Carbon Pollution Emission Guidelines for Existing Stationary Sources:

Electric Utility Generating Units

Docket ID No. EPA-HQ-OAR-2013-0602

Comments of the United Association of Journeymen & Apprentices of the Plumbing & Pipe Fitting Industry of the United States, Canada and Australia

William P. Hite, General President

November 25, 2014

I. Introduction

The United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry represents 370,000 skilled craft persons in the plumbing and pipe fitting trades in the United States, Canada and Australia. For many reasons, we have a vital interest and stake in the proposed Clean Power Plan rule and wish to assist the EPA in developing appropriate standards and procedures needed to implement this rule in a fair, effective and commonsense manner.

A substantial portion of UA members are employed in all facets of the power industry. Our skills are applied on a daily basis to build, maintain and operate the various energy infrastructure systems critical to generating and transmitting power throughout the U.S., including those relying on coal, nuclear, natural gas and alternative energy sources. In fact, the UA is one of the largest skilled trades employed throughout all sectors of the power industry. Consequently, the manner in which the Clean Power Plan is developed and administered will have a direct and substantial effect on our members.

As a related matter, we note that our members and their families have long-standing commitments to preserving America's natural resources and protecting our environment for future generations. As part of this commitment, the UA has become a partner and leading voice in the BlueGreen Alliance, which unites a number of labor unions with some of our nation's largest environmental groups to promote progressive energy and environmental policies that create good family wage jobs to support working families.

In preparing these comments, the UA has conducted considerable research on the issues related to this rule in order to offer the EPA informed input and recommendations. The comments offered here are also aided by the fact that we have had the unique opportunity to discuss this rule with virtually all key stakeholders, including the Obama administration and EPA leadership, major power producers and industry associations, other key labor unions and leading environmental advocates.

II. Concerns & Recommendations

Obtaining a 30 percent reduction in carbon emissions from power plants by 2030 is an ambitious goal by any standard. Yet this goal is generally *not* being disputed by most major stakeholders, including many power producers, which is a significant victory the EPA can claim out of the gate. The "means" for achieving this reduction, however, is where the debate properly lies. We submit that while the rule's goal may be achievable, it is absolutely vital that the projected reduction be implemented in a manner that balances this plan with the equally compelling needs for:

1. Ensuring a reliable power supply for our nation's substantial energy demands while simultaneously maintaining reasonable cost controls to protect consumers;

2. Developing adequate generation capacity by significantly expanding reliance on zero- and low-emitting sources, especially nuclear and natural gas, to meet the compliance goals as well as investing in CCS technologies; and

3. Providing states and industry enough time, flexibility and support to plan, permit, design and build what will be almost an entirely new infrastructure of power generation and transmission systems.

In addition, we suggest that in the final development of this rule the EPA explore ways to promote the creation of good jobs during the transformation of U.S. power industry that will occur as we seek to meet the challenges of building a cleaner electric power industry. American workers need better opportunities generally and many workers now employed in certain parts of the energy sector will be displaced due to changes effected by this rule. We need to take steps to ensure that this rule produces a positive "net" gain in jobs overall and that such jobs include proper training, good benefits and family wage-income that will help rebuild the American middle class.

A. Ensure Reliability – Conduct a Comprehensive, Accurate & Transparent Analysis

If the goal of reducing power plant emissions by 30 percent is no longer in debate, the central and most fundamental concern must be achieving this benchmark while still maintaining an adequate supply of safe, reliable power that can be produced at a reasonable cost. While there is no question that this will require the development of a new mix of cleaner energy sources, the critical focal point for these plans, in a word, must be *reliability*.

There may be growing support in America for cutting carbon emissions, yet at the same time, citizens expect any new efforts by government and the power industry to reduce pollution will be carried out in a manner that will still "*keep the lights on*." Everyone will expect that there will be a steady, uninterrupted flow of electricity needed by the millions of homes and thousands of businesses and communities across the country that rely on this vital energy source. Given the sweeping changes to come under this rule, meeting this demand will be no small feat. Considerations:

- We start from the premise that our modern society consumes an enormous amount of power on a daily basis for even the basic necessities.

- Plus, our ever-increasing appetite for new technology, an expanding population, and an anticipated rise in domestic manufacturing – all will drive demand up further.

- U.S. Energy Information Administration estimates, which may be conservative, show that electricity demand *will increase 29 percent from 2012 to 2040 under its reference case scenario, and 41 percent under its high economic growth scenario*.

- Under the proposed rule, the power industry must seek to meet these challenges while simultaneously making major reductions in carbon emissions and adapt to a vast sea change requiring a seismic shift away from coal to less carbon-intensive sources.

The EPA and all stakeholders need to be fully aware of the fact that the failure to properly plan this transition implicates serious reliability issues, as well as cost concerns, and recognize there must be multiple realistic power sources available in adequate number and capacity to ensure supply throughout our transition to new energy sources.

To execute such changes without compromising reliability requires a superior grasp of various factors such as the regulatory framework, capacity requirements, accurate calculations, proper methodologies, and sound accounting standards for measuring future demand, as well as realistic predictions and assumptions regarding the capacity of new energy sources. As a result, the standards, procedures and guidelines ushered in under the new rule to reduce emissions must be developed in an extremely careful manner to ensure they do not compromise the reliability of the power grid and unnecessarily drive up consumer costs.

As part of this evaluation, it is critical that the right questions be raised and properly answered. For example, do the goals and timetables of the proposed rule fully consider the stress that extreme weather patterns, such as the recent Polar Vortex, place on the power grid? That event revealed the significance of baseload capacity versus intermittent capacity. Do they account for population growth, technological development and manufacturing's resurgence and their impacts on future demand?

Given the complex nature and intricacies of our nation's power grid and high stakes at issue, we ***recommend EPA carefully review, double-check and confirm all key underlying assumptions, calculations and projections used in this rulemaking***. We further suggest this can be best done by having the EPA ***coordinate with the Federal Energy Regulatory Commission ("FERC") and North American Electric Reliability Corporation ("NERC") to prepare a comprehensive reliability analysis***.

These agencies have unique capabilities and expertise best suited to vet these issues and can help ensure the plan set forth in the rule is truly battle worthy. We also encourage the agency to be fully transparent in its review of these matters, including the calculations and methodologies used for determining emission rates and goals. This will allow states and other stakeholders to conduct a more informed evaluation of these projections, and if warranted, give additional input needed to ensure reliable power supply is properly maintained.

B. Maintain Adequate Baseload Supply by Encouraging Nuclear Capacity

While much attention has been devoted to promoting renewable energy sources, it is essential for the new rule to stress, promote and facilitate the use of low- or zero-carbon emitting sources, especially natural gas and nuclear energy. The proposed rule appropriately addresses the use of natural gas in the 2030 goals; however, ***the rule can and should do significantly more to embrace nuclear power***. The EPA's formula only credits states with preserving 6 percent of current nuclear power generation capacity and all nuclear units currently under construction. By contrast, the rule credits states with all present renewable energy generation and projects growth in renewable generation for most states depending on their regional targets. This disparity must be corrected.

While our nuclear fleet is aging and needs to be rebuilt, nuclear power should be a vital and strategic part of our solution because it: (1) is the largest source of carbon-free electricity in America; (2) serves as a safe and economically feasible alternative to coal and other fossil fuels; and (3) provides highly reliable baseload power unmatchable by renewable sources. Thus, we ***urge the EPA to promote nuclear generation by fully crediting existing nuclear power plant capacity and to consider other ways to further encourage states and utilities to expand nuclear power generation capacity***.

We also believe the EPA should ***remove nuclear generating capacity under construction from the rate-setting formula, and allow states to include 100 percent of "new" nuclear generating capacity, when it is operating, in their compliance calculations***, thereby providing an incentive to expand carbon-free nuclear generating capacity. This recommendation is bolstered by the following state examples reflecting the impact of the proposed rule on nuclear generation:

> **Pennsylvania:** Nuclear power provided 35 percent of Pennsylvania's electricity in 2013, the second highest in the nation. By giving Pennsylvania only 6 percent of nuclear power (at-risk nuclear), EPA is not providing an incentive for the other 94 percent to remain in operation.
>
> **Virginia:** In 2012, the excluded portion of nuclear generation (referred to as residual nuclear) accounted for approximately 23 percent of the total generation in the state. Plus, the EPA's proposal does not allow for consideration of additional nuclear generation in the determination of the state's CO2 emission rates, which is likely from a third unit at the North Anna facility.
>
> **Ohio:** Under the current proposal, only 993,077 MWh of carbon-free generation would have to be replaced with other options if both the state's nuclear reactors were shut down. But if all the state's nuclear electricity were included in the nuclear building block, then 16.95 million MWh (about 9 percent of the state's total 2012 generation) would have to be replaced if the Ohio reactors shut down.

With *reliability* being the watchword in this entire rulemaking, it is essential that we facilitate those alternatives that we can truly count on for replacing any and all fossil burning plants that are retired. Renewable sources—with all of the benefits and significant potential they offer for the long-term future—will still have relatively limited capacity in the big picture over the next several decades. It takes an enormous amount of energy to meet our nation's power generation needs; if we are going to retire a large number of fossil plants, the replacement plan must be properly crafted to allow nuclear power to play a significantly larger role.

C. Provide Sufficient Time & Flexibility by Eliminating or Replacing Interim Goals

An increasing number of states and industry stakeholders have expressed serious, even grave concerns over the ability to meet the proposed rule's interim goals. We agree. In short, these goals impose an unrealistic, unachievable burden on the generation cabilities of states and power companies. While reducing power plant emissions by 30 percent may be doable—*provided the necessary planning and other required steps are properly implemented* – ***the 2020 milestones impose impracticable demands that will seriously compromise power reliability and, therefore, must be rescinded***.

This is sheer pragmatism. The EPA will not complete these regulations until 2015; states must submit their plans by 2016. Even if states can pull off the herculean task of developing new comprehensive plans to restructure their entire approach to power generation, they'll be left with an impossibly short span of *only four years to implement* major portions of the plan as required by the rule—*including all critical phases of power planning, permitting, financing, plant design, engineering and construction and operational systems-testing and start-up*. Several key facts support this point:

- ❖ Achieving the required emission reductions will necessitate colossal investments in our country's energy infrastructure and core power generation supply systems.

- ❖ Natural gas and nuclear generation capacity will require *major, unprecedented expansion*—even assuming we can count on the most optimistic forecasts for renewable sources. In the natural gas industry alone, enormous challenges exist for growing capacity. We are currently confronted with literally thousands of miles of antiquated pipelines throughout the country that must soon be replaced to avoid serious harm to public health and safety; now we will need to double down to rebuild *and* expand this network. Plus, a whole new generation of plants will have to be designed, developed and built.

- ❖ Nuclear energy, while another vital part of our energy solution, faces difficult and time-consuming barriers, not the least of which are licensing and permitting.

- ❖ Each of the various stages required for addressing these challenges will involve multiple years of planning, deliberation and review by numerous state and local governmental bodies, from state legislatures to utility commissions to local zoning agencies.

Given these facts, the current 2020 interim goals are simply not workable and need to be rescinded; ***alternative strategies for ensuring full compliance by 2030 can be explored, including a mid-course review process or non-binding milestones***. The EPA's own Regional Haze regulations provide one example for such an alternative. In no event, however, can the transition phase threaten power supply reliability.

Finally, as part of the whole planning and quality control process for this rulemaking, and to aid the goal of maintaining power supply reliability, the ***EPA should consider requiring the industry to adopt skill certification standards to ensure that all new and modified facilities we are going to rely on for our future energy systems are properly delivered***. This entire plan depends on new, cleaner generation sources coming on line on time and producing the expected power at reduced carbon levels. To do this, the facilities in question must not only be correctly designed, but properly constructed, which means the skills of the construction craft personnel should be specified, evaluated and verified or the end goal of reliability will again be put at risk.

III. Conclusion

The single greatest challenge facing the EPA in this rulemaking is to achieve the targeted reduction in carbon emissions without compromising power reliability. This is achievable by diligent execution of the right plan. One key to success: make sure the plan incorporates a pragmatic, informed approach sufficient to conquer the monumental challenges ahead—challenges that should not be underestimated since they require wholesale transformation of our nation's energy infrastructure and power supply sources.

The "right" plan will depend on extremely careful research and development of the most realistic and effective power supply options and strategies. It will also require joint planning and intricate coordination of efforts by major stakeholders, including key federal agencies, legislatures and utility regulators of the 49 states involved, and all sectors of the power industry. To ensure success, the United Association specifically recommends that the EPA:

(1) ***Review, re-check and verify all measurements and calculations essential to the plan by working with FERC and NERC to develop a solid comprehensive reliability analysis***;

(2) ***Ensure greater reliance on nuclear energy in the plan by fully crediting existing nuclear power plant capacity and promoting additional means to assist states in expanding nuclear generation capacity; and***

(3) ***Rescind the 2020 interim goals to give states and the power industry adequate time and flexibility to plan, develop and implement necessary strategies to meet reduction goals by 2030 while maintaining power supply reliability***.

Adoption of these recommendations, we submit, will allow our nation to make the strides envisioned by the EPA's proposed carbon rule, while still ensuring we "*keep the lights on*" and meet core reliability goals expected of this process.