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Deputy Secretary
Office of Waste, Air, Radiation and Remediation
Pennsylvania Department of Environmental Protection
Rachel Carson State Office Building
400 Market Street
Harrisburg, PA 17101

Sept. 25, 2014

RE: Listening Session on EPA's Proposed Section 111(d) Clean Power Plan

Dear Deputy Secretary Brisini,

The Pennsylvania Chamber of Business and Industry is the largest, broad-based business advocacy association in the Commonwealth. Our members are of all sizes, crossing all industry sectors throughout Pennsylvania. Thank you for the opportunity for the PA Chamber and its members to comment on the Environmental Protection Agency's proposed plan to regulate greenhouse gas emission from existing power plants via a listening session.

The PA Chamber thanks the attention of department staff in considering these comments in advance of the department submitting formal comments to EPA regarding Docket ID EPA-HQ-OAR-2013-0602.

The PA Chamber also appreciates the efforts and leadership of department staff in developing the 111d White Paper that outlines a more reasonable and achievable means to secure greenhouse gas reductions and supports the continued inclusion of this proposal as a centerpiece of communications to EPA regarding the Clean Power Plan.

It is no coincidence that Pennsylvania's economy and workforce have grown in recent years as energy prices have fallen. The PA Chamber is concerned that the impacts of this rule, specifically the homogenization of generation sources and a total transformation of how electricity is produced and consumed, could reverse these positive economic trends by imposing costs that are much higher than benefits. EPA's Clean Power Plan would also alter, in an unprecedented way, the manner in which states and the federal government interact on energy and environmental policy issues.

The PA Chamber wishes for the Department to contemplate the following issues:

- 1. The EPA has argued its proposed Clean Power Plan offers states flexibility in terms of implementation, but the "building blocks" that inform the limit make unrealistic expectations about what is truly achievable in Pennsylvania – and ignores much of the progress industry has made in reducing emissions at existing electric generating units.**

EPA's draft rule proposes a number of approaches for Pennsylvania to achieve a very aggressive reduction target of 32% below 2012 levels¹, based on a number of assumptions, including that existing plants can (and will) become significantly more efficient, that existing and new natural gas plants can (and will) run significantly more often, that all current nuclear generation can (and will) be relicensed and operational for the long-term even without a viable long-term disposal option for nuclear waste, and that Pennsylvania can (and will) deploy considerable renewable assets and energy-efficiency measures beyond those already required by law. Each of these so-called "building blocks" will come with a cost. There remain significant questions as to the ability of Pennsylvania to comply with this target without additional shutdowns of coal-fired facilities.

PA Chamber members who own or operate coal-fired electric generating units have invested heavily in improving the efficiency and reducing the emissions from these units. EPA's proposal, using a 2012 baseline, appears to ignore the real and historic reductions in pollutants that have resulted. EPA's baseline and interim and final goals must be adjusted to reflect these reductions.

The power generation sector in Pennsylvania has reduced greenhouse gas emissions by 14% since 2005². In fact, America led the world in reducing greenhouse gas emissions over that time period³. Industry in the state has also, since 2008, reduced emissions of SO₂ by 68%, NO_x by 30% and VOCs by 21%⁴. These reductions are having a demonstrated impact on air quality, with DEP forecasting fewer and fewer severe air quality alerts each year⁵ – from 40 days in which such alerts were called in one or more regions in 2009 to just 4 such days in 2014.

Further, this rule expects that nuclear and coal generation sources operate in a "stop-and-start" manner to support apparently preferred generation from renewables and gas, which is expected to run at a minimum of 70% of nameplate capacity – a level much higher than was attained in recent PJM dispatch results when natural gas prices were at multi-year lows. The forced incentivizing of natural gas over coal threatens to imprint a significant distortion on the market.

It is also a significant concern to the PA Chamber if enough infrastructure and fuel supply will be available to ensure that this much generation from natural gas occurs. In its proposed rule, EPA itself estimates that this forced demand increase will drive up natural gas spot prices by 12.5% in 2020. This will impact not only electricity ratepayers, but manufacturing and other industries that rely heavily upon natural gas as a production feedstock.

Simply put, nuclear and coal generation facilities are not designed to operate in an intermittent manner. Nuclear plants cannot quickly cycle online, and coal plants operate much more inefficiently if operated intermittently. Perversely, such a style of operation would likely raise emissions from coal plants on a

¹ Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Generating Units. Environmental Protection Agency, June 2, 2014. <http://www2.epa.gov/sites/production/files/2014-05/documents/20140602proposal-cleanpowerplan.pdf>

² Electric Power Industry Emissions Back to 1990, Pennsylvania. U.S. Energy Information Administration, April 1, 2014. <http://www.eia.gov/electricity/state/pennsylvania/xls/sept07PA.xls>

³ Some fracking good news, *The Economist*, May 25, 2012. <http://www.economist.com/blogs/schumpeter/2012/05/americas-falling-carbon-dioxide-emissions>

⁴ 2012 Natural Gas Emissions Inventory. Pennsylvania Department of Environmental Protection, Air Quality Technical Advisory Committee, April 3, 2014. http://www.dep.state.pa.us/dep/subject/advoun/aqtac/2014/4-3-14/Marcellus_AQTAC_Unconventional_Gas_03-13-2014.pdf

⁵ Action Days. Pennsylvania Department of Environmental Protection, Bureau of Air Quality. http://www.ahs2.dep.state.pa.us/aq_apps/aqpartners/code_red.asp

per-kilowatt hour basis. The issue of a viable, long-term solution for disposal of nuclear waste remains unresolved at the federal level, and the PA Chamber questions if the Clean Power Plan has fully contemplated the challenge this impasse has presented in terms of nuclear plants' ability to be relicensed and operate competitively.

Moreover, EPA's proposed renewable targets—which are based on a complex formula that expects states to adopt renewable portfolio standards at or similar to levels mandated in neighboring states—appear to disproportionately burden Pennsylvania. Under EPA's proposal, PA would have to add more than 30,000 Gigawatt-hours of renewable generation by 2030—the second-most of any state in the country and an increase of almost 800 percent over current levels. This appears to have been the result of EPA effectively punishing Pennsylvania for having implemented a renewable portfolio standard before the baseline 2012 year, as a cursory review of carbon emission states in regions of the country where states by and large have not adopted such standards indicates such states are not expected to significantly increase renewable generation targets or reduce their carbon emissions to the degree that Pennsylvania is. EPA also appears to have included Washington, D.C.'s renewable electric supply mandates into the northeastern region's renewable building block – even though Washington, D.C. is not a state and does not have any power generation.

But if EPA is including what adjacent states in the northeastern region are doing, then EPA must revise the region's renewables expectation to reflect Ohio's recent change to its renewable portfolio standards. On June 13, 2014, shortly after EPA proposed the Clean Power Plan, Ohio Governor John Kasich signed into law legislation that freezes the current level of renewable portfolio requirements.⁶

2. DEP will be expected to submit a state implementation plan that includes enforceable measures regarding issues that are outside the department's jurisdiction – and do so in an accelerated timeframe.

Once EPA publishes as final its regulations regarding carbon emissions from existing EGU's and assuming the process outlined in the draft proposal remains unchanged, DEP will have one year to file a proposed state implementation plan with EPA. While EPA has proposed giving states the option of granting one or two-year extensions based on various factors, there are no guarantees such extensions will be granted. The PA Chamber requests DEP include in its comments a discussion of how long it has taken for both DEP to draft and submit a SIP and EPA to approve a SIP, and whether such a process has can take place in one year.

Further, such a plan will need to include enforceable measures that are outside the department's jurisdiction. While current law allows for DEP to regulate emissions at certain point sources, DEP does not have jurisdiction to unilaterally institute energy efficiency measures across the state, increase renewable portfolio requirements, require nuclear power plants to remain operational, mandate coal-fired EGU's become more efficient or ensure that natural gas plants operate at a given percentage of nameplate capacity. Such measures may require legislative action at the state or federal level, as well as adjustments to PJM's auction process or regulatory changes made by the PUC or FERC. Further, some of these issues may exist outside the realm of any government agency's jurisdiction – state or federal. In cases where government action is possible, such action is not guaranteed, and the nominal flexibility of the Clean Power Plan will require existing fossil fuel-fired EGU's to shoulder an even bigger share of the burden – perhaps to the point where the continued operation of such facilities is rendered uneconomic.

⁶ Ohio Governor signs bill freezing renewable-energy standards. Washington Post, June 13, 2014.
http://www.washingtonpost.com/business/economy/ohio-governor-signs-bill-freezing-renewable-energy-standards/2014/06/13/730d8b44-f33b-11e3-9ebc-2ee6f81ed217_story.html

3. The PA Chamber questions if EPA has fully contemplated the nature of competitive electricity markets and Pennsylvania's net export of electricity.

After deregulation of the state's electricity generation markets, prices have trended downward in significant years as various fuel sources have competed with each other to enter the capacity market on a least-cost basis. Other states that remain in a vertically integrated, rate-based utility structure have "captive" ratepayers that would bear the cost. In contrast, Pennsylvania generators will have to incorporate the costs of facility improvements into their bidding price at a time when capacity payments exhibit significant year-over-year volatility. Generators may very well find that the combination of upfront capital costs to achieve these improvements, paired with tremendous uncertainty about the ability to ever recover them, will lead to a decision to close the plants. The loss of additional coal plants, and by extension a loss of competition among generating units, likely translates to a significant economic impact to all consumers of energy, including business, in the state.

The PA Chamber also questions how energy markets can embrace dispatch on an environmental, rather than economic, basis without additional disruption to the grid.

4. The proposed Clean Power Plan is a significant departure from recent greenhouse gas regulations for new power plants – and from the long-standing notion of cooperative federalism under the Clean Air Act.

This proposal put forward by EPA is unlike any other emissions reduction strategy ever developed. As FERC Commissioner Tony Clark noted recently in a Congressional hearing, "EPA's proposed 111(d) regulations would dramatically alter [the] traditional lines of authority [between state and federal legislatures and executive agencies] by creating a new paradigm of oversight of net carbon emissions from a state. [...] What was once a relationship of interacting and cooperating entities will be one in which there is a clear senior partner."⁷

The PA Chamber also wishes to echo the concerns raised by FERC Commissioner Philip Moeller at a recent Congressional Energy and Commerce hearing. The EPA's Clean Power Plan would, in essence, establish a "national electricity policy," yet the traditional regulatory body governing interstate power markets – FERC – has not been given adequate opportunity to examine the reliability impacts of the proposal. As Commissioner Moeller noted in his testimony, "load pockets matter because the laws of physics trump written words. [...] Just as the Commission does not have expertise in regulating air emissions, I would not expect the EPA to have expertise on the intricacies of electric markets and the reliability implications of transforming the electric generation sector."⁸ Commissioner Moeller also notes a key point: that generation facilities provide more than just power to the grid – some provide crucial reliability mechanisms such as voltage support or "inertia" that ensure the smooth operation of the grid. It is clear EPA needs to engage more with FERC on the reliability implications of this proposal.

Further, EPA's Clean Power Plan to reduce carbon emission from existing power plants looks radically different than the recent proposal to curb such emissions from new power plants. On January 8, 2014,

⁷ Written Testimony of Commissioner Tony Clark, Federal Energy Regulatory Commission, Before the Committee on Energy and Commerce Subcommittee on Energy and Power. July 29, 2014.

<http://docs.house.gov/meetings/IF/IF03/20140729/102558/HHRG-113-IF03-Wstate-ClarkT-20140729.pdf>

⁸ Written Testimony of FERC Commissioner Philip D. Moeller Before the Committee on Energy and Commerce Subcommittee on Energy and Power. July 29, 2014. <http://www.ferc.gov/CalendarFiles/20140729091755-Moeller-07-29-2014.pdf>

EPA published in the Federal Register a notice announcing proposed rules for new fossil fuel-fired plants⁹. The rule proposes to establish an emissions limit of 1,110 lb CO₂/MWh for new coal-fired power plants, based on a requirement to use carbon capture and sequestration (CCS). New natural gas-fired power plants would, under the proposal, face an emissions limit of 1,000 or 1,100 lb CO₂/MWh, depending on the size of the units. Natural gas-fired power plants would not be required to operate using CCS as an emissions control, and industry estimates that nearly all existing natural gas power plants could meet the more stringent standard of 1,000 lb CO₂/MWh.

More pressing, though, is the fact that at present, CCS is a prohibitively expensive emissions control, one that adds, according to the Pennsylvania Department of Environmental Protection (DEP), an additional 80% to the cost of building a power plant¹⁰. As DEP notes in a comment letter to EPA, the Clean Air Act requires that BSER that have been “adequately demonstrated.” CCS has not been deployed commercially at any electric generating plant in the United States, with only a handful of such projects existing at the planning stages¹¹.

Putting aside concerns with whether or not CCS legally constitute BSER when it has not been adequately demonstrated, EPA’s 111(b) greenhouse gas proposal for new sources at minimum identified a pollutant, a source, and an emissions limit for that pollutant for that source. This is similar to the approach historically undertaken by EPA with respect to a variety of pollutant emissions from solid waste landfills, copper smelters, steel plants, automobile painting operations and other industrial source categories. The EPA’s proposal to regulate greenhouse gas emissions for existing sources under 111(d) is, however, a significant departure from this type of approach, with emissions reductions resulting from changes to the type, efficiency, lifespan and dispatch of EGU’s, as well as very aggressive energy efficiency measures.

The PA Chamber requests DEP ask EPA why these two proposals are so radically different, as well as to continue to urge EPA to resolve the long-standing issue with New Source Review that disincentives facility improvements. EPA must also be more clear about when a facility will be subject to 111(b) or 111(d) in cases where such facility improvements are made.

We appreciate the attention and consideration of DEP’s staff with regards to our comments and concerns. We believe the recommendations included in this comment letter can help achieve our mutual goal of a strong economy and clean environment.

Sincerely,



Kevin Sunday

⁹ Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units. U.S. Environmental Protection Agency, Federal Register, Jan. 8, 2014
<https://www.federalregister.gov/articles/2014/01/08/2013-28668/standards-of-performance-for-greenhouse-gas-emissions-from-new-stationary-sources-electric-utility#h-9>

¹⁰ Re: Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units. Pennsylvania Department of Environmental Protection, June 25, 2012.

¹¹ Power Plant Carbon Dioxide and Storage Projects. Massachusetts Institute of Technology, December 2013.
http://sequestration.mit.edu/tools/projects/index_capture.html

Deputy Secretary Vince Brisini
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September 25, 2014
Page 6

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