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**ARIPPA TESTIMONY:**
John Oelbracht, Westwood Generation and Gary Merritt Northern Star Generation Services on behalf of ARIPPA
To provide the Testimony for

**PUBLIC LISTENING SESSION ON THE TOPIC OF:**
EPA's proposed rule: Carbon Pollution Emission Guidelines for Existing Stationary Sources (or the "Clean Power Plan")

**DELIVERED TO:**
Vincent Brisini, Deputy Secretary
Pennsylvania Department of Environmental Protection (PADEP)
Rachel Carson Office Building
Harrisburg, PA

**September 25, 2014**

**Introduction:**

Good morning

My name is John Oelbracht, I am on the Board of ARIPPA and I serve as the Resident Manager of one of ARIPPA's member plants, Westwood Generating. I am here with Gary Merritt, who is with Cambria Cogeneration and IPAC Colver both members of ARIPPA.

We are both here on behalf of ARIPPA and we appreciate this opportunity to provide comments regarding the probable effects of EPA's proposed "Clean Power Plan."

ARIPPA is celebrating its 25th anniversary this year as a Pennsylvania based non-profit trade association. Its membership is comprised of electric generating plants, combusting coal refuse as primary fuel and producing alternative electric energy and/or steam. Most ARIPPA plants were originally constructed within close proximity of vast legacy coal refuse stockpiles in the Anthracite and/or Bituminous coal regions of the United States. ARIPPA plants generate approximately five percent (5%) of the total electricity produced in the Pennsylvania-West Virginia region. Hundreds to thousands of citizens are directly or indirectly employed by the ARIPPA industry, and live, along with their children, and families, in communities within close proximity of the ARIPPA alternative energy plants.

ARIPPA, on behalf of its member companies, is accordingly proud to provide testimony to the Committee on EPA's proposed rule: Carbon Pollution Standards for Existing Power Plants.

**Pennsylvania's Legacy Environment:**

Historical coal mining management practices included the abandonment of thousands of acres of mine lands and the stockpiling of low quality, low BTU, non-marketable coal known as coal refuse on surface lands. Exposed to the natural elements these unsafe lands and stockpiles of coal refuse expanded their negative environmental footprint over time, causing much of our water and land, r to become unsuitable for the growth of vegetation or the habitat of wildlife, fish, and/or citizens. Pennsylvania's Department of Environmental Protection (PADEP) has reported that Pennsylvania has more than two billion tons of coal refuse stockpiled on abandoned mine lands resulting in the largest source of water pollution in the state. The estimated time and cost to eliminate this "legacy" environment is 500 years and nearly 15 billion dollars of tax-payer funds.

An additional significant environmental problem that has occurred in the past, continues to occur today, and will likely occur in the future, is the uncontrolled burning of legacy coal refuse stockpiles. Certain stockpiles, on occasion, naturally combust due

to "Mother Nature" and/or unfortunate citizen activities. Such combustion produces various uncontrolled ground level emissions including GHG. Pennsylvania has long recognized this hazard and passed legislation in an attempt to abate and/or control these "naturally occurring" coal refuse fires. ARIPPA is convinced that EPA is also aware of this naturally occurring hazard and the correlating release of uncontrolled ground level emissions including GHG. We feel confident that EPA is also aware of the release of methane gas that currently occurs in most abandoned mine environments.

**ARIPPA's Comments**

ARIPPA Comments will be covered as follows:

1. Impact of GHG emissions on the Coal Refuse Industry in Pennsylvania
2. Un-Intentional Consequence of GHG, MATS, BMACT and CSAPR
3. Pennsylvania's Section 11(d) Policy Paper
4. Specific Comments Regarding EPA's Section 111(d) proposed rule making
5. Other Points regarding EPA's Section 111(d) proposed rule making
6. Summary

Our comments are more in the form of bullets as we are still working through the issues and the economic impacts.

**Impact of GHG emissions on the Coal Refuse Industry in Pennsylvania**

1. For coal refuse fired units the rule is problematic from the following perspectives:
    a. We are burning low Btu high ash fuels that result in higher heat rates per kW of electricity generated, which means higher CO2 emissions.
    b. The Plants utilize limestone injection in the furnace to control SO2 emissions. The calcination of the limestone increases CO2 emissions. The use of limestone to increase SO2 removal efficiencies from 92% to 98% under the MATS rule will increase CO2 emissions by another 7% which is more than the 6% improvement required by the EPA under block one of the GHG program.
    c. The economics of significantly improving a coal refuse plant's efficiency is not cost effective and the cost is not recoverable in the energy marketplace. Therefore the coal refuse plants will continue to move towards being un- economical and will eventually be unable to consume waste coal. When this occurs the plants will be unable to produce beneficial use ash for placement in areas where acid mine run-off and

streams are being polluted by the waste coal piles throughout Pennsylvania.

2. The coal refuse plants GHG emissions from burning coal refuse are carbon neutral as the emissions are offset by the uncontrolled emissions resulting from the burning of the piles in place. Therefore, the coal refuse units should be considered a "covered" unit or the emissions should be deemed zero.

3. The coal refuse fuel is processed from coal refuse sites as defined by SMCRA (Surface Mining Control and Reclamation Act of 1977). The technology to clean coal has resulted in more coal refuse being produced. However, the coal refuse produced from these coal cleaning technologies tends to be lower quality (lower Btus and higher Ash content) than legacy coal refuse piles. Legacy coal refuse piles tend to have a higher Btu content and lower ash content. Coal refuse fired plants are the only known consumer of coal refuse. Coal refuse fired plants need the flexibility to burn coal refuse having a wide range of characteristics. GHG regulations will limit our flexibility to burn coal refuse having a wide range of characteristics. We know that coal refuse piles have burned in the past. We know that some coal refuse piles are burning now. Without coal refuse fired plants, you can be assured that coal refuse piles will burn into the future! You must consider the following:

    A. Uncontrolled emissions from coal refuse piles are toxic and have greenhouse gases associated with them. These uncontrolled emissions are at ground level and pose community health/safety risks.
    B. Burning coal seams and coal refuse sites are major sources of GHG. Thus, using coal refuse as a fuel and eliminating these piles from being able to burn in the future, we are reducing long-term GHG Emissions.
    C. Coal refuse sites are sources of water pollution. The sites generate runoff and acid discharges.
    D. By reclaiming these sites, we eliminate them as a future source of uncontrolled air pollution (fugitive dusts and emissions from burning); eliminate runoff problems and ameliorate mine drainage problems resulting in significantly improved water quality in nearby streams. All downstream states receive benefits of our efforts to eliminate the AMD as it improves their water quality too.
    E. The revegetation serves as a carbon sink as does the restoration of streams and the return of those ecosystems.
    F. A key point here is that Coal Refuse fired units are providing a service by reclaiming old coal refuse sites, eliminating them as sources of air pollution (both Toxic Pollutants, Acid Gases, and Green House Gases)and in the process improving water quality, returning the land to a productive use and revegetating the sites. We believe that these long-term reductions in uncontrolled GHG emissions should be considered as reductions in GHG Emissions in the proposed rule.

**Un-Intentional Consequence of GHG, MATS, BMACT and CSAPR**

1. EPA's recent regulations has resulted in and will result in more coal fired power plants, including coal refuse fired plants to cease operations throughout Pennsylvania and other parts of the country.

2. As a result, the demand for coal in the United States will decrease drastically.

3. The reduction in coal production will result in less dollars being sent to the Federal AML Fund as a result of lost productions.

4. The decrease in revenues to the AML Fund reduces the amount of money available to a State like Pennsylvania (both in terms of a percent of the fees its Industry pays in as well as reduced fees from the other States).

**Pennsylvania's Section 111(d) Policy Paper**

1. Pennsylvania's strategy to address and obtain CO2 reductions based on energy efficiency is a critical component of their comments regarding Section 111(d).

2. In order for Energy efficiency projects to be successful, a thoughtful and careful retooling of the NSR review process will be necessary as outlined in the policy paper. By looking at energy efficiency from an output basis and tying the NSR Trigger to the comparison of pre and post modification emissions would create an excellent pathway to move these projects forward. This approach would result in pushing the non-EGU Industrial Sector to look at these projects to lower their costs, improve energy efficiency, and seek more Combined Heat and Power Projects. Further, it would encourage existing cogeneration projects to remain viable. These approaches are also similar to U.S. EPA Combined Heat and Power's document "Output-Based Regulations: A Handbook for Air Regulators August 2014" strategies.

3. The Pennsylvania approach would result in an increase in energy efficiency; provide an opportunity for plants to compete, and at the same time allow other types of projects to move forward.

4. Additionally, Pennsylvania's approach acknowledges the carbon neutral outcomes that result from the environmental cleanup of old coal refuse sites.

**Specific Comments Regarding EPA's Section 111(d) proposed rule making**

1. EPA describes its proposal to cut carbon emissions from the power sector by 30 percent from 2005 levels Nationwide.
2. What they don't say is that the reductions over 2005 is significantly higher.
    a. The "real" goals as proposed are:
        i. 2020
            a. 37% reduction of 2005 Levels
            b. 23% reduction over 2012 Levels
        ii. 2030
            a. 44% reduction over 2005 Levels
            b. 31% reduction from 2012 Levels

3. For Example:

**EPA's Proposed Carbon Emission Rate for Exisitng Power Plants (lbs/MWh)**

| State | Historical Emission Rate (2012) | Avg. Interim Emission Rate Goal (2020-2029) | Final Emission Rate Goal (s030) | Required Change (2012-2030) |
|---|---|---|---|---|
| Delaware | 1234 | 913 | 841 | 32% |
| Maryland | 1870 | 1347 | 1187 | 37% |
| New Jersey | 932 | 647 | 531 | 43% |
| Pennsylvania | 1540 | 1179 | 1052 | 32% |

4. To drive the rates down, EPA suggests that the capacity of the existing coal plants based on their IPM Modelling would be in the neighborhood of 38%. If this is the case, then a large number of plants (more specifically coal plants) would end up shutting down as a result of economic factors.

5. Further, there is a real question as to the stability of the grid that will result. This comes from two different directions. First the shutdown of upward of 75% of existing generation (based on PADEP's Projections) and the trend to energy efficiency. This approach impacts demand and weakens the grid. Ultimately, the transmission system will have to be maintained and the price of maintenance will become a fixed charge (no matter how much electricity flow through it to the end user).

6. It needs to be recognized that upwards of 40% of the power generated in Pennsylvania is transmitted to adjacent states. EPA's modeling and program includes reducing the capacity of the existing fleet with coal impacted the most.

7. For example:

| Year | Capacity Factor | Coal Consumption (Million Tons) | Potential Reduction in Coal Production from 2005* |
|---|---|---|---|
| **2005** | **73.4%** | **43.4** | **N/A** |
| **2012** | **54.6%** | **33.0** | **24%** |
| **2020** | **23.7%** | **12.5** | **71%** |
| **2030** | **16.9%** | **10.5** | **76%** |

- **The Coal Production does not include coal refuse burned At Waste Coal Plants.**

8. With a projected reduction in generation, would mean that there will be less power for Pennsylvania to export. Pennsylvania's first priority is to its citizens! If we export 40% now, based on our existing capacity, a reduction in generation to 38% capacity could mean that there will be a statewide deficit. Competition for replacement power will be stiff with no guarantee that these new source will be built in Pennsylvania.

9. What is the economic impact on lost production from coal fired units?

**Other Points regarding EPA's Section 111(d) proposed rule making**

1. Pennsylvania does not have the authority to dispatch power generation based on emissions.

2. In its IPM Modeling, EPA has reduced the capacity factors of many plants to 38% or less, which increases its costs to operate and generate power.
3. The demand response as presently designed in the PJM does not account for the air emissions from these smaller less controlled units in terms of NOx, SO2, PM, and GHG.. These units were never designed to meet the more stringent emission requirements of EGUs and many are located in areas that have the greatest concern for their air quality when these units are needed.
4. Pennsylvania's strategy to address and obtain CO2 reductions based on energy efficiency is a good point as set forth in their Section 111(d) comments. Specifically, the concept encourages efficiency and upgrade projects by modifying the NSR triggers to become an output based emissions limits which will result in reductions on a MW output basis. This is a better way to define NSR for CO2 reductions and energy efficiency projects.
5. At this time and for the foreseeable future, Pennsylvania should not be joining Regional Programs related to greenhouse gas controls. Since Pennsylvania must compete with PJM States for the sale of electricity, any regional system thought to assist in achieving the goals of the rule must be comprised of all the PJM States!

**Summary**

At this point, we believe that the proposed rule goes beyond what the Clean Air Act Authorizes EPA to do. Specifically, we believe that EPA cannot regulate Coal Refuse fired plants under Section 111(d) of the Clean Air Act while being simultaneously being regulated under Section 112. We also believe that the Proposed Clean Power Plan does not adhere to the statutory framework established by Congress and the EPA has taken liberties with its interpretations of definitions and the plain language reading of CAA and associated case law. We will leave it up to the lawyers to debate that in court.

We believe that enacting an energy policy this should be a Legislative effort not a regulatory effort as the implications of this proposal go to a restructuring of the Electric Transmission and Generation Industry; the potential elimination of the coal industry and their related industries. This proposal also institutionalizes the taxes needed to keep non-competitive power generation sources operating such as solar and wind projects.

This proposed plan impacts workers, families, children as well as their education, health care, jobs and more. Clearly, the impacts of this proposal have not been fully vetted by the EPA.

Once again EPA believes that Industry will miraculously find a way to survive by redesigning our plants and eliminating the problem! This time the costs will be too much to bear and that these regulations will significantly affect coal generated power in PA, negatively impacting grid reliability while, at the same time, increasing energy costs for all Pennsylvanians. It's a combination, Pennsylvania cannot afford!

Thank you for the opportunity to provide comment!