably efficient, and which can reasonably be expected to serve the interests of pollution control without becoming exorbitantly costly in an economic or environmental way." *Id.* p 433. (Internal citation omitted). In *Sierra Club v. Costle*, 657 F.2d 298 (D.C. Cir. 1981), the same court explained that to comply with the

<sup>&</sup>lt;sup>2</sup> Clean Air Act § 111(a)(1), 42 USC § 7411(a)(1).

requirements of the CAA, EPA must adopt standards that are achievable in all parts of the United States. *Id.* p. 330 ("The standard is, after all, a national standard with long-term effects").

It is clear that EPA's proposed determination that CCS and hydrogen co-firing are BSERs does not meet the requirements of Section 111. Neither system has been shown to be reasonably reliable, efficient or cost effective. CEPCI and ECSC have submitted, as Attachment 1 to these comments, the declaration of Robert Hochstetler, president and chief executive officer of CEPCI. Mr. Hochstetler is qualified by education and training to offer opinions on matters relating to planning for utilities. He and his staff have closely studied the potential for CCS and hydrogen co-firing in South Carolina. His declaration states the following.

- 1. There are no CCS projects of any kind in South Carolina or the Southeast and no CCS projects for natural gas generation anywhere. No one has even seriously begun the process of determining whether CCS is feasible in our region.
- 2. Based on the limited information that is available, it appears that the geology of our area is not suitable for CCS.
- 3. There is no existing infrastructure for CCS in South Carolina, including no plan for the permitting and construction of the pipelines that would be necessary to transport carbon dioxide (CO<sub>2</sub>) to locations where carbon storage is feasible, if such locations can be identified.
- 4. CEPCI has no reliable information that can be used to calculate cost estimates for a natural gas CCS project. Based on what is known, it appears likely that adding CCS to a natural gas generation project, if it is even feasible, would greatly increase the project's cost. That would greatly increase the cost of electricity for the people CEPCI ultimately serves, the consumermembers of CEPCI's member cooperatives.
- 5. There are no clean hydrogen co-firing generation plants in South Carolina or in the Southeast region. There is no supply of clean hydrogen, no plan to produce it, and no plan to construct the infrastructure that would be necessary to transport clean hydrogen to the plants where it would be used in co-firing generation units.
- 6. CEPCI has no means of assessing the feasibility of hydrogen co-firing or evaluating its cost. There is no basis for determining that co-firing natural gas generating units with clean hydrogen can be implemented by South Carolina utilities on a timeline that would allow CEPCI to reliably meet the generation demands that CEPCI expects to be serving.
- 7. CEPCI is unable to determine if either CCS or hydrogen co-firing is technically feasible to be implemented for natural gas units in South Carolina in time to meet the demand for electricity that CEPCI must plan to meet.
- 8. Because neither CCS or hydrogen co-firing has been adequately demonstrated to be a feasible and reasonably affordable way to reduce emissions from natural gas generating units, CEPCI is unable to determine if it is feasible to include those systems for South Carolina projects. CEPCI also is unable to produce a reasonable cost estimate for implementing either CCS or hydrogen co-firing for natural gas generating plants in South Carolina.

Hochstetler's declaration demonstrates the ways in which the EPA BESR designation fails to meet the requirements of Section 111.

Neither technology can be said to be reasonably reliable. Neither has been shown to be reasonably efficient. There is no basis upon which EPA could legitimately make the determination that the systems are not exorbitantly expensive. As explained in *Sierra Club v. Hostle, supra,* it is not enough for EPA to

demonstrate that CCS and hydrogen co-firing systems are reliable, efficient or cost effective in some other section of the country (although no such showing has been made).

Instead, to meet the requirements of Section 111, the systems must be shown to be reliable, efficient and cost effective in all parts of the country, including South Carolina. Hochstetler's affidavit, as well as our own technical analysis to follow, shows that there is absolutely no basis upon which those determinations can be made. The proposed determination that CCS and hydrogen co-firing have been adequately demonstrated to be the best systems of emission reduction doesn't even rise to the level of the "crystal ball inquiry" that was criticized in the *Essex Chemical* opinion.

# South Carolina electric cooperatives face near-term demand growth that requires the immediate pursuit of new natural gas generating capacity.

The Hochstetler declaration demonstrates the negative consequences that the proposed rule carries for South Carolina's electric cooperatives.

Several factors are driving the rising demand for electricity in South Carolina. One is population growth, as South Carolina is the third fastest growing state in the country. Another is the growing adoption of electric vehicles.

And a third is economic development, including a surge of announcements of large scale, transformative, manufacturing projects primarily centered on the electric transportation sector. The announcements of major electric vehicle and battery projects in South Carolina have been exciting for a state that has traditionally lagged behind other regions in attracting high-quality jobs. Electric cooperative leaders have welcomed the projects but recognize that they represent substantial additional demand for base load generating capacity.

The growth in demand for electricity comes at a time when South Carolina's electric utilities, including the two that provide the vast majority of power for CEPCI and its member cooperatives, are retiring coal-fired power plants and deciding how to replace the base load capacity they provided. Replacing that base load capacity is vital to preserving the reliability of the power grid. Although all of South Carolina's generating utilities have plans to increase their renewable generation, renewables are not robust enough to fully replace coal-fired generation while maintaining reliability and keeping up with growing demand for electricity.

These utilities need to be able to rely on natural gas-fired generating units in both the near- and longterm as they retire coal-fired plants. Utilities and their consumers need these new natural gas units now, as power supply is already becoming constrained in South Carolina. It is simply not possible for utilities to maintain the reliability of the electric grid and serve the coming growth in demand without new combined cycle natural gas units.

The process of planning for an expansion of natural gas-fired generation cannot be delayed while EPA and the electric industry wait to see if CCS and hydrogen co-firing ever become feasible alternatives.

Coal-fired generating plants are scheduled for closure in the coming years. Under these circumstances, it is critical that utilities be allowed to pursue natural gas-fired generation units.

# The proposed rule will make obtaining South Carolina regulatory approval for new natural gas generation much more difficult and time consuming.

EPA's proposed rule will inject uncertainty into this regulatory process and will lead to delays that will threaten the efforts of cooperatives to provide reliable service to their members.

To obtain necessary approvals to proceed with the construction of new natural gas generation in South Carolina, a utility must obtain approvals under the Integrated Resource Planning ("IRP") process, (S.C. Code Ann. §58-37-40) and the Utility Facility Siting and Environmental Protection Act ("Siting Act") (S.C. Code Ann. 58-33-10 *et seq*.). The two provisions are interrelated and complex, and they result in protracted proceedings.

The South Carolina IRP process was recently modified to require intensive proceedings with opportunities for interested parties to intervene, conduct discovery and participate in contested-case hearings. The IRP process explicitly subjects utility plans for new generation to intense scrutiny and comparison with other generation types. IRP decisions by the South Carolina Public Service Commission are subject to appeal by any party.

Once a utility has an approved IRP that includes general plans for adding natural gas generation, it must obtain approval for a specific project through the Siting Act process. An application to approve a specific project must include details about the project's cost and environmental impacts. The process requires an analysis comparing the proposed project with other types of generation. That comparison must look at the cost, feasibility, and environmental impact considerations of various generation options. Intervention, discovery, and a contested case proceeding are required. Any Siting Act decision by the South Carolina Public Service Commission approving a natural gas generating plant is subject to appeal by any party.

The EPA proposed determination that CCS and hydrogen co-firing are BSERs would mean that any natural gas generation project proposed to serve South Carolina's electric cooperatives must include those technologies. But as explained in Mr. Hochstetler's declaration, it is impossible to confidently project the cost or feasibility of including either of those systems on a natural gas project. With no reliable basis for demonstrating feasibility or cost, it is unclear how the proponent of a new natural gas generating unit could possibly meet its burden for approval under the IRP process or the Siting Act.

The state's electric cooperatives and their consumer-members need more power supply as soon as possible. It is already difficult to site and build generation units in South Carolina. EPA's regulations will make the process even more challenging, if not impossible.

# The proposed rule will have profoundly negative impacts on South Carolina electric cooperatives and their members.

Currently, the South Carolina electric utilities that provide CEPCI and its electric cooperative members wholesale electricity are pursuing plans to retire coal generation and replace it with a combination of renewable resources and natural gas generation. Those utilities have made substantial progress in reducing their carbon emissions – by 40% since 2005 – while providing power that is reasonably reliable and affordable.

That progress is threatened by EPA's proposed rule and its premature and irresponsible requirement that energy producers adopt CCS or hydrogen co-firing. Without the ability to move forward immediately with new natural gas generation projects as currently planned, the choices available to South Carolina utilities are:

- To attempt to obtain regulatory approval of natural gas generation projects that include CCS or hydrogen co-firing without being able to show whether such projects are technically feasible or provide a reasonable cost estimate for them.
- To delay or abandon efforts to expand generation capacity. This would result in a lack of capacity that will prevent CEPCI and South Carolina's electric cooperatives from keeping up with growing electric demand, including from the electrification economic development projects that have the potential to transform the economy of rural South Carolina and support the clean energy future.
- To delay the retirement of coal plants as scheduled.

None of these outcomes is acceptable, and none serve the public interest.

Building new generation is critical to the electric cooperatives' ability to service new manufacturing projects that are extremely important to the economic development of rural South Carolina. As mentioned above, these projects are largely related to electric vehicles. They offer hundreds, if not thousands, of high-paying jobs to economically depressed areas of South Carolina – including some of South Carolina's 12 persistent poverty counties – all of which are served by electric cooperatives.<sup>3</sup> They also offer an opportunity for South Carolina to meaningfully participate in the electrification of the economy – an important part of the national effort to reduce carbon emissions.

It is ironic that these promising plans that represent real progress on carbon emissions reduction are threatened by a proposed EPA rule purportedly aimed at reducing carbon emissions. The proposed rule is a misguided, premature, and unlawful effort that will not serve the public interest and is highly likely to cause immediate and irreparable harm to South Carolina's electric cooperatives, their members, and the communities they serve.

# Section II. Technical concerns

## Introduction

EPA's proposed rule relies on non-commercially available technologies that face numerous challenges related to cost, infrastructure, geologic and supply chain issues.

South Carolina's electric cooperatives believe these technologies fail to meet the legal standard for performance under Section 111 and thus should be augmented or abandoned.

That standard is based upon three major components.

- 1. The technology has been adequately proven.
- 2. The performance standards required are achievable.

<sup>&</sup>lt;sup>3</sup> Persistent Poverty In Counties and Census Tracts, United States Census Bureau, https://www.census.gov/library/publications/2023/acs/acs-51.html

3. The technology is in fact the best system to meet the need.

For reasons we will detail below, we believe CCS and clean hydrogen co-firing fail to meet each of the three parts of the Section 111 legal standard.

These technologies have not been adequately proven to reduce carbon emissions while maintaining electric reliability. A limited number of pilots for each of these proposed solutions have been unsuccessful, closed or canceled.

CCS and hydrogen co-firing are not achievable for the entire utility sector. EPA's proposal is founded on speculative forecasts and requires infrastructure that doesn't exist today. Due to geological constraints, CCS isn't even an option for South Carolina. There is nowhere to store the carbon underground.

And CCS and hydrogen co-firing are not the best systems for emissions reduction. They create a significant cost burden, carry negative environmental impacts, and require additional energy production to power them. Further, an industry-wide adoption of these technologies would put certain states, including South Carolina, at a competitive disadvantage due to their geographic location.

As members of the National Rural Electric Cooperative Association (NRECA), we agree with and share similar concerns related to the technical findings appended to the NRECA's comments regarding carbon capture and storage, natural gas to hydrogen co-firing, coal to natural gas co-firing, and transmission and infrastructure adequacy.

Below, we explain why CCS and clean hydrogen co-firing fail to meet each of the three components that underpin the legal standard for performance under Section 111.

## Is it adequately proven?

### Carbon capture and sequestration

CCS is a set of technologies that has the potential to greatly reduce greenhouse gas emissions from new and existing coal- and natural gas-fired power plants and large industrial sources. CCS is a three-step process<sup>4</sup> that includes:

- 1. Capture of  $CO_2$  from power plants or industrial processes.
- 2. Transport of the captured and compressed CO<sub>2</sub> (usually via pipelines).
- 3. Underground injection and geologic sequestration (also referred to as "storage") of the CO<sub>2</sub> into deep underground rock formations.

While CCS is a promising technology, it has not been adequately proven as a viable technology to rely on for emissions reduction in the timeframe outlined by EPA. Most major CCS projects currently center on either natural gas field refinement (Sleipnir by Statoil in Norway and Gorgon by Chevron in Australia) or for utilization of the captured CO<sub>2</sub> in Enhanced Oil Recovery (EOR).

There have been a handful of attempts at using CCS to limit the GHG emission of power plants. Most of those efforts have failed.

<sup>4</sup>Carbon Dioxide Capture and Sequestration: Overview, EPA,

https://19january2017snapshot.epa.gov/climatechange/carbon-dioxide-capture-and-sequestrationoverview .html

Just one power plant in the world currently uses carbon capture at scale – the Boundary Dam Power Station in Estevan, Canada. The project, operational since 2014, captures up to 90% of  $CO_2$  emitted from the coal plant on site.

One still-operating plant – WA Parish Generation Station in Houston – has since shut down its carbon capture project. The project, known as Petra Nova, was suspended in 2020 after three years of operation. Petra Nova wasn't even a true CCS project, as the captured carbon was used to enhance recovery of underground oil rather than merely being stored underground. Further, the original project developer, NRG, no longer owns a stake in Petra Nova. The plant was sold at a fraction of the construction costs, leaving JX Nippon Oil and Gas Exploration Corporation as the sole owner of the plant.

The Bellingham Energy Center offers another small and now-inoperable example of carbon capture. The Bellingham Energy Center used Fluor's Econamine FG Plus capture system on a combined cycle combustion turbine. The 40-MW facility operated for nearly 15 years and captured 85-95% of the CO<sub>2</sub> in the slipstream of the plant. Still, this example does not demonstrate sequestration as the captured carbon was utilized for functionality in the food industry rather than stored underground.

Several other CCS projects in the United States have been canceled over the past 15 years. The list includes American Electric Power Mountaineer, FutureGen 2.0, Texas Clean Energy Project, and Southern Co.'s Kemper Project.

While there are several "announced" CCS projects throughout the United States, none are currently under construction, and all are subject to the same outcomes as the projects listed above.

As maintained by the Clean Air Task Force, there are 29 planned carbon capture projects in the United States designated for use as prescribed by EPA.<sup>5</sup> That means 29 projects intend to be used at coal or natural gas power plants. All 29 projects are "in development." None are operational. Further, just one project has an announced operations date – a 10MW demonstration project implemented by the University of Illinois set to come online in 2026.

Another indicative example of the challenges of large-scale CCS is in West Virginia. In September 2022, Competitive Power Ventures announced that it would be building an 1,800 MW natural gas power station with carbon capture and storage capabilities. The cost of the project is estimated at \$3 billion. It is expected to go into operation "later this decade." Still, since the announcement – now nearly one year ago – there have been no further updates from Competitive Power Ventures on the project.

One notable project in North Dakota may be the exception to the rule. The Minnkota project is a "first of its kind demonstration" and benefits from its exceptional location. The Minnkota project is just south of the only operational plant with CCS in North America (the Boundary Dam Power Station, mentioned above) and is in close proximity to the same geological formations.<sup>6</sup> Further, North Dakota is one of just two states with the proper permits for CO<sub>2</sub> storage in place. Even with these advantages, the project was initiated in 2015 and began design and engineering work in 2018. The project is nearly in its 10<sup>th</sup> year of development and hopes to finalize designs in 2024. The project's estimated cost is \$1.45 billion to support the capture of 4 million metric tons of CO<sub>2</sub> per year from the plant's 700 MW capacity.

<sup>&</sup>lt;sup>5</sup> Clean Air Taskforce, <u>https://www.catf.us/ccstableus/</u>

<sup>&</sup>lt;sup>6</sup>Project Tundra: Minnkota Moves Forward on Carbon Capture and Storage, NRECA, https://www.cooperative.com/remagazine/articles/pages/project-tundra-minnkota-moves-forward-on-carboncapture-and-storage.aspx? zs=Ddr5n& zl=tH0d2

With so few projects in operation – whether in the exact configuration as intended by EPA or otherwise – it is clear that CCS has not been adequately demonstrated as an industry-wide solution for the purposes of EPA's proposal.

## Hydrogen "co-firing"

Hydrogen co-firing, too, is a promising technology. But like CCS, it has not been demonstrated in operation at the levels required in the EPA proposal.

In concept, hydrogen fuel use is an elegant solution for emissions reduction. Hydrogen does not contain carbon and therefore emits no carbon dioxide ( $CO_2$ ) when combusted. Because of this, there is increasing interest in hydrogen as a viable fuel source for stationary combustion turbines in the utility power sector. That said, hydrogen has seen limited adoption as a fuel source in the U.S. utility industry to date. It has primarily been used in niche applications in industrial sectors. Hydrogen is also employed in the transportation sector, currently in light-duty hydrogen fuel cell vehicles.

There is no great supply of hydrogen on the market for utilities to use as fuel for their power generation units. There are a number of ways to produce hydrogen fuel, as detailed in **Figure 1** below. But EPA's proposed regulations would prohibit most of these production methods, as they carry carbon footprints of their own. EPA's regulations require co-firing with "clean hydrogen" – that is, hydrogen that is generated by renewables through processes like electrolysis that don't emit greenhouse gasses into the atmosphere.

Power Source	roduction Process		
Coal	Gasification with or without carbon capture and storage (CCS)		
Natural Gas	Steam Methane Reforming (SMR) and Autothermal Reforming (ATR) with o without CCS, Methane Pyrolysis		
Nuclear	Thermal energy for gasification or SMR, electrolysis (low and high temperature), and thermochemical		
Renewable	Electrolysis, photoelectrochemical (PEC), thermochemical		
Others	ners Byproduct hydrogen and hydrogen derived from biomass, byproducts, and refuse		

#### Figure 1 – Hydrogen Production Methods<sup>7</sup>

This "clean hydrogen" pathway comes with its own challenges for South Carolina.

"Clean hydrogen" is expensive and inefficient.<sup>8</sup> It requires four times more energy to produce than the energy it creates as a fuel source, according to the NRECA's public submission to EPA. Given that South Carolina is already facing a power supply crunch, it is counterintuitive to devote resources toward producing a fuel that isn't worth the energy that was required to create it. We also have concerns about

<sup>&</sup>lt;sup>7</sup>Hydrogen in Combustion Turbine Electric Generating Units Technical Support Document, EPA https://www.epa.gov/system/files/documents/2023-05/TSD%20-%20Hydrogen%20in%20Combustion%20Turbine%20EGUs.pdf

<sup>&</sup>lt;sup>8</sup>Energy and the Hydrogen Economy, https://afdc.energy.gov/files/pdfs/hyd\_economy\_bossel\_eliasson.pdf

the economic viability of clean hydrogen as its production costs have yet to become competitive<sup>9</sup> with other production processes. The Biden Administration's continued funding for research, development, and demonstration efforts to reduce the cost of clean hydrogen further highlights that this technology is still under development and does not meet the standards of BSERs.<sup>10</sup>

"Thanks to new funding from President Biden's historic clean energy laws, DOE is accelerating our effort to make this exciting and versatile fuel **market-ready within a decade**—supercharging America's drive towards an affordable and secure clean energy economy."

Internationally, there is just one small operating plant that fires with hydrogen fuel: The Fujiyoshida Hydrogen Power Station is a 360-kW single-fuel power plant that has operated on 100% hydrogen in Fujiyoshida City, Japan, since April 2022.<sup>11</sup> This is a small pilot, powering only 100 homes. The plant initially planned to acquire hydrogen from a partner company, produced without generating carbon. However, this meant selling the acquired hydrogen at a loss.

There have been successful demonstrations of lower volumes of hydrogen co-firing at other existing power plants:

- A natural gas combustion turbine at Georgia Power's 2.5-GW Plant McDonough-Atkinson co-fired a 20% hydrogen blend at both full and partial loads while maintaining emissions compliance and with no impact to maintenance intervals.
- At the Brentwood power plant in September 2022, the New York Power Authority (NYPA) successfully demonstrated the ability to co-fire 44% 'carbon-free' hydrogen blended with natural gas in a retrofitted combustion turbine. According to NYPA, this was the first time an existing U.S. natural gas-fired combustion turbine has successfully been retrofitted to co-fire hydrogen, and according to the Electric Power Research Institute (EPRI), the project demonstrated a 14% reduction in CO<sub>2</sub> at a 35% hydrogen blend. The unit's existing SCR controlled NOX emissions within permit limits.
- Also in New York, the Cricket Valley Energy Center is planning to demonstrate co-firing a 5% blend of hydrogen at a combined cycle facility.

By comparison, EPA's proposed regulations would require large natural gas-fired power plants to co-fire at 96% by 2038. Those co-firing levels have never been achieved in a natural gas-fired power plant, and plans to achieve this are on a much longer timeframe: Many new facilities have announced plans to initially co-fire up to 30% hydrogen by volume and up to 100% in approximately 10-20 years.<sup>12</sup> While several demonstrations have offered encouragement for proponents of hydrogen fuel, it remains

<sup>12</sup> Hydrogen in Combustion Turbine Electric Generating Units Technical Support Document, EPA https://www.epa.gov/system/files/documents/2023-05/TSD%20-

%20Hydrogen%20in%20Combustion%20Turbine%20EGUs.pdf

 <sup>&</sup>lt;sup>9</sup> Hydrogen Production: Electrolysis, https://www.energy.gov/eere/fuelcells/hydrogen-production-electrolysis
<sup>10</sup> Biden-Harris Administration Announces \$750 Million to Advance Clean Hydrogen Technologies,

https://www.energy.gov/articles/biden-harris-administration-announces-750-million-advance-clean-hydrogen-technologies

<sup>&</sup>lt;sup>11</sup>Japan first commercial hydrogen power plant to open near Mount Fuji in 2022, Hydrogen Central, https://hydrogen-central.com/japan-commercial-hydrogen-power-plant-2022/

unquestionable that clean hydrogen co-firing has yet to be adequately proven at the levels EPA is requiring.

### Is it achievable?

In reviewing these technologies and discussing them with stakeholders across the state, South Carolina's electric cooperatives have identified a series of real-world barriers that prevent both CCS and hydrogen co-firing from being deployed at the scale required within EPA's proposal and by the aggressive deadlines the agency has set.

Both technologies face significant challenges with respect to infrastructure, including the need to build hard-to-site pipelines and, for CCS, the lack of potential storage options in South Carolina.

Power plants looking to co-fire with hydrogen are immediately faced with a scarce supply of the fuel. And both of EPA's suggested technologies would increase a power plant's energy burden, meaning they require energy to be used, decreasing the supply available to consumers.

These challenges compound on one another. For example, a lack of hydrogen supply requires an energy producer to build pipeline infrastructure to bring it in from somewhere else.

Each key challenge with respect to achievability is detailed across both technologies below.

#### Carbon capture and sequestration

CCS technology faces three primary challenges to be deployed at a commercial scale: geologic storage constraints, development of CO2 pipeline, and mitigation of parasitic load.

To address them in order, first is the requirement for somewhere to store the captured carbon underground. Sequestered carbon can be stored in three types of underground formations: oil and natural gas reservoirs, saline formations, and unmineable coal areas. Many of these storage locations have existed naturally for thousands of years and are viable options for carbon sequestration. However, access to them is limited by geography, which is unchangeable and not distributed evenly. Figure 2 below, provided by EPA in its Carbon Dioxide Capture and Sequestration Overview, illustrates these limitations well:



Figure 2. Overview of Geologic Storage Potential in the United States<sup>13</sup>

EPA's own map shows access is limited and, unfortunately, nearly unavailable for plants operating in the Southeast. The most promising opportunity for storage in our region is in the South Georgia Rift Basin (SGR). Extensive studies on the SGR – which cost millions of dollars – have come back inconclusive:<sup>14</sup>

"This [South Georgia Rift] basin was evaluated by the assessment panel and found to contain no definitive evidence that there are reservoir and seal formations that satisfy the specific requirements of the USGS methodology for assessing CO2 storage resources."

Without local storage available, the burden for infrastructure grows higher. As of now, approximately 5,000 miles of pipelines carry  $CO_2$  in the United States, primarily linking natural  $CO_2$  sources to aging oil fields where the  $CO_2$  is used for enhanced oil recovery. A much more expansive  $CO_2$  pipeline network would be needed for CCS to meet the requirements of EPA's proposal. A recent study from Princeton suggests that such a network could total over 65,000 miles, more than 12 times larger than the network we have today. This would require an estimated \$170 billion capital investment. The relative cost in

<sup>&</sup>lt;sup>13</sup> Carbon Dioxide Capture and Sequestration: Overview,

https://19january2017snapshot.epa.gov/climatechange/carbon-dioxide-capture-and-sequestration-overview\_.html

<sup>&</sup>lt;sup>14</sup> South Carolina Carbon Sequestration, South Carolina Department of Natural Resources, <u>https://www.dnr.sc.gov/geology/SCO2/index.html</u>

South Carolina would be even higher, given the need to export captured carbon due to the lack of storage available locally.

Still, this discussion only addresses transportation infrastructure – moving the captured carbon to its eventual storage location. Yet another wave of capital investment would be required to store the sequestered carbon via injection wells below the Earth's impermeable seal over one mile beneath the surface. This, of course, is another dramatic infrastructure hurdle facing the industry and – as discussed further in the next section – presents its own set of cost and safety challenges.

Finally, for CCS, the third major hurdle is the issue of parasitic load. In order to power CCS technology, operating plants utilizing CCS effectively must curb their capacity, diverting some portion of the power they produce to the CCS technology. This is of particular concern in South Carolina, where demand for electricity is expecting to skyrocket in the coming years.

## Hydrogen "co-firing"

For hydrogen co-firing, the list of challenges the technology faces is similar to CCS: infrastructure requirements, supply of hydrogen, and, relatedly, the parasitic energy cost of producing that hydrogen.

The US has an extensive network of pipelines, nearly 3 million miles in total. But only a small percentage is dedicated to carrying hydrogen. There are just 1,600 miles of hydrogen pipelines<sup>15</sup>, which are primarily used to transport hydrogen from the point of production to the point of use. In order to reach the vast number of power plants impacted by EPA's proposal, this total will need to increase dramatically. In South Carolina, hydrogen pipeline infrastructure is virtually nonexistent. The state has petitioned for traditional pipeline infrastructure for years to no avail. The Federation of American Scientists projects thousands of miles of new pipeline will be needed throughout the United States to support hydrogen supply.<sup>16</sup> The construction of this network alone could undo much of the progress made in emissions reduction as the pipeline manufacturing process is carbon-intensive. That means the net impact of producing this pipeline could have the opposite intended effect on reducing carbon emissions.

Finally, in order to contribute to EPA's stated goal of reducing carbon emissions, it is critical that hydrogen be produced by a clean energy source. As identified above, the best approach to meet this objective is to produce hydrogen on-site with electrolysis. That requires additional renewable capacity that does not currently exist at the levels necessary to comply with EPA's proposal. Similar to the issue of parasitic load for CCS, this further increases the energy burden in the face of already-increasing demand for electricity in South Carolina.

EPA's ruling, as written, would force South Carolina to become an exporter of CO<sub>2</sub> and an importer of clean hydrogen. Implementing either CCS or hydrogen co-firing would require the construction of vast networks of pipelines, an effort that would take years to complete and drive up the cost of electricity for our consumer-members in rural South Carolina.

<sup>&</sup>lt;sup>15</sup> EPA's Greenhouse Gas Rules for New and Existing Power Plants, NRECA, July 2023

<sup>&</sup>lt;sup>16</sup> Building a National Network of Composite Pipes to Reduce Greenhouse Gas Emissions, Federation of American Scientists, <u>ttps://fas.org/publication/building-a-national-network-of-composite-pipes-to-reduce-greenhouse-gas-emissions/</u>

## Are CCS and hydrogen co-firing the BSER?

For the aforementioned reasons, as well as those laid out in the "Legal concerns" section of this submission, CCS and hydrogen co-firing both fail to qualify as the "best system of emissions reduction."

Both have yet to be adequately demonstrated at a utility scale, and both carry immense costs associated with infrastructure and transmission upgrades.

Those costs are impossible to confidently project, given the nascency of the proposed technologies. The challenge of predicting the costs of compliance is exacerbated by EPA's decision to allow just 75 days for stakeholders to study and provide comments on the proposed regulations. This inadequate public comment period was effectively made even shorter when EPA introduced significant updates to its modeling on July 7, halfway through the comment period.

Still, it takes only common sense to recognize that EPA's proposed solutions will cost far more than today's methods of power generation. Those costs will necessarily be passed down to our consumermembers, who will see their power bills rise with little – if any – benefit to show for it.

# Section III. Concerns about the consequences for rural South Carolina

EPA's proposal has the potential to seriously harm the rural South Carolinians we serve, including the very real likelihood they will be forced to pay far more for less reliable electricity.

In South Carolina, the lights don't go out because of utilities' failure to plan or the state's failure to set effective energy policy. If the power goes out, it's because of a natural disaster or an isolated incident. And our consumer-members have come to expect short outage times as our crews respond quickly to those events. In 2021, the average S.C. co-op member experienced less than 143 minutes of outages, far less than the national utility average of 462 minutes.

But that reliability will be under threat if EPA implements these regulations as written.

As detailed above, South Carolina is already facing a power crunch due to population growth, economic development and the electrification of the economy. The rolling blackouts several S.C. utilities were forced to undertake during several cold days around Christmas 2022 is ample evidence of that.

The state needs more power capacity in order to continue growing. It needs more combined cycle natural gas-fired power plants, in particular, to keep up with demand, retire aging coal-fired power plants, and keep South Carolina on a path of reducing carbon emissions.

But as previously explained, EPA's proposed regulations would render it nearly impossible to site and build the new natural gas-fired generation our consumer-members desperately need. EPA's proposed rules also would make it nearly impossible to operate existing coal- and natural gas-fired plants at the levels necessary to maintain the reliable flow of electricity to the people and businesses we serve.

Our consumer-members cannot be asked to live without reliable electricity, especially as their power bills rise due to unnecessary and ill-advised regulations.

The sick and elderly can't be made to suffer through days of intense heat without air conditioning and nights of extreme cold without heating systems. As Winter Storm Uri in Texas taught us just two years ago, people will die if we can't reliably deliver the electricity they need.

South Carolina's recent roll of economic development victories also will come to a grinding halt. Major industries require reliable, affordable electricity, and they will go wherever they can find it. In recent years, South Carolina has landed a number of these projects in part because other states lacked the energy supply necessary to serve them. Many of these industries are setting up shop in rural South Carolina, offering much-needed opportunity to people and communities that have historically been left behind. These projects bring high-paying jobs and infuse local school districts with tax revenue.

Our consumer-members in rural swaths of the state have waited a long time for these jobs. But EPA's regulations would likely prevent South Carolina's electric cooperatives from taking on any new economic development projects due to power supply constraints.

Ironically, many of these new projects are helping to reduce greenhouse gas emissions by facilitating the ongoing electrification of the economy. Listed here is just a sampling of the electric vehicle-related economic development projects South Carolina has landed over the past few years.

- <u>Scout Motors</u> EV trucks and SUVs plant in Blythewood \$2 billion investment, 4,000 new jobs
- <u>Redwood Materials</u> EV battery recycling and production plant near Charleston \$3.5 billion investment, 1,500 new jobs
- AESC EV battery cell gigafactory in Florence \$810 million investment, 1,170 new jobs
- <u>Cirba Solutions</u> EV battery recycling facility in Columbia \$300 million investment, 300 new jobs
- <u>Albemarle Corporation</u> Lithium hydroxide processing facility in Chester County \$1.3 billion, 300 new jobs
- <u>Volvo</u> Will produce several EV models at its Ridgeville plant, including the Polestar 3 and a <u>fully</u> <u>electric SUV</u> – 1,500 jobs
- <u>BMW</u> Planning an EV manufacturing plant in Spartanburg and an EV battery facility in Woodruff – \$1.7 billion investment, 300 new jobs
- Mercedes-Benz Manufacturing eSprinter vans in Ladson \$60 million expansion
- <u>BorgWarner</u> Expansion of EV battery production in Oconee County \$42.7 million investment, 122 new jobs
- <u>Kontrolmatik Technologies</u> EV battery factory in Colleton County \$279 million investment, 575 jobs

Clearly, South Carolina is contributing significantly to the burgeoning electric vehicle industry, helping to decarbonize the nation's largest producer of greenhouse gas emissions: the transportation sector. But that contribution depends on the reliability of South Carolina's electric grid. EPA's regulations would undermine that reliability.

Finally, our consumer-members cannot afford the electric rate hikes that will inevitably accompany the implementation of these regulations. The unproven technologies EPA is forcing onto the utility sector require vast amounts of infrastructure – including massive pipeline networks – to be sited and constructed from scratch in just a matter of years.

All of this costs money – loads of it. And the cost of compliance will only rise as utilities across the country compete in the market to secure scarce resources and materials, including hydrogen fuel. These energy producers will pass these costs along to their consumers, including South Carolina's electric cooperatives.

Electric cooperatives have no shareholders to absorb such costs. Just as our excess revenues are passed back to our consumer-members, so are our costs.

Our consumer-members cannot afford to pay more for less reliable electric service. Indeed, many cooperative consumer-members are among those least able to afford higher electricity rates.

Electric cooperatives serve some of the most economically depressed areas of our state. That includes all 12 of South Carolina's persistent poverty counties – areas where at least 20% of the population live in poverty. The median income of counties served primarily by S.C. cooperatives is 10% below the state median income, which is already nearly \$11,000 less than the national average, according to the U.S. Census Bureau.

Our consumer-members in South Carolina already spend a higher percentage of their household income on electricity than typical electric consumers. Households living below the federal poverty level in South Carolina spent some 17% of their income on electricity, more than any other state, according to the <u>U.S.</u> <u>Department of Energy</u>.

These rural South Carolinians will pay for EPA's rate hikes on their power bills. They also will pay for it every time they go to the grocery store or shop at a retail store. The cost of consumer goods and basic necessities will inflate as manufacturers, wholesalers and retailers pass along their higher electricity costs to their consumers.

Our consumer-members cannot afford the rate hikes and rising cost of living that will accompany these regulations.

# **Section IV. Conclusion**

To summarize, EPA's power plant proposal is a bad policy that poses serious harm to South Carolina's electric cooperatives, their consumer-members, and the communities they serve.

The proposed regulations represent an ill-considered attempt to reduce carbon emissions by making it nearly impossible to build or operate a large fossil fuel-fired power plant. What the rule fails to consider is the critical importance of those plants, particularly combined cycle natural gas-fired generation units, in maintaining the reliability of the power grid in the face of unprecedented demand for electricity, especially in South Carolina.

Attempting to comply with these regulations will cost energy producers a fortune as they attempt to build vast pipeline networks on unrealistic timelines. Unfortunately, those costs will be passed down to families and businesses, including those in cooperatives' service territory who cannot afford it.

EPA's regulations also are unnecessary. South Carolina utilities already are on a proven path toward reducing carbon emissions in a meaningful way. The electricity that CEPCI purchases today for the state's 20 electric cooperatives is produced with 40% less carbon emissions than 2005 levels, for example. Utilities have accomplished that feat largely by investing in renewables and replacing coal-fired power plants with cleaner natural gas-fired generation units.

Ironically, EPA's proposal would all but prevent the siting and construction of new large-scale natural gas plants, forcing utilities to continue operating the coal-fired units they hoped to replace with cleaner natural gas-fired ones. One does not have to be opposed to controlling carbon emissions to also acknowledge that doing so in a haphazard way will be overly expensive and counterproductive. Again, we urge EPA to go back to the drawing board with this proposed rule. Any second draft of these regulations should more thoughtfully consider the possible impacts on the people of rural South Carolina and across the United States.

### Before the U.S. ENVIRONMENTAL PROTECTION AGENCY Washington, DC

In the Matter of	)	
	)	
New Source Performance Standards for GHG	)	Docket ID No.: EPA-HQ-OAR-2023-0072
Emissions from New and Reconstructed	)	
EGUs; Emission Guidelines for GHG	)	
Emissions from Existing EGUs; and Repeal	)	
of the Affordable Clean Energy Rule	)	

### DECLARATION OF ROBERT C. HOCHSTETLER IN SUPPORT OF COMMENTS OF CENTRAL ELECTRIC POWER COOPERATIVE, INC. AND THE ELECTRIC COOPERATIVES OF SOUTH CAROLINA

I, Robert C. Hochstetler, hereby declare as follows:

1. I am the President and Chief Executive Officer of Central Electric Power Cooperative, Inc. ("CEPCI") and have held that position since July 2014. I hold a BS degree in Electrical Engineering and four Masters degrees in Business Administration, Statistics, Strategic Management, and Public Administration. I have been employed in the electric utility industry since 1990, working for investor-owned utilities and electric cooperatives. Over the course of my career, I have managed various electric utility generating assets, including coal and natural gas units as well as renewable generation. I am providing this Declaration in support of the Comments of CEPCI and its affiliate, The Electric Cooperatives of South Carolina Inc.

2. As my utility career has progressed, I have increasingly been involved in, and responsible for, the planning function of the utilities for which I have worked. Planning for electric utilities means projecting the demand for electricity that the utility will be expected to provide over time and determining what resources - generation, transmission, and distribution - will be required to provide and deliver the electricity to meet that demand. Planning for electric

utilities is a "long lead time" process that requires the ability to understand long-term demand growth trends, the attributes and limitations of various types of generation assets, and the planning, approval and construction requirements related to those generation assets.

3. In my current position as President and CEO of CEPCI I and my team are responsible for the planning function for CEPCI and its members. CEPCI is a not-for-profit generation and transmission cooperative owned by its members, the twenty distribution cooperatives that operate in South Carolina. CEPCI provides wholesale electric service to its twenty member cooperatives using more than 800 miles of transmission lines. CEPCI members provide service in all 46 of South Carolina's counties through 76,000 miles of distribution lines. CEPCI currently provides approximately 20,000,000 megawatt hours ("MWhrs") of energy to its members annually with a peak demand of approximately 4600 megawatts ("MW").

4. As part of its planning process CEPCI has projected the demand for energy and capacity over a planning horizon through 2050 using several different sets of assumptions. Under all cases demand for capacity and energy will increase significantly. In addition, we anticipate that dramatic growth in near-term demand is likely, based on a number of announced manufacturing projects, the majority of which are electric transportation projects, primarily manufacturing plants to build electric vehicles and the batteries that will power those vehicles. While not all of these projects are being built in service territory served by the electric cooperative members of CEPCI, many of them are, and those that are not will generate spin-off projects located in territory served by electric cooperatives. These projects represent substantial investment in South Carolina that will produce high quality jobs and allow South Carolina to participate in "electrifying the economy" and thereby limiting carbon emissions. However, to

reap the benefits associated with these projects, CEPCI and its members must have a dependable supply of reliable, firm electricity capacity to commit to serve these projects.

5. CEPCI does not generate electricity. It contracts with wholesale suppliers of electricity on behalf of its member cooperatives to meet their short- and long-term needs. The vast majority of its electric capacity is acquired through two long-term Power Purchase Agreements ("PPAs") with the South Carolina Public Service Authority ("Santee Cooper") and Duke Energy ("Duke"). Santee Cooper and Duke currently rely in part on coal-fired base load generation to meet the needs of their customers including CEPCI. Both Santee Cooper and Duke have plans to retire existing coal generation plants and to replace the generation from those plants in part with natural gas fired combined cycle ("CC") generating units. The Duke plan includes the retirement of 6.2 gigawatts (GW) of coal generation and the replacement of that generation with a variety of cleaner assets, including 2.4 GW of CC generation. Santee Cooper's retirement of coal and addition of CC generation is part of its plan to reduce its carbon emissions by the mid-2030s to 44% of its 2005 carbon emissions level. The other major utility operating in South Carolina, Dominion Energy South Carolina, is also planning to close its two remaining coal generation plants by 2030 and to replace the generation provided by those units with a variety of cleaner generating units including a critically important CC plant.

6. I and my staff at CEPCI have followed closely the efforts of our wholesale providers to manage their generation resources to retire coal generation and replace it with cleaner generation while maintaining the reliability and affordability of their service. We have reviewed regulatory filings made by the companies in their Integrated Resource Plans and other regulatory filings. Based on our review of their filings, we are aware that Santee Cooper and Duke are planning, over the next few years, to greatly increase their deployment of, and reliance

on, renewable resources. However, we are convinced that, without the addition of the CC units they plan to add, neither of our major wholesale suppliers will be able to: (1) retire existing coal generation on their planned schedules; (2) maintain the reliability and affordability of their service; and (3) meet the increasing demand for capacity and energy that they and CEPCI are facing. The CC units will provide reliable and dispatchable base load generation that is simply not available from other resources.

7. CEPCI's planning team believes, based on our close examination of the plans of these utilities, that it is critically important that they move forward immediately with efforts to construct new CC units. The demand growth that CEPCI expects to experience adds urgency to the need for Duke and Santee Cooper to move forward very soon with plans to build the natural gas CC plants. For these projects to meet the expected energy demands of South Carolina, the projects must be planned, go through the regulatory approval process, and then be constructed. The process is difficult and time-consuming and must be started in the very near future for the plants to come online in time to meet the demands we must meet to serve South Carolina consumers.

8. It is because of our understanding of the importance to our wholesale suppliers of their ability to add natural gas CC generation that I and my team are so concerned about the rule proposed by the EPA pursuant to Section 111 of the Clean Air Act. In particular, the proposal to adopt as "best systems of emissions reduction" ("BSERs") Carbon Capture and Sequestration ("CCS") or co-firing natural gas units with Clean Hydrogen is flawed and, if adopted in a final rule, could have devastating consequences for South Carolina electric utilities, including CEPCI and its member cooperatives. My team has studied both of these options. We have concluded that, while these technologies may one day in the future be helpful in reducing carbon emissions,

neither is remotely ready for deployment in South Carolina in a time frame necessary to supply the resources we need to meet our needs.

There are no CCS projects of any kind in our state or region and no CCS projects 9. for natural gas generation anywhere. No one has even seriously begun the process of determining whether CCS is feasible in our region. There is no existing infrastructure for CCS in South Carolina and no plan for the permitting and construction of the pipelines that would be necessary to transport CO<sub>2</sub> to locations where CCS is feasible, if such locations can be identified. Based on the limited information that is available, it appears that the geology of our area would not be suitable for CCS. We have no reliable information that we can use to calculate cost estimates for a natural gas CCS project. Based on what we know, it appears likely that adding CCS to a natural gas generation project, if it is even feasible, would greatly increase the project's cost, thereby greatly increasing the impact on the people we ultimately serve, the members of CEPCI's member retail distribution cooperatives. Our member cooperatives serve mostly rural parts of South Carolina and many of their members live in poorly insulated homes and struggle to pay their current power bills. CEPCI is focused on providing those people electricity at reasonable rates. The proposed requirement to implement CCS at this point in its development is irresponsible in its disregard for the likely financial impact on our end-user members.

10. The proposed determination that co-firing natural gas generation with "Clean Hydrogen" is a BSER under the Clean Air Act is just as premature and irresponsible as the determination for CCS. There are no Clean Hydrogen co-firing generation plants in our region. There is no supply of Clean Hydrogen, no plan to produce it, and no plan to construct the infrastructure that would be necessary to transport Clean Hydrogen to the plants where it would be used in co-firing generation units. We again have no means of assessing its feasibility or

evaluating its cost. There is no basis for determining that co-firing natural gas generating units with Clean Hydrogen can be implemented by South Carolina utilities on a timeline that would allow CEPCI to reliably meet the generation demands that we expect in the near future.

11. The proposed determination that CCS and Clean Hydrogen co-filing are BSERs and thus must be implemented for any new natural gas projects is flawed and unsupported by engineering and economic analysis. In addition, it will have adverse consequences for the efforts of South Carolina utilities to reduce carbon emissions and will thwart the efforts of South Carolina to participate in transitioning to a cleaner economy with new electric vehicle and battery manufacturing projects. Without the ability to proceed now with planning and permitting new natural gas CC projects, South Carolina utilities will not be able to move forward with plans to retire coal generation units and maintain the reliability of their service. In addition, the uncertainty caused by the proposed new rule will make it difficult for CEPCI and other South Carolina utilities to commit to serving the planned electric vehicle and battery projects that will add significant load growth in the State.

12. CEPCI and its members support efforts to reduce carbon emissions and replace existing coal generation with cleaner resources. The carbon density of CEPCI's generation portfolio has decreased by 40% since 2005. However, CEPCI does not believe that the proposed determination that CCS and Clean Hydrogen co-firing are BSERs will assist in the effort to reduce carbon emissions. The proposed determination is unfounded and premature and should be withdrawn by the EPA.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.

Robert C. Hochstetler

<u>Aug 3</u>, 2023

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P.O. Box 417 • 2790 Wagener Road Aiken, South Carolina 29802-0417 (803) 649-6245 • Fax: (803) 641-8310

August 3, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As Chief Executive Officer of Aiken Electric Cooperative, Inc., I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

Aiken Electric Cooperative serves almost 51,000 active accounts in a nine-county service area. EPA's proposal would undermine Aiken Electric Cooperative's mission of providing affordable, reliable power to the communities and member-owners we serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The families and businesses served by Aiken Electric Cooperative are direct stakeholders and the sole memberowners of the not-for-profit cooperative. The fundamental expectation of our member-owners is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

I am particularly concerned that EPA's proposed regulations:

- Are based on the use of hydrogen and carbon capture and storage (CCS), which are promising technologies but are not yet commercially viable or available in many parts of the country;
- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.

U.S. Environmental Protection Agency Administrator Michael S. Regan August 3, 2023 Page 2

EPA's proposal could have dire consequences for our member-owners in Aiken County and the citizens of South Carolina by inflating power bills, increasing the already-high cost of living and driving away industry and jobs.

I join electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to life-threatening blackouts. It doesn't work for my electric co-op, my community, or our nation's economy.

Sincerely,

Gary L. Stooksbury Chief Executive Officer

low



Post Office Box 1234, Moncks Corner, SC 29461

www.berkeleyelectric.coop

July 25, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As president and CEO of Berkeley Electric Cooperative, I write in opposition to the Environmental Protection Agency's recent proposal to impose unworkable regulations on new and existing power plants.

Berkeley Electric is a not-for-profit utility serving more than 100,000 member-consumers in coastal South Carolina. The EPA's proposal would undermine the cooperative's mission of providing affordable, reliable power to the communities and consumer-members we serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always-available power plants, while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The families and businesses served by Berkeley Electric are its direct stakeholders and the sole owners. One-third of the families we serve are considered low-income households. The fundamental expectation of our consumers is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

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Post Office Box 1234, Moncks Corner, SC 29461

www.berkeleyelectric.coop

EPA's proposal could have dire consequences for our consumer-members in rural South Carolina, inflating power bills, increasing the already-high cost of living, and driving away industry and jobs.

I join electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to life-threatening blackouts.

It doesn't work for Berkeley Electric's members or our nation's economy.

Sincerely,

Michael & Fulle

Michael S. Fuller, President and CEO Berkeley Electric Cooperative, Inc.



POST OFFICE BOX 130 SUMTER, SOUTH CAROLINA 29151-0130 PHONE: (803) 469-8060 FAX: (803) 469-8320 www.blackriver.coop

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

#### Administrator Regan:

As CEO of Black River Electric Cooperative in Sumter, South Carolina, I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants. My cooperative serves four rural counties in South Carolina and our members rely on us for reliable, affordable electricity. In our cooperative alone, close to 35,000 electric bills in Sumter, Lee, Clarendon, and Kershaw counties will be impacted by this proposal.

EPA's proposal would undermine the electric cooperatives' mission of providing affordable, reliable power to the communities and members they serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The families and businesses we serve are direct stakeholders and the sole owners of their not-for-profit cooperatives. And the fundamental expectation of our members is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

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• Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and

• Fail to recognize the massive infrastructure development necessary to support these technologies.

EPA's proposal could have dire consequences for our members in rural South Carolina, inflating power bills, increasing the already-high cost of living, and driving away industry and jobs. We also serve

members of both the US Army and Air Force, and this could negatively impact our service men and women personally.

I join electric cooperatives across the country in standing firm against the EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to lifethreatening blackouts.

It doesn't work for South Carolina's electric cooperatives, the communities we serve, or our nation's economy.

Sincerely,

Alle

Charles R. Allen CEO

August 4, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Dear Administrator Regan:

I am the president and CEO of Blue Ridge Electric Cooperative, headquartered in Pickens, South Carolina. Our member-owned utility provides electric service to nearly 72,000 households, industrial plants, commercial businesses, and other ratepayers in South Carolina's Upstate region.

On behalf of those we serve, I am writing to express my deep concern about the Environmental Protection Agency's proposal to implement certain energy related regulations. As presented, these regulations undoubtedly would have a devastating impact on our state's ability to produce affordable electric power for its citizens.

It is apparent to me and others in our business, that both hydrogen production and carbon capture and storage are still immature technologies. Neither of these has yet reached the stage where they could produce electricity that is either reliable or favorably priced.

I am also disturbed with the prospect that the plan's transition to these expensive options would entail the closure of some existing generation facilities. In my view, such an outcome would be ill-advised in the extreme. Our state just barely escaped widespread rolling blackouts on Christmas Day last year, when thermometer readings fell to eight degrees Fahrenheit. That reality, along with the ongoing rapid growth South Carolina is seeing, offers ample evidence we need more tried-and-true baseload generating facilities, not fewer. If South Carolina is to continue to grow and prosper, reliable and affordable electric service is a must. Reliability and affordability are essential to the success of the current economic-development initiatives our state is spearheading.

It is my sincere hope that EPA officials will reconsider and abandon the plan to introduce these burdensome and truly costly regulations. South Carolina and its citizens simply would not be able to bear up under them.

Sincerely,

Jim Lovinggood

Jim Lovinggood President CEO

Your Touchstone Energy\* Partner 🔨



August 3, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As President and CEO of Broad River Electric Cooperative, Inc. (BREC), I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

BREC distributes electricity to 24,000 consumer-members in the rural areas of 7 counties in South Carolina and North Carolina.

EPA's proposal would undermine my electric cooperative's mission of providing affordable, reliable power to the communities and consumer-members we serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The families and businesses served by Broad River Electric Cooperative, Inc. are direct stakeholders and the sole owners of the not-forprofit cooperative. And the fundamental expectation of our consumers is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

I am particularly concerned that EPA's proposed regulations:

- Are based on the use of hydrogen and carbon capture and storage (CCS), which are promising technologies but are not yet commercially viable or available in many parts of the country;
- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.

EPA's proposal could have dire consequences for our consumer-members in rural South Carolina, inflating power bills, increasing the already-high cost of living, and driving away industry and jobs.

I join electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to life-threatening blackouts. It doesn't work for my electric co-op, my community, or our nation's economy.

Sincerely, Jerfin

Terry W. Mallard President and CEO Broad River Electric Cooperative, Inc.


August 4, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As President & CEO of Cooperative Electric Energy Utility Supply, Inc. (CEEUS, Inc.), I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

My organization is an electric utility distributor of power equipment that represents the interests of 22 electric cooperatives in South Carolina along with Santee Cooper, the electric municipalities of SC, and Dominion Energy SC, and the more than 3.5 million South Carolinians who rely on them for electricity.

EPA's proposal would undermine the electric cooperatives' mission of providing affordable, reliable power to the communities and consumer-members they serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The families and businesses served by our 20 distribution cooperative members and 2 generation & transmission cooperative members are direct stakeholders and the sole owners of their not-for-profit cooperatives. And the fundamental expectation of our consumers is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

I am particularly concerned that EPA's proposed regulations:

- Are based on the use of hydrogen and carbon capture and storage (CCS), which are promising technologies but are not yet commercially viable or available in many parts of the country;
- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.



EPA's proposal could have dire consequences for the consumer-members of electric cooperatives in rural South Carolina, inflating power bills, increasing the already-high cost of living, and driving away industry and jobs.

I support electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to lifethreatening blackouts. It doesn't work for South Carolina's electric cooperatives, the communities they serve, or our nation's economy.

Sincerely,

E. Chad Capps

E. Chad Capps President & CEO CEEUS, Inc.



### Before the U.S. ENVIRONMENTAL PROTECTION AGENCY Washington, DC

In the Matter of	)
	)
New Source Performance Standards for GHG	)
Emissions from New and Reconstructed	)
EGUs; Emission Guidelines for GHG	)
Emissions from Existing EGUs; and Repeal	)
of the Affordable Clean Energy Rule	)

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

### DECLARATION OF ROBERT C. HOCHSTETLER IN SUPPORT OF COMMENTS OF CENTRAL ELECTRIC POWER COOPERATIVE, INC. AND THE ELECTRIC COOPERATIVES OF SOUTH CAROLINA

I, Robert C. Hochstetler, hereby declare as follows:

1. I am the President and Chief Executive Officer of Central Electric Power Cooperative, Inc. ("CEPCI") and have held that position since July 2014. I hold a BS degree in Electrical Engineering and four Masters degrees in Business Administration, Statistics, Strategic Management, and Public Administration. I have been employed in the electric utility industry since 1990, working for investor-owned utilities and electric cooperatives. Over the course of my career, I have managed various electric utility generating assets, including coal and natural gas units as well as renewable generation. I am providing this Declaration in support of the Comments of CEPCI and its affiliate, The Electric Cooperatives of South Carolina Inc.

2. As my utility career has progressed, I have increasingly been involved in, and responsible for, the planning function of the utilities for which I have worked. Planning for electric utilities means projecting the demand for electricity that the utility will be expected to provide over time and determining what resources - generation, transmission, and distribution - will be required to provide and deliver the electricity to meet that demand. Planning for electric

utilities is a "long lead time" process that requires the ability to understand long-term demand growth trends, the attributes and limitations of various types of generation assets, and the planning, approval and construction requirements related to those generation assets.

3. In my current position as President and CEO of CEPCI I and my team are responsible for the planning function for CEPCI and its members. CEPCI is a not-for-profit generation and transmission cooperative owned by its members, the twenty distribution cooperatives that operate in South Carolina. CEPCI provides wholesale electric service to its twenty member cooperatives using more than 800 miles of transmission lines. CEPCI members provide service in all 46 of South Carolina's counties through 76,000 miles of distribution lines. CEPCI currently provides approximately 20,000,000 megawatt hours ("MWhrs") of energy to its members annually with a peak demand of approximately 4600 megawatts ("MW").

4. As part of its planning process CEPCI has projected the demand for energy and capacity over a planning horizon through 2050 using several different sets of assumptions. Under all cases demand for capacity and energy will increase significantly. In addition, we anticipate that dramatic growth in near-term demand is likely, based on a number of announced manufacturing projects, the majority of which are electric transportation projects, primarily manufacturing plants to build electric vehicles and the batteries that will power those vehicles. While not all of these projects are being built in service territory served by the electric cooperative members of CEPCI, many of them are, and those that are not will generate spin-off projects located in territory served by electric cooperatives. These projects represent substantial investment in South Carolina that will produce high quality jobs and allow South Carolina to participate in "electrifying the economy" and thereby limiting carbon emissions. However, to

reap the benefits associated with these projects, CEPCI and its members must have a dependable supply of reliable, firm electricity capacity to commit to serve these projects.

5. CEPCI does not generate electricity. It contracts with wholesale suppliers of electricity on behalf of its member cooperatives to meet their short- and long-term needs. The vast majority of its electric capacity is acquired through two long-term Power Purchase Agreements ("PPAs") with the South Carolina Public Service Authority ("Santee Cooper") and Duke Energy ("Duke"). Santee Cooper and Duke currently rely in part on coal-fired base load generation to meet the needs of their customers including CEPCI. Both Santee Cooper and Duke have plans to retire existing coal generation plants and to replace the generation from those plants in part with natural gas fired combined cycle ("CC") generating units. The Duke plan includes the retirement of 6.2 gigawatts (GW) of coal generation and the replacement of that generation with a variety of cleaner assets, including 2.4 GW of CC generation. Santee Cooper's retirement of coal and addition of CC generation is part of its plan to reduce its carbon emissions by the mid-2030s to 44% of its 2005 carbon emissions level. The other major utility operating in South Carolina, Dominion Energy South Carolina, is also planning to close its two remaining coal generation plants by 2030 and to replace the generation provided by those units with a variety of cleaner generating units including a critically important CC plant.

6. I and my staff at CEPCI have followed closely the efforts of our wholesale providers to manage their generation resources to retire coal generation and replace it with cleaner generation while maintaining the reliability and affordability of their service. We have reviewed regulatory filings made by the companies in their Integrated Resource Plans and other regulatory filings. Based on our review of their filings, we are aware that Santee Cooper and Duke are planning, over the next few years, to greatly increase their deployment of, and reliance

on, renewable resources. However, we are convinced that, without the addition of the CC units they plan to add, neither of our major wholesale suppliers will be able to: (1) retire existing coal generation on their planned schedules; (2) maintain the reliability and affordability of their service; and (3) meet the increasing demand for capacity and energy that they and CEPCI are facing. The CC units will provide reliable and dispatchable base load generation that is simply not available from other resources.

7. CEPCI's planning team believes, based on our close examination of the plans of these utilities, that it is critically important that they move forward immediately with efforts to construct new CC units. The demand growth that CEPCI expects to experience adds urgency to the need for Duke and Santee Cooper to move forward very soon with plans to build the natural gas CC plants. For these projects to meet the expected energy demands of South Carolina, the projects must be planned, go through the regulatory approval process, and then be constructed. The process is difficult and time-consuming and must be started in the very near future for the plants to come online in time to meet the demands we must meet to serve South Carolina consumers.

8. It is because of our understanding of the importance to our wholesale suppliers of their ability to add natural gas CC generation that I and my team are so concerned about the rule proposed by the EPA pursuant to Section 111 of the Clean Air Act. In particular, the proposal to adopt as "best systems of emissions reduction" ("BSERs") Carbon Capture and Sequestration ("CCS") or co-firing natural gas units with Clean Hydrogen is flawed and, if adopted in a final rule, could have devastating consequences for South Carolina electric utilities, including CEPCI and its member cooperatives. My team has studied both of these options. We have concluded that, while these technologies may one day in the future be helpful in reducing carbon emissions,

neither is remotely ready for deployment in South Carolina in a time frame necessary to supply the resources we need to meet our needs.

9. There are no CCS projects of any kind in our state or region and no CCS projects for natural gas generation anywhere. No one has even seriously begun the process of determining whether CCS is feasible in our region. There is no existing infrastructure for CCS in South Carolina and no plan for the permitting and construction of the pipelines that would be necessary to transport CO<sub>2</sub> to locations where CCS is feasible, if such locations can be identified. Based on the limited information that is available, it appears that the geology of our area would not be suitable for CCS. We have no reliable information that we can use to calculate cost estimates for a natural gas CCS project. Based on what we know, it appears likely that adding CCS to a natural gas generation project, if it is even feasible, would greatly increase the project's cost, thereby greatly increasing the impact on the people we ultimately serve, the members of CEPCI's member retail distribution cooperatives. Our member cooperatives serve mostly rural parts of South Carolina and many of their members live in poorly insulated homes and struggle to pay their current power bills. CEPCI is focused on providing those people electricity at reasonable rates. The proposed requirement to implement CCS at this point in its development is irresponsible in its disregard for the likely financial impact on our end-user members.

10. The proposed determination that co-firing natural gas generation with "Clean Hydrogen" is a BSER under the Clean Air Act is just as premature and irresponsible as the determination for CCS. There are no Clean Hydrogen co-firing generation plants in our region. There is no supply of Clean Hydrogen, no plan to produce it, and no plan to construct the infrastructure that would be necessary to transport Clean Hydrogen to the plants where it would be used in co-firing generation units. We again have no means of assessing its feasibility or

evaluating its cost. There is no basis for determining that co-firing natural gas generating units with Clean Hydrogen can be implemented by South Carolina utilities on a timeline that would allow CEPCI to reliably meet the generation demands that we expect in the near future.

11. The proposed determination that CCS and Clean Hydrogen co-filing are BSERs and thus must be implemented for any new natural gas projects is flawed and unsupported by engineering and economic analysis. In addition, it will have adverse consequences for the efforts of South Carolina utilities to reduce carbon emissions and will thwart the efforts of South Carolina to participate in transitioning to a cleaner economy with new electric vehicle and battery manufacturing projects. Without the ability to proceed now with planning and permitting new natural gas CC projects, South Carolina utilities will not be able to move forward with plans to retire coal generation units and maintain the reliability of their service. In addition, the uncertainty caused by the proposed new rule will make it difficult for CEPCI and other South Carolina utilities to commit to serving the planned electric vehicle and battery projects that will add significant load growth in the State.

12. CEPCI and its members support efforts to reduce carbon emissions and replace existing coal generation with cleaner resources. The carbon density of CEPCI's generation portfolio has decreased by 40% since 2005. However, CEPCI does not believe that the proposed determination that CCS and Clean Hydrogen co-firing are BSERs will assist in the effort to reduce carbon emissions. The proposed determination is unfounded and premature and should be withdrawn by the EPA.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct to the best of my knowledge and belief.

Robert C. Hochstetler

<u>Aug 3</u>, 2023

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20 Cooperative Way Columbia, S.C. 29210 803-779-4975

August 3, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

RE: Docket ID EPA-HQ-OAR-2023-0072

Dear Administrator Regan:

As President and CEO of Central Electric Power Cooperative Inc., I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

EPA's proposal would undermine my electric cooperative's mission of providing affordable, reliable power to the distribution cooperatives we serve and ultimately the communities and consumer-members the distribution cooperatives serve in South Carolina. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The fundamental expectation of our consumers is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

I am particularly concerned that EPA's proposed regulations:

• Are based on the use of hydrogen and carbon capture and storage (CCS), which are promising technologies but are not yet commercially viable or available in many parts of the country;

### Administrator Michael S. Regan August 3, 2023 Page Two

- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.

I join electric cooperatives nationwide in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to lifethreatening blackouts. It doesn't work for my electric co-op, my community, or our nation's economy.

Sincerely,

C Hochste

Robert C. Hochstetler President and CEO Central Electric Power Cooperative, Inc.





# Coastal Electric Cooperative, Inc.

Your Touchstone Energy<sup>®</sup> Cooperative

2269 Jefferies Hwy. Walterboro, SC 29488

Telephone: (843) 538-5700 FAX: (843) 538-5081

July 27, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As CEO of Coastal Electric Cooperative, I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

Coastal Electric Cooperative serves approximately 12,000 accounts in the Lowcountry of South Carolina. Our territory is rural and somewhat depressed. Slightly more than half, 51% of our member-owners are low income, and already struggling to afford the basic needs due to the increasing cost of everyday necessities.

EPA's proposal would undermine my electric cooperative's mission of providing affordable, reliable power to the communities and consumer-members we serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The families and businesses served by Coastal Electric Cooperative are direct stakeholders and the sole owners of the not-for-profit cooperative. And the fundamental expectation of our consumers is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

Administrator Michael S. Regan July 27, 2023 Page 2

I am particularly concerned that EPA's proposed regulations:

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- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.

I join electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to life-threatening blackouts. It doesn't work for my electric co-op, my community, or our nation's economy.

Mark L. Walling

Mark L. Walling President & Chief Executive Officer

MLW:dgf



July 24, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As president and CEO of The Electric Cooperatives of South Carolina, I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

My organization is a trade association that represents the interests of 18 electric cooperatives in South Carolina and the more than 1.5 million South Carolinians who rely on them for electricity.

EPA's proposal would undermine the electric cooperatives' mission of providing affordable, reliable power to the communities and consumer-members they serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The families and businesses served by our 18 distribution cooperative members are direct stakeholders and the sole owners of their not-for-profit cooperatives. And the fundamental expectation of our consumers is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

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- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.

EPA's proposal could have dire consequences for our consumer-members in rural South Carolina, inflating power bills, increasing the already-high cost of living, and driving away industry and jobs.

I join electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to life-threatening blackouts.



It doesn't work for South Carolina's electric cooperatives, the communities they serve, or our nation's economy.

Sincerely,

2 fh Couch

Mike Couick President and CEO The Electric Cooperatives of South Carolina



July 26, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

#### Administrator Regan:

As President/CEO of Edisto Electric Cooperative, Inc. I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

EPA's proposal would undermine my electric cooperative's mission of providing affordable, reliable power to the communities and consumer-members we serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The families and businesses served by Edisto Electric Cooperative, Inc., are direct stakeholders and the sole owners of the not-for-profit cooperative. And the fundamental expectation of our consumers is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

I am particularly concerned that EPA's proposed regulations:

- Are based on the use of hydrogen and carbon capture and storage (CCS), which are promising technologies but are not yet commercially viable or available in many parts of the country;
- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.

I join electric cooperatives across the country in standing firmly against the EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to lifethreatening blackouts. It does not work for my electric co-op, my community, or our nation's economy.

Sincerely David E. Felke President/CEO





July 21, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As Chief Executive Officer of Fairfield Electric Cooperative, I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

EPA's proposal would undermine my electric cooperative's mission to provide our members with quality energy services at a fair and reasonable price. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants; while making it harder to permit, site, and build critical new power plants. All of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The families and businesses served by Fairfield Electric Cooperative are direct stakeholders and the sole owners of the not-for-profit cooperative. The fundamental expectation of our consumers is that the lights stay on at a cost they can afford. Recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

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- Fail to recognize the massive infrastructure development necessary to support these technologies.

I join electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to life-threatening blackouts. It doesn't work for my electric coop, my community, or our nation's economy.

Sincerely, Fairfield Electric Cooperative

Bruce G. Bacon CEO



# Horry Electric Cooperative, Inc.

2774 Cultra Road • P.O. Box 119 • Conway, S.C. 29528-0119 Telephone (843) 369-2211 • Fax (843) 369-6040



July 25, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As Executive Vice-President and CEO of Horry Electric Cooperative, Inc., I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

Horry Electric is an electric distribution cooperative with 93,000 meters and 77,000 members located in rural areas of Horry County. Thirty-five percent of our members are low income, and our service territory has an average per capita income of \$27,624, according to the EPA's own mapping. Many of our members can't afford the high power bills and cost-of-living increases that would likely come with this regulation.

EPA's proposal would undermine Horry Electric's mission of providing affordable, reliable power to the communities and consumer-members we serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of available power plants while also making it harder to permit, site, and build critical new power plants. All of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives were built by, and belong to, the communities we serve. The families and businesses served by Horry Electric cooperative members are direct stakeholders and the sole owners of our not-for-profit cooperative. The fundamental expectation of our consumers is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

I am particularly concerned that EPA's proposed regulations:

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- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and

A Touchstone Energy® Cooperative

• Fail to recognize the massive infrastructure development necessary to support these technologies.

EPA's proposal could have dire consequences for our consumer-members in rural Horry County, inflating power bills, increasing the already-high cost of living, and driving away industry and jobs.

I join electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to lifethreatening blackouts.

The EPA's proposed regulations do not work for Horry Electric, the South Carolina's electric cooperatives, the communities they serve, or our nation's economy.

Sincerely,

Daviel B. Shelly .

Daniel B. Shelley, III - CPA Executive Vice-President and CEO Horry Electric Cooperative, Inc.



A Touchstone Energy<sup>®</sup> Cooperative Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As **president and CEO of Laurens Electric Cooperative**, I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

EPA's proposal would undermine **the electric cooperatives'** mission of providing affordable, reliable power to the communities and consumer-members we serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The families and businesses served by Laurens Electric Cooperative are direct stakeholders and the sole owners of their not-for-profit cooperatives. And the fundamental expectation of our consumers is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

I am particularly concerned that EPA's proposed regulations:

- Are based on the use of hydrogen and carbon capture and storage (CCS), which are promising technologies but are not yet commercially viable or available in many parts of the country;
- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.

EPA's proposal could have dire consequences for our consumer-members in rural South Carolina, inflating power bills, increasing the already-high cost of living, and driving away industry and jobs.

#### 864.682.3141 1.800.942.3141 864.683.1838 tax



A Touchstone Energy<sup>®</sup> Cooperative **X** in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to lifethreatening blackouts.

It doesn't work for South Carolina's electric cooperatives, the communities they serve, or our nation's economy.

Sincerely, Savid Wasson

J./David Wasson, Jr. President and CEO The Electric Cooperatives of South Carolina



#### 864.682.3141 1.800.942.3141 864.683.1838 fax

PO BOX 700 • 2254 HWY 14 • LAURENS, SC 29360 www.laurenselectric.com OUTAGE: 1.866.9RESTORE



# LITTLE RIVER ELECTRIC COOPERATIVE, INC.

300 Cambridge Street • Post Office Box 220 • Abbeville, South Carolina 29620 Telephone (864) 366-2141 • Fax (864) 366-4524

August 04, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As General Manager and CEO of Little River Electric Cooperative, in Abbeville, South Carolina, I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

We are a distribution cooperative serving the electric needs of over 14,900 member-owners in Abbeville, Anderson, Greenwood, and McCormick counties in South Carolina.

EPA's proposal would undermine our electric cooperatives' mission of providing affordable, reliable power to the communities and member-owners we serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The families and businesses served are direct stakeholders and the sole owners of Little River Electric Cooperative. And the fundamental expectation of our consumers is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

I am particularly concerned that EPA's proposed regulations:

- Are based on the use of hydrogen and carbon capture and storage (CCS), which are promising technologies but are not yet commercially viable or available in many parts of the country;
- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.



Your Touchstone Energy<sup>®</sup> Cooperative The power of human connections<sup>®</sup>



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EPA's proposal could have dire consequences for our member-owners in rural South Carolina, inflating power bills, increasing the already-high cost of living, and driving away industry and jobs. Our area has 38% low income, a per capita household income of \$27,041, and an unemployment rate of 5%. Our member-owners can ill afford a proposal that would cause further burden to our communities.

I join electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to life-threatening blackouts.

It doesn't work for Little River Electric Cooperative, the communities we serve, or our nation's economy.

Sincerely,

Jeff Lewis General Manager and CEO Little River Electric Cooperative, Inc.







July 24, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As **president and CEO of Lynches River Electric Cooperative of South Carolina**, I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

My organization is one of 20 Electric Cooperatives in South Carolina who serves more than 1.5 million Carolinians who rely on us for electricity.

EPA's proposal would undermine **Lynches River Electric Cooperative's** mission of providing affordable, reliable power to the communities and consumer-members **we** serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always-available power plants while also making it harder to permit, site, and build critical new power plants. Moreover, all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The families and businesses served **by our cooperative** are direct stakeholders and the sole owners of **their not-for-profit cooperative**. In addition, the fundamental expectation of our consumers is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly affecting reliability and increasing the risk of blackouts.

I am particularly concerned that EPA's proposed regulations:

• Are based on the use of hydrogen and carbon capture and storage (CCS), which are promising technologies but are not yet commercially viable or available in many parts of the country.

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- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.

### EPA's proposal could have dire consequences for our consumer-members in rural South Carolina, inflating power bills, increasing the already-high cost of living, and driving away industry and jobs.

I joined electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to lifethreatening blackouts.

It does not work for Lynches River Electric Cooperative, or our nation's economy.

Sincerely,

Bu W. Burghton

Brian W Broughton President and CEO Lynches River Electric Cooperative

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Post Office Box 669 Lexington, SC 29071

# Mid-Carolina

August 5, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As President and CEO of Mid-Carolina Electric Cooperative (MCEC), I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose the impractical regulations on new and existing power plants.

# MCEC is a not-for-profit Electric Cooperative that serves nearly 60,000 electric accounts (175,000) citizens in the midlands of South Carolina. These people trust MCEC and rely on us to deliver safe, reliable and affordable power 24/7 to run their homes and businesses.

EPA's proposal would undermine our mission of providing affordable, reliable power to the communities and consumer-members we serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of our South Carolina economy.

MCEC was formed in 1940 to serve our members and the communities we live, work and play in and the fundamental expectation of our members is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

I am particularly concerned that EPA's proposed regulations:

- Are based on the use of hydrogen and carbon capture and storage (CCS), which are promising technologies but are not yet commercially viable or available in many parts of the country;
- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.



www.mcecoop.com

(803) 749-6555 (office) (888) 813-9000



ELECTRIC COOPERATIVE

Post Office Box 669 Lexington, SC 29071

EPA's proposal will have dire consequences for MCEC members by inflating power bills, increasing the already high cost of living, and driving away industry and the high-quality jobs we have worked so hard to bring to rural South Carolina.

I join electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to life-threatening blackouts.

Sincerely, 1) Faulling

B. Robert Paulling

President and CEO



www.mcecoop.com



August 3, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As CEO of New Horizon Electric Cooperative, I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

My organization is a Generation & Transmission cooperative that represents the interests of five distribution electric cooperatives in South Carolina and the more than two hundred thousand South Carolinians who rely on them for electricity.

EPA's proposal would undermine the electric cooperatives' mission of providing affordable, reliable power to the communities and consumer-members they serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The families and businesses served by our 230,000 cooperative members are direct stakeholders and the sole owners of their not-for-profit cooperatives. And the fundamental expectation of our consumers is that their basic necessities of life, dependent upon the electricity we provide, remain available at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to provide for these fundamental and life-dependent needs is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

I am particularly concerned that EPA's proposed regulations:

• Are based on the use of hydrogen and carbon capture and storage (CCS), which are promising technologies but are not yet commercially viable or available in many parts of the country;

864-682-3159 1776 Highway 14 • P.O. Box 1169 • Laurens, SC, 29360 Fax: 864-682-3162

### NewHorizonElectric.com



- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.

EPA's proposal could have dire consequences for the consumer-members of electric cooperatives in rural South Carolina, inflating power bills, increasing the already-high cost of living, and driving away industry and jobs.

I support electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to lifethreatening blackouts. It doesn't work for South Carolina's electric cooperatives, the communities they serve, or our nation's economy.

Sincerely,

Calur w. S.

Robert W. Smith President and CEO New Horizon Electric Cooperative, Inc.

## NewHorizonElectric.com



August 2, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As President and CEO of Newberry Electric Cooperative, I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

EPA's proposal would undermine my electric cooperative's mission of providing affordable, reliable power to the communities and consumer-members we serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The families and businesses served by Newberry Electric Cooperative are direct stakeholders and the sole owners of the not-for-profit cooperative. And the fundamental expectation of our consumers is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

I am particularly concerned that EPA's proposed regulations:

- Are based on the use of hydrogen and carbon capture and storage (CCS), which are promising technologies but are not yet commercially viable or available in many parts of the country;
- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.

I join electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to life-threatening blackouts. It doesn't work for my electric co-op, my community, or our nation's economy.

Sincerely,

G. Keith Avery

G. Keith Avery President and CEO Newberry Electric Cooperative



One Cooperative Way

Hardeeville, SC 29927-5123

843-208-5551

August 1, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As President and CEO of Palmetto Electric Cooperative, I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

### Palmetto Electric Cooperative serves more than 77,000 members in South Carolina's Beaufort, Hampton, and Jasper counties.

With 45% of the citizens living in Hampton and Jasper counties and a significant percentage in Beaufort county being classified by the EPA's Community Report as low-income households, EPA's proposal would undermine Palmetto Electric Cooperative's mission of providing affordable, reliable power to all the communities and members we serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities we serve. The families and businesses served by Palmetto Electric are direct stakeholders and the sole owners of the not-for-profit cooperative. The fundamental expectation of our consumers is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.



I am particularly concerned that EPA's proposed regulations:

- Are based on the use of hydrogen and carbon capture and storage (CCS), which are promising technologies but are not yet commercially viable or available in many parts of the country;
- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.

# EPA's proposal could have dire consequences for our members, inflating power bills, increasing the already-high cost of living, and driving away industry and jobs.

I join electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to life-threatening blackouts.

# It doesn't work for Palmetto Electric Cooperative, our members, the communities we serve, or our nation's economy.

Sincerely,

A. Berl Davis, Jr. President and CEO





424 Sumter Highway • PO Box 548 • Kingstree SC, 29556 • (843) 355-6187 • www.santee.org

August 2, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As President and Chief Executive Officer of Santee Electric Cooperative, I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

EPA's proposal would undermine my electric cooperative's mission of providing affordable, reliable power to the communities and consumer-members we serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

SEC serves a large portion of the land mass of Clarendon, Florence, Georgetown, and Williamsburg Counties in South Carolina. The areas and the citizens we serve are sparsely populated and economically challenged. Electric cooperatives are built by, and belong to, the communities they serve. The more than 45,000 families and businesses served by Santee Electric are direct stakeholders and the sole owners of the not-for-profit cooperative. And the fundamental expectation of our consumers is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

I am particularly concerned that EPA's proposed regulations:

- Are based on the use of hydrogen and carbon capture and storage (CCS), which are promising technologies but are not yet commercially viable or available in many parts of the country;
- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.

This past Christmas Eve, I joined local utility executives across South Carolina and also a major portion of the eastern United States in "waiting for our turn." Rolling blackouts were happening all around us. Although my cooperative dodged the bullet this year, it was a very near thing. I found myself on Christmas morning doing something I never thought I would have to do … reaching out to our consumers and pleading with them to let their homes be colder than they would like and to not cook on Christmas morning. If we keep closing existing baseload generation … and making it harder to build new, we will place the United States in a terrible position.

I join electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to lifethreatening blackouts. It doesn't work for my electric co-op, my community, or our nation's economy.

Sincerely,

Robert G. Ardis III, P.E. President and CEO

July 21, 2023



Administrator Michael S. Regan Your Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

As CEO of Tri-County Electric Cooperative, I write in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose unworkable regulations on new and existing power plants.

EPA's proposal would undermine my electric cooperative's mission of providing affordable, reliable power to the communities and consumer-members we serve. This proposal would require the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe. This will force the premature closure of always available power plants while also making it harder to permit, site, and build critical new power plants. And all of this will occur while the demand for electricity skyrockets as we electrify more of the American economy.

Electric cooperatives are built by, and belong to, the communities they serve. The families and businesses served by Tri-County Electric Cooperative are direct stakeholders and the sole owners of the not-for-profit cooperative. And the fundamental expectation of our consumers is that the lights stay on at a cost they can afford. However, recent threats to the grid serve as a dire warning that America's ability to keep the lights on is in jeopardy. According to the North American Electric Reliability Corporation, the "disorderly" retirement of existing generating assets across the country, and insufficient replacement of that power capacity, is directly impacting reliability and increasing the risk of blackouts.

I am particularly concerned that EPA's proposed regulations:

- Are based on the use of hydrogen and carbon capture and storage (CCS), which are promising technologies but are not yet commercially viable or available in many parts of the country;
- Require emission reductions on unworkable timelines and based on speculative assumptions that hydrogen and CCS will somehow be economical and widely available at some point years in the future; and
- Fail to recognize the massive infrastructure development necessary to support these technologies.

I join electric cooperatives across the country in standing firmly against EPA's proposal. It would undermine decades of work to reliably keep the lights on across the nation and could lead to life-threatening blackouts. It doesn't work for my electric co-op, my community, or our nation's economy.

Sincerely,

Chad T. burder

Chad T. Lowder CEO

P.O. Box 217 / 6473 Old State Road • St. Matthews, SC 29135-0217 803-874-1215 / Fax 803-874-3888 www.tri-countyelectric.net



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July 28, 2023

Administrator Michael S. Regan Attn: Docket ID EPA-HQ-OAR-2023-0072 U.S. Environmental Protection Agency 1200 Pennsylvania Avenue, NW Washington, DC 20460

Administrator Regan:

I write to you in opposition to the Environmental Protection Agency's (EPA) recent proposal to impose impractical regulations on new and existing power plants on behalf of the concerned members of York Electric Cooperative, Inc. (YEC).

As President and CEO of YEC, and as a member of this community for more than 30 years, the financial hardship EPA's proposal would create for our member-owners and greater communities would be catastrophic, along with the reliable, safe energy our members expect.

Our cooperative, made up of more than 69,000 members, focuses our attention on improving the quality of life for members and always looking out for their best interest. I cannot, nor will I, quiet my voice on such a service-altering topic such as EPA's proposal that would cause detriment to the affordability and reliability of our electric delivery, along with the lives of those we serve. EPA's proposal negates our core mission at YEC. Requiring unrealistic expectations of the use of carbon capture and hydrogen technologies that are not yet commercially viable on an unreasonably expedited timeframe puts our promise of keeping the lights on at a price our members can afford at risk. Within the EJScreen Community Report provided by EPA, some glaring numbers of at-risk citizens stood out to me:

- More than 20% of our members are below poverty level.
- 26% of the people in the communities we serve are people of color.
- Our aging population makes up 17% of our members.

Passing this proposal could create an undo strain on these vulnerable groups of community members because of the subsequent rate hikes that would follow. Creating an additional energy burden is unjust and something YEC will not support.

YORK ELECTRIC COOPERATIVE, INC. P. O. BOX 150 | 1385 ALEXANDER LOVE HWY. EAST YORK, SC 29745 WWW.YORKELECTRIC.NET We were built by our community, we belong to our community and our voice in opposition to this proposal is for our community. It isn't right for YEC, our state or our country.

Sincerely,

Paul Basta

Paul Basha President and CEO York Electric Cooperative

YORK ELECTRIC COOPERATIVE, INC. P. O. BOX 150 | 1385 ALEXANDER LOVE HWY. EAST YORK, SC 29745 WWW.YORKELECTRIC.NET