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**Testimony of Craig Butler
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Before the Ohio House Public Utilities Committee
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Good morning, Chairman Schaffer, Vice Chair Roegner, Ranking Member Ashford and members of the House Public Utilities committee. I appreciate the opportunity to provide testimony this morning.

My name is Craig Butler; Director of Ohio EPA. I recently provided testimony to the Energy Mandates Study Committee on this topic and am happy to be invited here today.

I will provide testimony on U.S. EPA's draft Clean Power Plan – an unprecedented proposal to overhaul the nation's power generation, transmission, and distribution system by reducing fossil fuel use and increasing reliance on natural gas, energy efficiency, and renewable energy to meet our future power demands.

My testimony will describe the highly inclusive process Ohio used to review and respond to this massive proposal, as well as provide you with a summary of the complex history around how U.S. EPA is attempting to regulate carbon via carbon dioxide emissions from predominantly fossil fuel power plants.

Most importantly, I would like to provide several specific issues and objections we have raised to the U.S. EPA on its plan. I will say as an overall comment included in our 180 pages (excluding supporting materials) of highly technical comments that this federal plan has significant legal and technical flaws that will need to be resolved and/or addressed before any rule focusing on carbon emissions can be finalized and presented to states demanding compliance.

Background on Air Quality Standards

Before we discuss carbon and carbon dioxide regulation, I think it's helpful to understand some basics about the way U.S. EPA regulates emissions from sources like power plants.

In accordance with the federal Clean Air Act, U.S. EPA establishes air quality standards for six specific air pollutants at levels deemed to be protective of human health based on the best available science. Those pollutants are carbon monoxide, lead, nitrogen dioxide, sulfur dioxide, ozone and particulate matter.

Similarly, they develop regulations for the many types of operations that emit air pollution. Examples would be utilities, foundries, large printing operations, hazardous waste incinerators, glass furnaces, landfills and coal-fired power plants.

Please note that carbon or carbon dioxide is **not** one of these expressly defined under the federal Clean Air Act.

The Clean Air Act requires a review, once every five years, of all of the latest research on each criteria pollutant by a scientific advisory committee. That committee then makes a recommendation to U.S. EPA on whether or not the standard should be changed.

Ohio is approved and fully delegated by U.S. EPA to implement the federal air program on their behalf. Therefore, if new standards are needed and U.S. EPA finalizes them in rule, states such as Ohio are responsible for figuring out how to achieve these standards in a way that works for their respective states, by the deadline established by U.S. EPA. This process is completed through a "State Implementation Plan" developed by states and submitted to U.S. EPA for review. State legislation, regulation or enforceable measures are generally required to comply with the federal mandate. Most of Ohio EPA's air statutes and regulations are the result of this procedure.

Carbon History

The story of carbon regulation in the United States began in May 2007 when the Supreme Court ruled that greenhouse gases, including CO₂, were within the definition of an "air pollutant" under the Clean Air Act. As a result of this ruling, in December 2009 U.S. EPA released an Endangerment Finding that greenhouse gases endanger the health of citizens in the United States. This finding set the stage for subsequent carbon or carbon dioxide (CO₂) regulations.

Inaction at the congressional level prompted U.S. EPA to move down the path of carbon regulations on their own. U.S. EPA started by tightening CO₂ emissions from vehicles through the Light-Duty Vehicle Standards and Corporate Average Fuel Economy Standards Rule in May 2010.

U.S. EPA then targeted fossil fuel-fired power generation. Currently, U.S. EPA has a pending proposed regulation for coal-fired power plants that requires carbon capture and sequestration on all new units. It is our (and others) belief that this technology is so costly and unproven that it essentially, and intentionally, places an unattainable standard in front of any new coal-fired generation being built in the country that is not heavily subsidized by the government.

U.S. EPA also has a pending proposed rule for Modified & Reconstructed power plants.

The final step in their lengthy progression of regulations to attack all possible sources of CO₂ from fossil fuel generation, especially coal, is to regulate existing power plants through the Clean Power Plan.

Proposed Carbon Rules (Clean Power Plan) Legal Concerns

So just what is at the heart of this plan.... Ultimately U.S. EPA is trying to reduce carbon emissions from existing power plants nationwide by roughly 30% in accordance with Executive Orders and the Clean Power Plan.

U.S. EPA estimates that coal-burning and natural gas power plants release roughly one-third of the domestic total carbon releases. Another third comes from vehicles, which U.S. EPA is already regulating and the remaining third is from various other sources.

To achieve this goal of the President, U.S. EPA decided to take an untraditional multi-pronged approach. This approach aims to:

- 1) force existing coal-fired plants to operate more efficiently,
- 2) minimize their penetration in the marketplace, and
- 3) reduce the need for what they sell – electricity.

U.S. EPA's strategy of both regulating individual sources coupled with influencing the national marketplace, and in effect, directing how electricity is moved throughout the country to reduce electricity demand is unprecedented in scope and is fraught with legal problems.

Let me provide you with a summary of the major legal concerns we, and other states, continue to raise.

The first hurdle is that U.S. EPA is using Section 111(d) of the Clean Air Act to implement the plan. Section 111(d) is a rarely used section that reserves authority and flexibility to the states. It was designed by Congress to provide a method to regulate pollutants that are not "Criteria Pollutants" and not "Hazardous Air Pollutants." The problem is that U.S. EPA does not have authority under 111(d) because the plain language of the statute prohibits regulation of a source category (coal-fired power plants) if they have already been regulated under Section 112 of the Clean Air Act, which regulates hazardous air pollutants. Coal-fired power plants are already regulated under Section 112 for mercury emissions.

Murray Energy has already filed a petition in the D.C. Circuit court claiming that U.S. EPA is engaged in illegal rulemaking. Ohio, along with eight other states, has joined the case. Written briefs to the court are due in March.

A second major legal hurdle is that U.S. EPA is proposing to regulate aspects of the power system beyond the source itself, or beyond the "fence line." In the rare instances that 111(d) has been used, U.S. EPA confined its authority to the source of emissions. This rule proposes to expand their regulatory reach to all "affected entities," as they say, which include power generators, power users and all parties in between.

We believe that the vast expansion of authority and regulatory reach to the national power generation, transmission, distribution system, in addition to anyone who uses electricity, is not

consistent with Congressional intent and that these and other legal challenges will be argued as/if the rules become final later this year.

Clean Power Plan Technical Concerns

At this point, I'm going to provide you with a bit more explanation about the Clean Power Plan.

Again, U.S. EPA recognized that they could not reach their goal of a 30 percent reduction in carbon dioxide emissions from the individual plants themselves. So they became a bit creative and developed a multi-pronged attack with four strategies which seek to make coal-fired power plants operate more efficiently, minimize their utilization and reduce demand for their product - electricity.

Each of these strategies are summed together to establish a carbon emissions rate for each respective state that, when combined, achieves U.S. EPA's ultimate reduction target of a 30% reduction below 2005 levels. Since each of these strategies operates somewhat independently, we will call each of these measures "Buckets."

As we go through these Buckets, keep in mind that U.S. EPA's goal for Ohio, the sum of reductions from all four Buckets, won't change once the final rule is released. However, Ohio can shift reductions in between the Buckets, taking more or less of each one to still achieve the ultimate goal.

Bucket 1: Requires a 4-6% improvement in the efficiency of how coal-fired power plants operate.

Bucket 2: Requires power generation to be redispatched from coal to natural gas by up to 70% of the available capacity.

Bucket 3: Dramatically increases Renewable Energy Development.

Bucket 4: Dramatically increase Energy Efficiency mandates.

Problems with Bucket One are as follows:

- Ohio power plants have significantly reduced carbon dioxide emissions from electricity generation below 2005 emissions levels. In fact, carbon dioxide emissions have dropped from 138 million tons in 2005 to 107 million tons in 2013 and we expect an additional 33.8 million tons by 2016. These reductions were accomplished without a state, federal or multistate agreement to limit carbon dioxide emissions and should count towards any new goal.
- When designing the Clean Power Plan and calculating targets for "Buckets" U.S. EPA started with 2012, not 2005. They do not recognize the state-wide reductions made prior to 2012, nor do they recognize improvements already made by plants.

- The fleet of coal power plants in Ohio has improved dramatically over the years and will continue to improve over the next couple years. With the closing of old inefficient plants due to U.S. EPA's air toxics Mercury rule, Ohio will be left with a well-controlled highly efficient fleet of coal plants. When we compare Ohio's fleet-wide average gross heat rate for 1997-2013 to the status in 2016, we will recognize a 5.4% improvement. To expect an additional 4-6% efficiency improvement on a per-plant basis is extremely unrealistic.
- In addition, the 4-6% improvement target for coal-fired plants was established through misapplication and overreliance on a research study by Sargent & Lundy. U.S. EPA's reliance on this study to justify specific improvements, the associated costs and assessed feasibility directly contradicts the author's stated purpose. Rather, they use the study to over-simplify coal plant design and each unit's ability to achieve efficiency improvements.

The second Bucket proposes to minimize the usage of coal-based power by requiring all natural gas power generators to be utilized at a minimum of 70% of their design capacity.

- In general, we have serious concerns about Bucket Two exerting undue strain on both the natural gas and electrical distribution and transmission systems. Numerous stakeholders with intimate knowledge of the interstate transmission system have expressed similar concerns to U.S. EPA. Even U.S. EPA's own feasibility projections, performed to justify their proposal, could only predict 64% dispatch at the state level. Only through a regional approach could 70% be achieved.
- As you well know, in Ohio, power generation is regulated by the PUCO. Our two agencies partnered in an unprecedented manner during this comment process. The Commission's analysis forecasts wholesale energy prices to be 39% higher, costing Ohioans approximately \$2.5 billion more for electricity in 2025 as a result of this Bucket.

As for the increases in renewable energy and energy efficiency under Buckets 3 and 4, U.S. EPA's goals for renewable energy were designed in a unique way. They grouped states into "regions" that had similar renewable energy development "potential." These regions were perceived to have similar renewable energy development options. Ohio was grouped with Delaware, District of Columbia, Maryland, New Jersey, Pennsylvania, Virginia and West Virginia.

Once regions were established, U.S. EPA analyzed the renewable and energy efficiency portfolio standards for all states within the region. These state-approved rules provided a perceived reasonable target for development options. Based on this assessment, a renewable energy target was developed and applied to all states in the region.

Yes, U.S. EPA used SB 221 when developing the target for our region. Ultimately, the goal for Ohio is 10.6% of total net generation from renewable energy by 2029.

The Energy Efficiency target for each state increases 1.5% annually. Individual states start at various points, but the glide path to 1.5% is the same. In Ohio, by 2029 this goal will reach 11.6 %.

Regardless of the appropriateness of U.S. EPA's targets for Ohio, we have other serious concerns with U.S. EPA attempting to federalize programs that have historically been the domain of the states. The implications of this federalization are paramount because whatever programs are included in an Implementation Plan will become enforceable by not only the states, but U.S. EPA. Therefore, even if the Ohio General Assembly agrees that changes to the program are needed, they cannot be fully incorporated into Ohio's plan until U.S. EPA agrees with them.

Implementation

As we look to the future and how Ohio will develop an Implementation Plan, many unknowns still exist. For example, U.S. EPA intends to also release a proposed Federal Plan with the final rule. The Federal Plan will dictate necessary measures if an acceptable Implementation Plan is not approved. This is a recent announcement. No one has seen the details of what this may be, however, it will likely be draconian and designed to encourage states to develop their own Implementation Plans.

U.S. EPA has postponed their release of a final plan from June 2015 to "mid-summer" 2015. We don't know the outcome or when it will be released. However, they have made clear that the final state Implementation Plans will be due in June 2016. While we will pursue an extension of one or two years, as allowed, even the extension process is very demanding and may not be achievable due to the complexity the extension requests outlined in the rule. The timing of implementing this massive plan, whatever Ohio decides, will be extremely challenging and necessitate significant statutory changes and development of rules.

Final Thoughts

In the last four years, Governor Kasich has supported an energy policy that is inclusive of all sources of generation. From our world-class energy summit held in 2011 where we discussed developing a broad portfolio of cost-effective energy sources in Ohio, to recent legislative activity to include combined heat/ cogeneration to SB 221's list of qualifying energy sources. We have and will continue to embrace the often overused but certainly relevant "all of the above" energy strategy. We do this because we understand how important it is to provide affordable and reliable electricity.

And we also are willing and prepared to participate in a full national debate on carbon, the need (or not) to regulate carbon, and how Ohio is and remains committed to being a good

steward of the environment. However, this U.S. EPA Clean Power Plan is not the way to do this we will continue to ask U. S. EPA to reconsider this misguided approach.

It is a seriously flawed proposal and should not be used to set unprecedented national policy. It is not the will of Congress, the states, or the people.

I appreciate your attention during my testimony and I am happy to answer any questions you may have. Thank you.