

IN THE  
SUPREME COURT OF THE UNITED STATES

---

STATE OF WEST VIRGINIA, *et al.*,  
*Applicants*,  
v.  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al.*,  
*Respondents*.

---

---

To the Honorable John G. Roberts, Jr.,  
Chief Justice of the United States and  
Circuit Justice for the District of Columbia Circuit

---

---

**RESPONSE OF THE  
LOUISIANA PUBLIC SERVICE COMMISSION, INTERVENOR,  
IN SUPPORT OF STAY TO POINT OUT THE IMMEDIATE HARMFUL  
EFFECT ON NATURAL GAS ELECTRIC GENERATION AND GRID  
RELIABILITY OF NEW ENVIRONMENTAL PROTECTION AGENCY RULE**

---

---

Kathryn Bowman  
Executive Counsel  
Louisiana Public Service Commission  
Galvez Building - 12th Floor  
602 N. Fifth Street  
Baton Rouge, Louisiana 70802

Michael R. Fontham  
*Counsel of Record*  
Dana M. Shelton  
Justin A. Swaim  
Of  
STONE PIGMAN WALTHER  
WITTMANN L.L.C.  
909 Poydras Street, Suite 3150  
New Orleans, Louisiana 70112  
Telephone: (504) 581-3200  
MFontham@stonepigman.com

*Counsel for Intervenor, the Louisiana Public Service Commission,  
in Support of Stay*

Additional Captions Listed on Following Page

NATIONAL RURAL ELECTRIC COOPERATIVE,  
*Applicant,*  
v.  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al.,*  
*Respondents.*

---

---

NATIONAL MINING ASSOCIATION, *et al.,*  
*Applicants,*  
v.  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al.,*  
*Respondents.*

---

---

NACCO NATURAL RESOURCES CORPORATION,  
*Applicant,*  
v.  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al.,*  
*Respondents.*

---

---

ELECTRIC GENERATORS FOR A SENSIBLE TRANSITION,  
*Applicant,*  
v.  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al.,*  
*Respondents.*

---

---

EDISON ELECTRIC INSTITUTE, *et al.,*  
*Applicants,*  
v.  
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, *et al.,*  
*Respondents.*

**TABLE OF CONTENTS**

	<b>Page</b>
<b>TABLE OF CONTENTS</b> .....	<b>i</b>
<b>TABLE OF AUTHORITIES</b> .....	<b>ii</b>
<b>INTEREST OF INTERVENOR IN SUPPORT OF STAY</b> .....	<b>1</b>
<b>SUMMARY OF ARGUMENT</b> .....	<b>1</b>
<b>ARGUMENT</b> .....	<b>3</b>
<b>A. The New EPA Rule Will Immediately Begin Undermining the Reliability of the Electric Grid</b> .....	<b>3</b>
<b>B. Even if Generation from New Natural Gas Resources Could Quickly Be Shown to be Economic, Compliance by 2032 as a Practical Matter Is Not Feasible</b> .....	<b>7</b>
<b>C. Natural Gas Electric Generation Is Reliable, Cost-Effective and Has Been Extremely Effective in Reducing CO2 Emissions</b> .....	<b>10</b>
<b>CONCLUSION</b> .....	<b>14</b>

## TABLE OF AUTHORITIES

Page(s)

### Administrative Decisions

*New Source Performance Standards for Greenhouse Gas Emissions*,  
89 Fed. Reg. 39,798 (May 9, 2024) ..... 1, 5, 6, 7, 8, 9

### Statutes and Regulations

La. Const. Art. IV, § 21 ..... 1

### Other Authorities

*2023 Long-Term Reliability Assessment*, NERC (Dec. 2023),  
[https://www.nerc.com/pa/RAPA/ra/Reliability%20assessments%20DL/NERC\\_LTRA\\_2023.pdf](https://www.nerc.com/pa/RAPA/ra/Reliability%20assessments%20DL/NERC_LTRA_2023.pdf)..... 2

Glen McGrath, *Electric power sector CO<sub>2</sub> emissions drop as generation mix shifts from coal to natural gas*, U.S. ENERGY INFO. ADMIN. (June 9, 2021), <https://www.eia.gov/todayinenergy/detail.php?id=48296> ..... 11, 12, 13

*Natural Gas Explained: Natural Gas and the Environment*, U.S. ENERGY INFO. ADMIN., <https://www.eia.gov/energyexplained/natural-gas/natural-gas-and-the-environment.php> (last updated Apr. 16, 2024) ..... 10, 13

*Sources of Greenhouse Gas Emissions*, EPA, <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#t1fn3> (last updated July 8, 2024)..... 10, 13

*Table 3.1.A. Net Generation by Energy Source: Total (All Sectors), 2012-2022*, U.S. ENERGY INFO. ADMIN. (Oct. 19, 2023), [https://www.eia.gov/electricity/annual/html/epa\\_03\\_02\\_a.html](https://www.eia.gov/electricity/annual/html/epa_03_02_a.html) ..... 5

*Table 3.2.A. Net Generation by Energy Source: Electric Utilities, 2012-2022*, U.S. ENERGY INFO. ADMIN. (Oct. 19, 2023), [https://www.eia.gov/electricity/annual/html/epa\\_03\\_02\\_a.html](https://www.eia.gov/electricity/annual/html/epa_03_02_a.html) ..... 5, 9

## INTEREST OF THE INTERVENOR IN SUPPORT OF STAY

The Louisiana Public Service Commission ("Louisiana Commission") is an agency of the State of Louisiana with plenary power to regulate the rates and service of public utilities in the state. La. Const. Art. IV, § 21. The Louisiana Commission is particularly concerned with the **immediate** harmful impact of the Environmental Protection Agency's new carbon-capture rule ("Rule") on new, highly efficient gas-fired base-load generating units and the reliability of the national electric grid. These units until now have provided the most economical generation sources available to meet steadily increasing electric demand. The Louisiana Commission is concerned that the new Rule will vastly increase the costs of these projects, and dramatically change the obstacles to planning, siting, construction and use of these resources, **beginning now**. The Louisiana Commission intervened in the proceeding in the Court of Appeals. The Louisiana Commission supports the application for a stay and the reasons cited in support of it, but deems it important to emphasize that the harmful effect on natural gas generation and the grid cannot be avoided absent a stay.

## SUMMARY OF ARGUMENT

The West Virginia application emphasizes the impact of the EPA's new Rule on coal-fired generation, but there is a detrimental effect on natural gas-fired generation that is immediate and potentially more damaging to consumers and the electric grid. *New Source Performance Standards for Greenhouse Gas Emissions*, 89 Fed. Reg. 39,798 (May 9, 2024). The grid and consumers depend heavily on natural-gas generation and the delays and obstacles that the Rule imposes on new base load

units will raise costs astronomically and undermine grid reliability. The Rule depends on unduly favorable cost projections, fairy-tale predictions concerning the feasibility of compliance in seven years, and indifference to maintaining electric reliability.

New base load natural gas units are needed to supply the nation's electric needs. Natural gas generation is more economical than other types and much more reliable than wind and solar. Indeed, utilities need natural gas generation to *back up* the intermittent supply from wind and solar. With all the emphasis on developing these "clean resources" in the past decade, natural gas electric generation has increased significantly and must steadily increase in coming years to fuel the nation's economy.

The North American Reliability Corporation's 2023 Long-Term Reliability Assessment shows inadequate reserve margins within a few years even if all currently planned resources are added. *2023 Long-Term Reliability Assessment*, NERC (Dec. 2023), [https://www.nerc.com/pa/RAPA/ra/Reliability%20assessments%20DL/NERC\\_LTRA\\_2023.pdf](https://www.nerc.com/pa/RAPA/ra/Reliability%20assessments%20DL/NERC_LTRA_2023.pdf). For example, in the Midwestern Interconnection ("MISO") region, the report predicts there will be a reserve shortfall in 2028 even if 12,000 megawatts of capacity are added, mostly natural gas generation. *Id.* at 17, 26. Construction of new generation needs to start **now**, not in a few years.

The new Rule imposes insurmountable obstacles to increasing the supply of natural gas-fired generation. It requires new baseload natural gas units to meet 90 percent carbon capture by January 1, 2032, seven years from now. That rests

on the hope that carbon capture technology capable of meeting the 90 percent standard in large units will be developed immediately, followed by the siting of compliant generators, the siting and construction of new transportation pipelines for captured carbon dioxide, and the siting and construction of underground carbon sequestration facilities. The EPA rules are premised on a fanciful flight of fiction -- that the requirements can be met and that electric supply will remain sufficient while utilities undertake these massive assignments.

### **ARGUMENT**

The new EPA Rule will have an immediate and potentially devastating effect on electric generating supply in the absence of a stay. The Rule requires utilities planning new base load gas units to meet three requirements within seven years – achieving 90 percent carbon capture, planning and construction of carbon dioxide pipelines to potentially distant sequestration facilities, and finding or constructing those facilities at feasible locations. The Rule and its timeline are entirely based on fantastic predictions, not proof.

#### **A. The New EPA Rule Will Immediately Begin Undermining the Reliability of the Electric Grid.**

What is EPA requiring utilities to accomplish and regulators to approve? First, the utility must identify a carbon capture technology that is proven to accomplish 90 percent or more carbon capture from the flue stream of the gas turbine. The EPA provides a few examples of success in achieving that level at coal-fired facilities, but none at natural gas facilities of the size currently being constructed by utilities. Since CO<sub>2</sub> is less dense from a natural gas unit than a coal unit, carbon

capture is more difficult. *Id.* at 39,925. EPA's prime example of success involved carbon capture from a "40 MWe slip stream," less than one tenth the amount produced by modern combined cycle gas generators. *Id.* at 39,926. EPA also relied on *planned* facilities that it predicts can accomplish 90 percent carbon capture, if things go according to plan, to support its hope that compliance can be accomplished.

Second, the utility must identify, or perhaps construct, a CO2 sequestration facility that can receive the CO2 captured by the new carbon capture technology. That requires a site where the geological makeup can accommodate injections and safely contain large amounts of compressed carbon dioxide. Given the impact of the Rule on coal and base load gas-fired generators, new sequestration facilities will be required and they will have a cost.

The utility cannot choose a viable CO2 sequestration site unless it has the ability to transport the CO2 to that site. Transportation is accomplished through pipelines and those pipelines will be entirely new, although EPA predicts that some utilities may only need new pipelines to transport the CO2 to and from existing trunkline pipelines. Alternatively, the EPA says that utilities could site the generators near potential sequestration sites and transmit the electricity over long distances to where the load needs it. But EPA does not evaluate the time, cost and difficulty of obtaining permits to site the generators and new high voltage electric transmission lines to serve a utility far away.

The net natural gas generation in the United States for all generators has increased at an average rate of 56.3 million megawatt-hours ("MWH") per year



in 2013-2022, about five percent per year. *Table 3.1.A. Net Generation by Energy Source: Total (All Sectors), 2012-2022*, U.S. ENERGY INFO. ADMIN. (Oct. 19, 2023), [https://www.eia.gov/electricity/annual/html/epa\\_03\\_02\\_a.html](https://www.eia.gov/electricity/annual/html/epa_03_02_a.html). For electric utilities the pace of increase has been 33 million MWH per year. *Table 3.2.A. Net Generation by Energy Source: Electric Utilities, 2012-2022*, U.S. ENERGY INFO. ADMIN. (Oct. 19, 2023), [https://www.eia.gov/electricity/annual/html/epa\\_03\\_02\\_a.html](https://www.eia.gov/electricity/annual/html/epa_03_02_a.html). That electricity was needed, and more is needed every year. Utilities must plan to serve the future load; there is no more devastating impact on consumers and the economy than a blackout of the grid. Utilities must construct generators in time to meet the load.

The 90 percent carbon capture Rule has three elements – 90 percent capture, transportation through pipelines to a carbon sequestration facility, and availability of a sequestration facility. Additionally, the Rule requires "highly efficient" electric generators. 89 Fed. Reg. at 39,903. EPA acknowledges that each of the three carbon capture elements will entail increased costs and will require time to implement. Its prediction that compliance can be achieved within seven years is based on speculation.

The planning process involves at least two elements – feasibility and cost. Utilities must evaluate alternative energy sources to fulfill their duty of prudent planning. They must make economic comparisons given all the considerations that will affect the cost to the consumer and show their regulators that the choice is

prudent. But the Rule's compliance date requires an immediate upheaval and delay of the planning process.

Take, for example, a utility that is currently planning a large natural gas unit to go online to meet the expected demand in three or four years. Given EPA's requirements, the utility must scrap existing plans, determine the feasibility of adding compliant carbon capture equipment, find a sequestration site, and determine how to transport the CO<sub>2</sub> to be sequestered. Then it must perform an economic evaluation of the natural gas generation versus alternatives. Even using the EPA's dreamy projections, the cost impact on natural gas generation will be enormous.

EPA states that adding carbon capture equipment more than doubles the capital cost of a new natural gas base load generator – increasing the cost by 115 percent. 89 Fed. Reg. 39,932. It asserts that the cost of operating the unit will go up by 35 percent. *Id.* At the same time, the equipment will **decrease** the optimal capacity of the new unit by 11 percent, so that fewer MWH can be generated at higher cost. EPA estimates that the levelized cost of electricity from the unit over time from the carbon capture technology alone will increase by \$27 per MWH. *Id.* That is about the cost of energy purchase costs in the MISO Regional Transmission Organization footprint in the last few years. And that is just for the carbon capture equipment. EPA does not provide estimates of the construction costs of new pipelines and new sequestration facilities. *Id.* at 39,933-34.

EPA provides a number of hopeful possibilities for the future cost of capturing, transporting and sequestering carbon dioxide from natural gas. They are

not reassuring to electric planners, who must plan facilities based on more than hope. Nor should they be reassuring to regulators or the Court.

The Rule requires shelving plans for new base load gas-fired generating units until studies can be performed of the feasibility and cost of the gas-fired versus alternative resources. Most likely, solar and wind resources will appear more economic, but it is well known that they are unreliable and must be backed up. Utilities will rely on purchases from the grid to meet increasing load, even though reliability organizations are warning of impending shortfalls. Only a stay will ensure a continuing supply of reliable energy for our country, because utilities must keep constructing natural gas generators to serve customers.

**B. Even if Generation from New Natural Gas Resources Could Quickly Be Shown to be Economic, Compliance by 2032 as a Practical Matter Is Not Feasible.**

It is fantasy to believe that the installation of carbon capture equipment on new facilities, identification, siting and permitting of new pipelines to transport compressed carbon dioxide, and the permitting and construction of new sequestration facilities can reasonably be accomplished within seven years. Carbon capture at 90 percent on base load natural gas units of substantial size has not been proven. Perhaps it will be, but that will take time. After that, either the permitting or siting process could itself take seven years or more.

EPA provides an example in which an entity achieved 85-95 percent carbon capture from "the flue gas of a 40 MW slip stream" at a "386 MW" cogeneration facility. 89 Fed. Reg. at 39,926. That does not *prove* that 90 percent capture can be achieved on a unit with a 600, 700 or 800 MW flue stream. The EPA says that there

are other examples of actual or planned carbon capture on flue gas from small MW streams, which does not prove its point. *Id.* A prudent utility would have to wait for more proof, because constructing a hugely expensive but non-compliant natural gas generator may well be found imprudent.

Utilities will be required to identify existing sequestration facilities with additional capacity or construct new ones. If natural gas generation remains economic despite the EPA-imposed costs, new facilities will surely be required. That entails finding locations with geological formations capable of holding compressed CO<sub>2</sub> in large quantities, acquiring the property, obtaining permits, and constructing the facilities. Pipeline construction would have to await at least the land acquisition and permitting processes.

After obtaining sequestration rights, the new rule requires that utilities plan carbon dioxide pipelines, obtain rights of way, obtain licenses at the federal and state levels, and construct the pipelines to the sequestration facilities or find another party to accomplish these tasks within a few years. Perhaps that can be accomplished if circumstances are ideal, but they are not likely to be ideal on a large scale.

Leakage from CO<sub>2</sub> pipelines can present health issues, as EPA acknowledges. 89 Fed. Reg. at 39,861 (Mississippi leak required medical treatment and evacuation). Landowners and environmental groups may oppose the routing and construction of new pipelines in many areas, which would bring litigation delays and may require rerouting pipelines. These obstacles inevitably entail delay.

Until the utility achieves certainty that CO2 transportation and sequestration can be achieved economically, it cannot begin the regulatory process for siting the new generator. In many states, like Louisiana, utilities must show that the project is a reasonable choice to meet consumer demand. Those proceedings take time, and the difficulty of forecasting costs for all the new facilities will make the process more complex and, potentially, litigious.

The time-consuming difficulties were not considered by EPA, except to the extent it promised to speed up its own permitting process. 89 Fed. Reg. at 39,870. EPA determined that seven years is sufficient time to accomplish the actions required under the Rule, based on hazy and unproven assumptions. *Id.* at 39,862 (pipeline construction); 39,875 (coal capture), 39,938-39 (base load natural gas). That is much later than when the generation is needed.

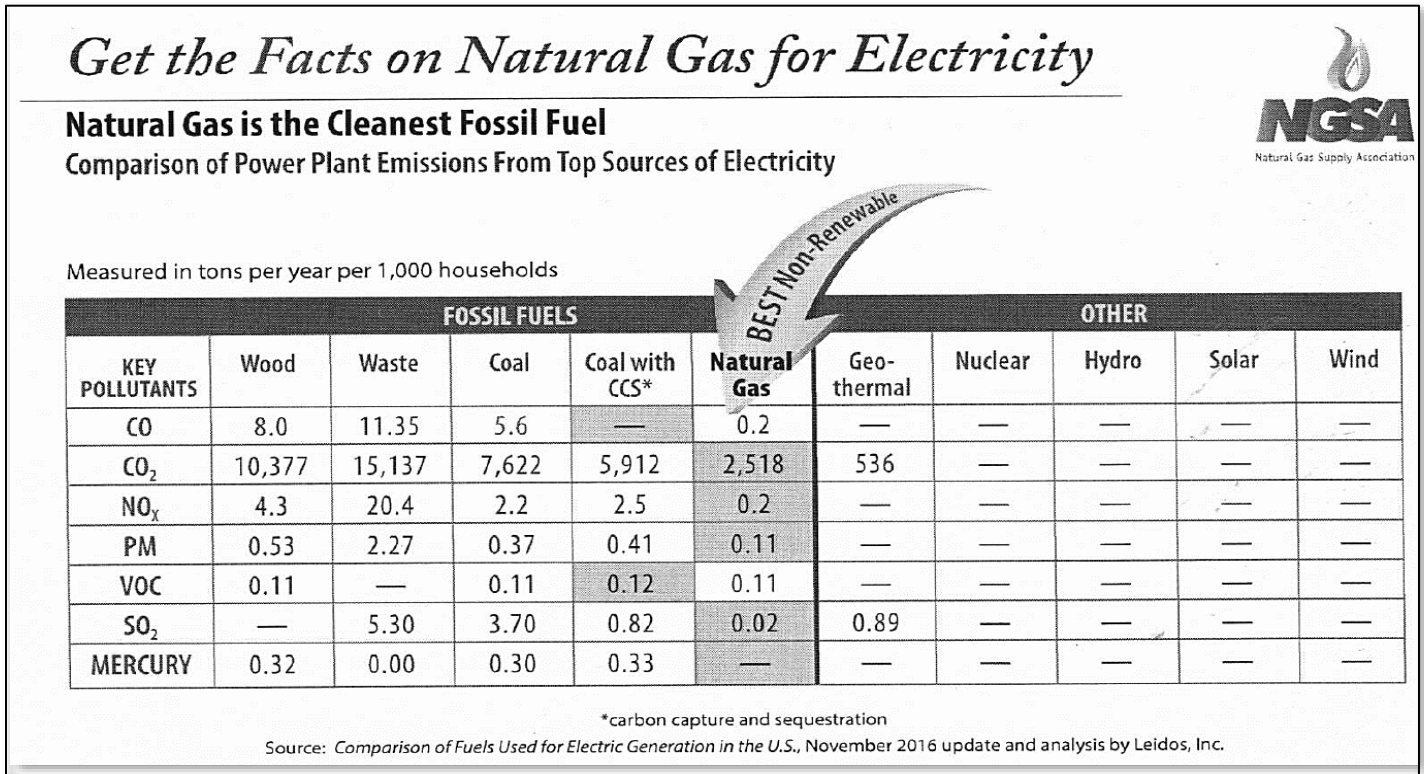
The EPA appears to assume that all of these activities can occur simultaneously, beginning now. But first, feasibility and economic benefit must be established. The EPA does not appear to care about the threat its Rule presents to the U.S. electric grid. At the rate of growth in the need for economic natural gas generation, the equivalent of 40 additional operating 600 MW natural gas units will be needed within four years. *Table 3.2.A. Net Generation by Energy Source: Electric Utilities, 2012-2022*, U.S. ENERGY INFO. ADMIN. (Oct. 19, 2023), [https://www.eia.gov/electricity/annual/html/epa\\_03\\_02\\_a.html](https://www.eia.gov/electricity/annual/html/epa_03_02_a.html). (average growth 33 million MWH per year 2013-22). To accomplish that increase, the process needs to *start now*. But it cannot given the new Rule.

**C. Natural Gas Electric Generation Is Reliable, Cost-Effective and Has Been Extremely Effective in Reducing CO2 Emissions.**

EPA's Rule obviously aims to hinder or effectively ban base-load natural gas generation as a significant source of electricity for the nation. This effort is counter-productive, given the enormous reductions in CO2 emissions since the development of efficient combined-cycle gas generation. The EPA seeks to prohibit the most beneficial generating resource that can also ensure reliability.

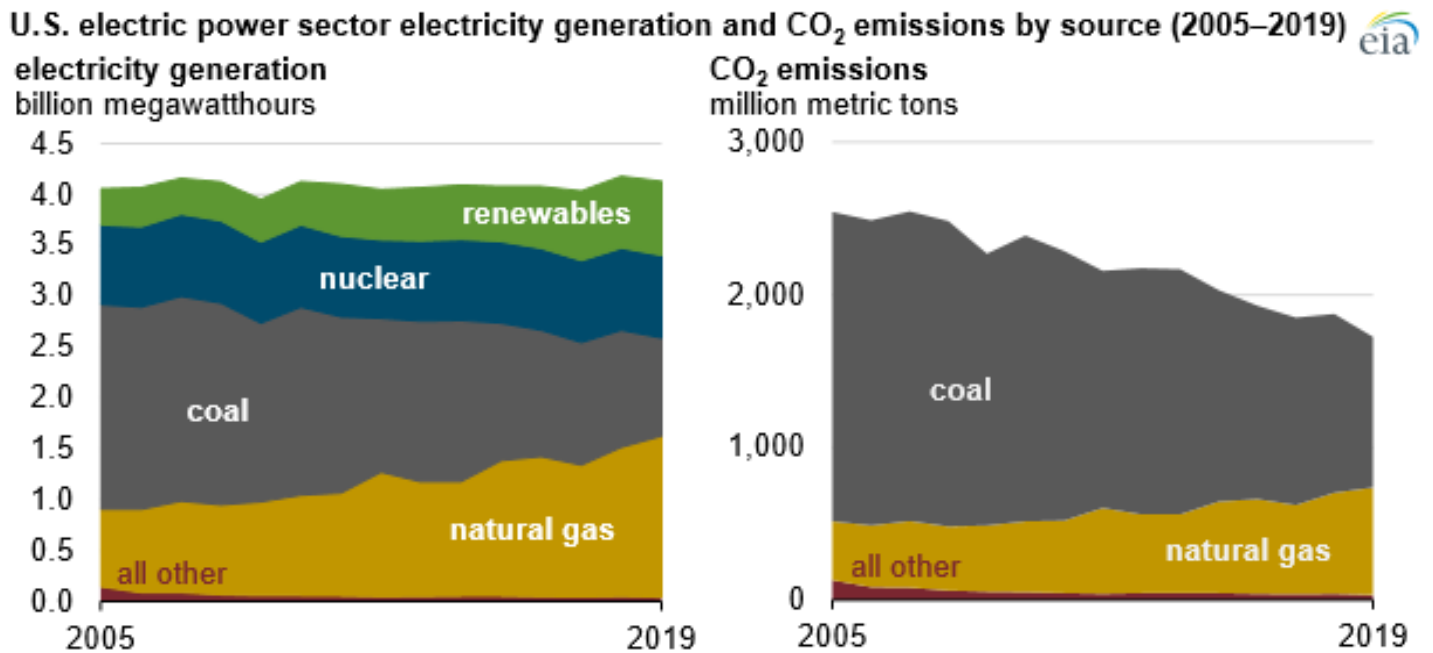
The EPA reports that approximately 60 percent of U.S. electricity is produced by the burning of fossil fuels, namely coal and natural gas. *Sources of Greenhouse Gas Emissions*, EPA, <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#t1fn3> (last updated July 8, 2024). Coal combustion is more "carbon-intensive" than burning natural gas to produce electricity. *Id.* According to the Energy Information Administration ("EIA"), "burning natural gas for energy results in fewer emissions of nearly all types of air pollutants and carbon dioxide (CO<sub>2</sub>) than burning coal or petroleum products to produce an equal amount of energy." *Natural Gas Explained: Natural Gas and the Environment*, U.S. ENERGY INFO. ADMIN., <https://www.eia.gov/energyexplained/natural-gas/natural-gas-and-the-environment.php> (last updated Apr. 16, 2024). In fact, about one hundred seventeen pounds of CO<sub>2</sub> emissions are produced per million British thermal units ("MMBtu") equivalent of natural gas. When compared with the more than two hundred pounds of CO<sub>2</sub> per MMBtu of coal and more than one hundred sixty pounds per MMBtu of distillate fuel oil, the benefits of natural gas are undeniable. *Id.*

The Natural Gas Supply Association published the following chart comparing emission rates of harmful pollutants produced by natural gas with other fossil fuels. The chart demonstrates that natural gas is far and away the lowest-emitting fossil fuel source. Renewable resources are cleaner with respect to carbon dioxide, but have other environmental concerns.



Over the last sixteen years, there has been a shift away from coal towards natural gas, as the benefits of natural gas have become more evident. From 1990 to 2018, the EPA found that methane emissions declined by twenty-three percent. Robin Rorick, Vice President of Midstream, Comments regarding the Nov. 16, 2021, Technical Conference, FERC Docket No. PL21-3-000 (Jan. 7, 2022). In 2019, the U.S. electric power sector produced 1,724 million metric tons ("MMmt") of CO<sub>2</sub>, down from 2,544 MMmt produced in 2005. Glen McGrath, *Electric power sector CO<sub>2</sub>*

*emissions drop as generation mix shifts from coal to natural gas*, U.S. ENERGY INFO. ADMIN. (June 9, 2021), <https://www.eia.gov/todayinenergy/detail.php?id=48296>. The chart below illustrates the correlation between increased natural gas production and lower CO<sub>2</sub> emissions occurring between 2005 and 2019.



In 2019, coal-fired generation produced 2,257 pounds of CO<sub>2</sub> per megawatt hour ("MWh") of electricity, whereas natural gas-fired generation produced only 976 pounds of CO<sub>2</sub> per MWh. *Id.* Although the reduction of CO<sub>2</sub> emissions results from both the shift from coal to natural gas and an increased use of renewables, the EIA reports that the transition to natural gas has had a greater impact on CO<sub>2</sub> emissions than the increased use of renewables. *Id.* It states:

Of the 819 million metric ton decline in CO<sub>2</sub> emissions from 2005 to 2019, approximately 248 million metric tons (30%) of that decline is attributable to the increase in renewable



generation. In comparison, almost 532 million metric tons (65%) of the decline in CO<sub>2</sub> emissions is attributable to the shift from coal-fired to natural gas-fired electricity generation. Decreased petroleum-fired generation largely influenced the remaining decrease in CO<sub>2</sub> emissions.

*Id.*

In addition to reduced CO<sub>2</sub> emissions, advances in drilling and "natural gas recovery technologies" have reduced the amount of land disrupted for the development of oil and gas resources. *Natural Gas Explained: Natural Gas and the Environment*, U.S. ENERGY INFO. ADMIN., <https://www.eia.gov/energyexplained/natural-gas/natural-gas-and-the-environment.php> (last updated Apr. 16, 2024). Moreover, "[h]orizontal and directional drilling techniques" now make it possible to produce more natural gas from one well than ever before, thereby reducing the number of wells needed. *Id.*

In 2022, coal accounted for fifty-five percent of CO<sub>2</sub> emissions, but only supported twenty percent of the electricity generated in the United States. *Sources of Greenhouse Gas Emissions*, EPA, <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions#t1fn3> (last updated July 8, 2024). Conversely, natural gas fueled thirty-nine percent of the electricity produced in 2022. *Id.* Over the last thirty years, greenhouse gas emissions have fallen by approximately fifteen percent due to the use of lower-emitting fuel sources, such as natural gas. *Id.*

What this data reveals is that the proposed policy contradicts the alleged purpose behind its enactment and may produce the opposite effect. Given the U.S. dependence on energy, generation using natural gas has been a **GOOD THING**. Consumers will still need electricity and utilities will still need to provide cost-

effective generation. In the short term, the only remaining option is to construct smaller peaking natural gas generators, which are much less efficient. EPA apparently exempted those generators because they are needed to back up renewables. There is no reasonable basis to conclude that the environmental benefit from the Rule, if any, justifies undermining the U.S. electric grid.

### CONCLUSION

EPA's new Rule presents an immediate threat to new generation resources and the stability of the nation's electric grid. The Court should stay the Rule to avoid these harmful consequences.

Date: August 19, 2024

Respectfully submitted,

Kathryn Bowman  
Executive Counsel  
Louisiana Public Service Commission  
Galvez Building - 12th Floor  
602 N. Fifth Street  
Baton Rouge, Louisiana 70802

/s/ Michael R. Fontham  
Michael R. Fontham  
*Counsel of Record*  
Dana M. Shelton  
Justin A. Swaim  
Of  
STONE PIGMAN WALTHER  
WITTMANN L.L.C.  
909 Poydras Street, Suite 3150  
New Orleans, Louisiana 70112  
Telephone: (504) 581-3200  
MFontham@stonepigman.com

*Counsel for Intervenor, the Louisiana Public Service Commission,  
in Support of Stay*