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EPA Docket Center
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Attn: Docket ID No. EPA-HQ-OAR-2013-0495
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Re: Proposed Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units – 79 Fed. Reg. 1429 (January 8, 2014)
Docket ID No.: EPA-HQ-OAR-2013-0495

Dear Administrator McCarthy:

On April 13, 2012, the U.S. Environmental Protection Agency (EPA) proposed a new source performance standard under the Clean Air Act for emissions of carbon dioxide for new affected fossil fuel-fired electric utility generating units (EGUs). According to EPA, more than 2.5 million comments were received on the proposed rule.¹ After consideration of information provided in those comments, the EPA decided to withdraw its April 13, 2012 proposal.

On September 20, 2013, EPA re-proposed new standards of performance for emissions of carbon dioxide for new affected fossil fuel-fired EGUs. The proposed rule, “*Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electric Utility Generating Units*,” (“GHG standard” or “carbon pollution standard”) was published in the Federal Register on January 8, 2014 (79 FR 1429), with public comments due by March 10, 2014. The Alabama Public Service Commission (APSC) appreciates the opportunity to file comments in this proceeding.

The APSC regulates essential utility services throughout many parts of Alabama, including the electric utility service provided by Alabama Power Company. As a regulatory body, we are responsible for balancing the interests of our regulated utilities with those of the consuming public, with the ultimate goal being the provision of reliable service at rates that are fair and reasonable. As part of this balance, we also consider the fact that our regulated electric utility is under a legal duty to serve its retail electric customers. To that end, the APSC must necessarily consider the impacts of

¹ The Alabama Public Service Commission filed comments in this proceeding on June 25, 2012.

the standards being proposed, including how those standards may influence future pollution control investments, plant retirements, investments in new generation, system reliability, customer rates and other actions undertaken by the utility subject to our jurisdiction.²

The issues we raise are critically important to the citizens we serve and more than justify careful consideration of the proposed rule. Specifically, the APSC's comments are focused on: 1) cost impacts, 2) economic considerations, 3) carbon capture and storage technology, and 4) the connection between greenhouse gases, climate change and public health and welfare.

DISCUSSION

1. Cost Impacts

A fundamental goal of the APSC is to strike a reasonable balance between affordable and reliable electricity for Alabama consumers. Historically, the state's retail electricity suppliers have achieved these goals, in large part, by maintaining a balanced mix of generation resources. These resources include hydro, coal, natural gas, nuclear, and renewables. Additionally, the state's electric providers have also implemented demand response measures, such as energy efficiency and conservation, when such measures have proven to be cost-effective.

In our view, the proposed rule effectively bans traditional coal-fired generating technology as a future supply option, despite the fact that this base-load technology has provided reliable, cost-effective electricity to consumers in Alabama, and nationally, for many decades. In so doing, the proposed rule stands to weaken the country's generation portfolio and significantly impact the future cost of electricity. Just as important, the proposed standard may impact the reliability of our nation's electric system and, as a result, customers will be forced to pay more for a product that is less reliable.

The EPA defends the proposed rule, in part, by claiming that utilities' long-term resource plans do not call for the construction of any new coal-fired generation in the coming decade and therefore, any cost concerns surrounding the proposed rule will not be realized. If the assumption that little coal-fired generation will be built in the future holds true, the APSC questions the need to issue the rule at all.

Fuel diversity unquestionably contributes to the production of low-cost, domestic energy, which in turn promotes affordable electricity rates, energy independence and security. By constraining the fuel options available to electric suppliers, the proposed rule imposes an unnecessary cost risk by forcing electric suppliers to rely predominantly on natural gas as the fuel choice for new generation resources. This risk is particularly acute given the historic price volatility of natural gas.³

² For this same reason, the National Association of Regulatory Utility Commissioners ("NARUC") has urged state utility regulators to engage with EPA on this issue. See *Resolution on the Role of State Regulatory Policies in the Development of Federal Environmental Regulations*, NARUC Board of Directors, Feb. 16, 2011.

³ Henry Hub natural gas spot prices from 1997 through 2013. <http://www.eia.gov/dnav/ng/hist/rngwhhdm.htm>

A recent example is the cold weather events that struck much of the eastern half of the nation in January 2014, causing increased demand and therefore, natural gas prices to spike. The impact to Alabama was muted somewhat, not only due to the aforementioned fuel diversity that consumers benefit from, but also widespread electric heating in the state. (Notwithstanding this diversity, the state still found itself among those suffering from propane shortages.) It is difficult to imagine that Alabama consumers would have been spared some of this price volatility in the absence of the fuel and energy supply diversity utilized by Alabama electric suppliers. Certainly, the EPA must recognize that such a paradigm shift in fuel resources will increase costs to consumers, and will exacerbate the price risk described above, by forcing the electricity industry to depend more and more on natural gas-fired generation.

Continuing along this same line, the APSC is not only concerned over the proposed GHG standard but is very concerned by the cumulative costs of the EPA's actions or proposals over the last several years. Compounded together, the multiple regulations issued (e.g., the Mercury and Air Toxics Standards) or proposed (e.g., the rules concerning coal ash and water intake structures) are sure to place an enormous burden on Alabama residents. Yet, the APSC is not aware of any meaningful analysis undertaken by the EPA as to the cumulative cost impacts resulting from implementation of, and compliance with, the suite of pending and issued rules affecting electric utility generating units. Considering the proposed carbon restrictions being advanced by the EPA now appear to be shaping up as a paired approach (new and existing units) to regulation, the APSC believes the need for a cumulative analysis is particularly justified. Thus, just as regulated utilities consider all the cost impacts as they forecast and implement long-term resource planning decisions, the APSC believes it is of significant importance for the EPA to perform a comprehensive cost analysis as well. This analysis cannot merely examine each proposed rule in isolation, but instead should consider the cumulative cost impacts of all such proposals. Moreover, we believe it is important for the consuming public to be advised of the potential rate impacts associated with implementing the full suite of the EPA's recently proposed and newly issued regulations.⁴

2. Economic Considerations

The price of electricity can significantly affect the viability of an industrial customer because electricity is often the largest component of their operating costs. For example, electricity typically represents 60 percent to 75 percent of the direct operating cost for some of Alabama's largest

⁴ In recognizing the value of a broad analysis that seeks to evaluate combined effects, the EPA, in an April 5, 2012 letter, inquired of the U.S. Army Corps of Engineers about the possibility of adverse health effects caused by the potential development of several new coal export terminals on the West Coast and requested the U.S. Army Corps of Engineers to study the "cumulative" impact that the coal terminal projects could have on human health and the environment.

In a similar vein, The White House Office of Information Administrator, Cass Sunstein, recently issued a memorandum to the heads of federal agencies that outlined the details of new guidance on consideration of "cumulative impacts" of regulations. His memo said agencies should take active steps to take account of the cumulative effects of new and existing rules and identify opportunities to harmonize and streamline multiple rules. Simply, the goals of this effort should be to "simplify requirements on the public and private sectors; to ensure against unjustified, redundant, or excessive requirements; and ultimately to increase the net benefits of regulations."

Administrator Sunstein also added a few areas where agencies should try to improve, including early consultation and close engagement with affected stakeholders, harmonizing regulatory requirements, reducing administrative costs, avoiding unnecessary or inconsistent requirements, specific consideration of the cumulative effects of regulations on small businesses and startups, and careful consideration of the analysis of costs and benefits. (SNL Energy, *EPA Pushing for Cumulative Impact Analysis of West Coast Terminal Projects*. Dan Lowery. April 17, 2012. P.1.)

industry, such as air separation plants and caustic chlorine operations. For this reason, the price elasticity of demand for electricity is greater in the industrial sector. It then stands to reason that an increase in electricity prices, resulting from the proposed carbon pollution standard, will significantly diminish U.S. industrial production and will lead to a cascading negative impact on the economy.

The APSC, as well as other state economic development agencies and electric suppliers, have devoted significant time and effort to build and maintain a strong manufacturing presence in Alabama. One of the key factors for the State's success has been its ability to provide industry with competitively priced electricity. In 2010, the state's manufacturing sector provided approximately 236,000 direct jobs in Alabama and created many more indirect jobs as well. Moreover, the manufacturing industry produced more than \$13 billion in exports to the world economy, that is, nearly 85% of all exports in Alabama.⁵

In recognizing the importance of the U.S. economy, the APSC strongly encourages the EPA to seriously consider the impact that its proposed carbon pollution standard will have on industry and businesses as they are faced with the decision to locate, expand and/or remain in Alabama and, more importantly, the United States. We further ask for policies and regulations that will facilitate competitively-priced electricity, which in turn will support the U.S. and Alabama manufacturing industries.

An additional economic concern of the APSC is that the EPA's proposal will cause a further shift away from coal-fired generation, resulting in a decrease of Alabama coal production. In light of the fact that the coal mining industry is very important to Alabama's economy and employs more than 4,484 workers,⁶ the EPA's proposed GHG standard is very alarming to the APSC. In 2013, mining companies had more layoffs in the state of Alabama than any other industry.⁷

Not only does the coal industry support many direct jobs, it also supports many other businesses that provide ancillary services to the mining industry, creating even more jobs for Alabamians. Some of these related businesses include railway transportation companies, trucking companies and manufacturers of mining equipment. However, if the EPA moves forward with its proposed carbon standard, many of these indirect jobs are at risk as well.⁸

In short, the negative consequences of the proposed rule, on the U.S. coal industry⁹ and related sectors, will do nothing to promote a recovery of our state's or our nation's economy, but will only make matters worse. Before finalizing any GHG standard, the APSC strongly encourages the EPA to perform a job impact analysis, particularly as to the effect the proposed rule could have on related industry, to assist in weighing the costs and benefits of the proposed regulation.

⁵ Semoon Chang, PhD, "The Importance of the Manufacturing Industry to the Alabama Economy and the Role of Electricity," consulting report, November 2011.

⁶ http://www.alcoal.com/coal_industry.html. The number 4,484 workers include both metallurgical coal and steam coal production.

⁷ Birmingham Business Journal, February 21, 2014, <http://www.bizjournals.com/birmingham/subscriber-only/2014/02/21/largest-layoffs.html>

⁸ As an example, CSX Corp. recently furloughed about 280 employees and put about 100 locomotives into storage. Chief Executive Michael Ward characterized this action as a "surgical" response to a big downturn in demand for coal from electric utilities.

⁹ From its near-term peak of 93,700 in the fourth quarter of 2011, average coal mine employment dropped 17.1% to 77,639 by the end of the fourth quarter of 2013. The U.S. EPA's air emissions regulations have played the largest part in the downsizing of coal production and employment, particularly the immediate impact of the EPA's Mercury and Air Toxics Standards, together with the impending Greenhouse Gas New Source Performance Standards for new and existing facilities. SNL.com. [US Coal Mine Employment Continues to Plummet with No Bottom in Sight](#). February 13, 2014.

3. Carbon Capture and Storage Technology

Companies building new coal-fired power plants would have to install some form of carbon capture and storage (CCS) technology to meet the EPA's proposed GHG standard. However, such CCS technology is largely regarded as neither economically viable nor adequately demonstrated at this time. The White House's Office of Management and Budget has doubts about the CCS mandate, saying the technology "has not been deployed at scale in commercial power plants" and has costs risks due to "significant selection bias," given that it factors in projects that have benefited from significant government funding and other subsidies.¹⁰

To date, most CCS projects, which are in various stages of development, have received federal incentives or benefitted from by-product sales (such as captured CO₂ for enhanced oil recovery). Without federal incentives and other revenue streams, high costs are challenging to CCS development. In fact, the three CCS demonstrations located in the U.S. and used to support EPA's carbon pollution standard all received federal dollars. In addition, we understand that one of those examples – the Kemper County facility, which is being constructed in the neighboring state of Mississippi – possesses unique, site-specific considerations that favored its development and construction, but which are not necessarily replicable in other areas of the country. Even so, the cost to construct that facility has exceeded estimates and the projected final cost is significantly greater, in terms of \$/kw, than what the EPA is estimating in the proposed rule.

The APSC follows one major CCS research demonstration project taking place near Mobile, Alabama at Alabama Power's Plant Barry, a coal-fired power plant. This project is not commercial scale. Rather, a small amount of flue gas from one unit at Plant Barry (equivalent to the amount produced when generating 25 MW of electricity) is diverted from the plant and captured for storage.¹¹ Currently, the project has captured 100,000 tons of CO₂ and is injecting it into a saline formation 9,000 feet below ground surface in the Citronelle Oil Field (which is owned and operated by Denbury Resources).¹² This project has received financial support from the Department of Energy.

While the Plant Barry project has proven successful relative to its goals, it has not demonstrated a standardized CCS technology capable of being applied at all coal-fired power plants. This is true because location is very important to the successful implementation of CCS technology - particularly the site's geological attributes. Even so, there is limited geologic understanding and mapping on a national scale, which are essential pieces to injection and underground storage of CO₂. Indeed, proven CO₂ storage, with sequestration, has happened in a small number of locations.¹³ The CCS demonstration at Plant Barry has also confirmed the economic challenges facing widespread CCS at the present time. To be sure, significant additional capital is required to initially build carbon capture facilities due to their technical complexities and could increase the price of electricity an astounding 70 or 80 percent.¹⁴

¹⁰ SNL Financial. January 10, 2014. "White House highly critical of EPA's carbon capture mandate in interagency review."

¹¹ Southeast Regional Carbon Sequestration Partnership. http://www.secarbon.org/index.php?page_id=8

¹² Carbon Capture & Sequestration Technologies at MIT. <http://sequestration.mit.edu/tools/projects/citronelle.html>

¹³ Once captured, carbon storage presents its own unique technical and economic issues. This aspect of CCS must be considered separately as it depends not only on the viability of technical applications but on regulatory developments – such as property rights and environmental permitting – and also local geological conditions.

¹⁴ Bloomberg. Department of Energy deputy assistant secretary for clean coal. <http://www.bloomberg.com/news/2014-02-12/co2-capture-could-raise-wholesale-energy-price-80-percent.html>

Research and development, like that being done at Plant Barry, are the first of many steps in a long process toward possibly employing some form of CCS technology on a wide-scale basis. However, we still need more answers. It will take several years to increase the scale of these and similar projects, monitor the results of various storage facilities and then evaluate the successes and failures before industry can conclude if CCS technology is a viable solution for reducing global carbon emissions.

Eventually, CCS may accomplish the cost-effective reduction and/or capture of carbon emissions and satisfy the governing standards of the Clean Air Act for deeming the technology the “best system of emission reduction.” In the meantime, the APSC urges the EPA to support ongoing research and development efforts in CCS while avoiding a forced transition to commercially unproven technologies. Such an approach will most assuredly raise electricity rates on families and businesses in Alabama and throughout the country.

4. The Connection between Greenhouse Gases, Climate Change and Public Health and Welfare

The EPA’s justification for proposing a carbon pollution standard for new power plants is based on its conclusion that “[g]reenhouse gas pollution threatens the American public’s health and welfare by contributing to long-lasting changes in our climate that can have a range of negative effects on human health and the environment.”¹⁵

In previous comments, the APSC noted that scientists and climatologists continue to disagree as to whether human activities, and more specifically greenhouse gas emissions, are the primary driver of any measurable climate change (versus, for example, solar cycles) and whether environmental regulations in the United States alone can have any effect on global climate change.¹⁶ The proposed rule defends the science underlying the agency’s view of the potential health implications of climate change, but the rule does not address the fact that carbon emissions are a global phenomenon. Considering this observation, the APSC questions the basis for the proposal, and whether it represents an appropriate solution under the circumstances. Indeed, the current proposal stands to harm the U.S. economy for little to no effect on global greenhouse gases.

Aside from the uncertainty surrounding climate change science, the EPA must also consider that such rules will result in the loss of high-paying jobs in the coal industry. In fact, the EPA’s recently issued and proposed rules are essentially condemning a lot of people to the unemployment line and a much lower standard of living since, in many cases, there are no readily available jobs that can offer salaries that compete with the coal mining industry. Today, there are many hard-working families who depend on the coal industry to make an honest living and who will not be able to maintain that standard of living if the proposed GHG standards are promulgated by the EPA.

Another point concerning public health and welfare is that coal-fired generation has long been a vital tool in the fight to reduce energy poverty in the United States. In our view, eradicating energy poverty will dramatically improve the health and welfare of many Americans, and the EPA should consider how the proposed carbon standard impedes this goal.

¹⁵ Environmental Protection Agency. <http://www2.epa.gov/carbon-pollution-standards/learn-about-carbon-pollution-power-plants>

¹⁶ Other factors that have been identified as potential contributing sources to climate change include: [ocean currents](#), volcanic aerosols, urban heat islands, and deforestation.

5. Conclusion

The link between affordable energy and economic growth cannot be ignored. Affordable energy, as we all know, is a vital necessity for every residence and business alike, and is the cornerstone to a vibrant U.S. economy. Coal, as part of a balanced mix of generation resources, is readily available to support affordable and reliable electricity over many years to come. The low cost and dependability of coal can help mitigate energy poverty and move the U.S. closer to energy independence. However, if the EPA follows through with its proposed GHG standard and removes coal from our energy future, such steps will most likely have devastating consequences.

With this in mind, the APSC strongly encourages the EPA to avoid energy policies that could have more severe economic impacts than the assumed negative impacts associated with carbon. Furthermore, we urge the EPA to use any and all available flexibilities to temper its proposed GHG standard to avoid such adverse impacts, and assure the consuming public that good and quantifiable benefits will clearly offset the anticipated costs of the proposed standard.

If you have any questions or need additional information, please contact the undersigned at 334-242-5200 or John Free at: john.free@psc.alabama.gov.

Sincerely,

/s/John A. Garner

John A. Garner
Executive Director
Alabama Public Service Commission