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June 22, 2012

EPA Docket Center, U.S. Environmental Protection Agency (EPA)
Mail Code 2822T, 1200 Pennsylvania Ave., NW
Washington, DC 20460
Attn: Docket ID No. EPA-HQ-OAR-2011-0660

Subject: State of Wisconsin Comments Regarding EPA's Proposed Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units

Dear Administrator Jackson:

The Wisconsin Department of Natural Resources (WDNR) hereby submits comments on the recent proposal for new source performance standards (NSPS) for emissions of carbon dioxide (CO_2) from electric generating units (EGUs) published on April 13, 2012 [*77 FR 22392*]. Wisconsin needs a balance of electric generation technologies to continue meeting our state's energy needs. The state remains concerned about the cumulative impact of this proposal, together with other recently proposed or pending EPA regulations, on the reliability of the electric grid. Coal-fired EGUs should not be precluded as an electric generation option due to onerous requirements in this proposed NSPS or other EPA regulations.

Combination of Coal and Natural Gas Categories

It is inappropriate for EPA to combine fuel categories (coal and natural gas) under one NSPS as was recently proposed. There is a fundamental difference in the design of electric generation technologies based on coal and natural gas. EPA should be consistent with past practice of establishing separate standards for the coal and natural gas categories, regardless of whether market trends and modeling favor electric generation technology using natural gas over coal. Historically, the natural gas market has been volatile and unstable, and reliance on current market trends could prove costly to electric generators.

Historically, in limited instances, EPA used a fuel neutral approach to establish NSPS for nitrogen oxides and sulfur dioxide emissions from fossil fuel fired EGUs [*62 FR 49442 and 71 FR 9866*]. However, these standards were based on coal-fired EGUs, and the use of natural gas was viewed as a potentially more cost-effective option for compliance. The proposed greenhouse gas (GHG) NSPS, in contrast, sets a CO_2 emission standard based on gas-fired EGUs with which coal-fired EGUs can not comply. The WDNR requests that EPA create a separate coal category for the proposed NSPS reflecting the best demonstrated technology that is currently commercially available. The WDNR believes this to be a supercritical coal boiler.

Availability of Carbon Capture and Sequestration Technology

The WDNR does not agree with EPA's rationale used to determine the commercial availability of Carbon Capture Storage (CCS) technology for several reasons.

- CO_2 transportation costs can vary significantly by facility depending on routing pipe through densely populated areas and distance to an available storage site. The WDNR permit engineering staff estimates that the cost of piping construction alone for CO_2 transportation from Milwaukee, WI to Decatur, IL (the

location of the closest CO_2 storage site, which is only in the testing stage of development) could cost as much as $405 million. This estimate was based on a March 2010 U.S. Department of Energy (DOE) document entitled "*Estimating Carbon Dioxide Transport and Storage Costs*." Although this report puts costs at $50,000 per inch-diameter per mile, given that a pipeline from Milwaukee to Decatur would have to travel through the Milwaukee metropolitan area and the western suburbs of Chicago, we believe the cost would be at least $100,000 per inch-diameter per mile. As such, a 15-inch diameter pipeline traveling 270 miles would cost approximately $405 million. Also, the Wisconsin Public Service Commission (PSC) evaluated different pipeline networks for transporting CO_2 from the larger (greater than 1,000,000 tons CO_2 annually) coal-fired power plants in Wisconsin to the Illinois Basin. This evaluation is detailed in the September 2010 PSC report entitled, "*An Investigation to Explore the Potential for Geologic Sequestration of Carbon Dioxide Produced by Wisconsin's Electricity Generation Fleet*." The PSC report estimates that the total cost to construct a pipeline network dedicated to CO_2 transportation could be between $550 million and $1 billion. Thus, the transportation component of CCS alone may be a hindrance to the commercial availability of CCS in the foreseeable future, contrary to EPA's expectation.

- Although selling captured CO_2 for enhanced oil recovery may be possible for new coal power plants in Wisconsin, it should not be viewed as a comprehensive solution due to the lack of nearby CO_2 storage sites.
- CO_2 transportation and sequestration components of CCS technology make it fundamentally different than historic air pollution control technologies used for establishing prior NSPS regulations. Legal, availability, technical and cost issues surrounding these components and the CO_2 capture component of CCS are reflected by recent GHG best available control technology (BACT) determinations. These determinations found CCS to be technically infeasible or not cost-effective. EPA is not projecting the path of technological development for CCS in the reasonable way that is required. On a practical level, utilities in Wisconsin seeking to build new coal-fired EGUs will likely face difficulty obtaining the necessary financing given these unresolved issues and the questionable timeframe for CCS technology.

Given these points, the proposed NSPS seems to require a "particular technological system of continuous emission reduction" for compliance – namely, natural gas combined cycle EGUs. This is contrary to Section 111 of the Clean Air Act.

Cost Considerations

EPA's cost comparison between a new natural gas combined cycle EGU and a new coal-fired EGU does not sufficiently address state- and facility-specific factors that can significantly affect the cost of a new natural gas power plant in Wisconsin. For instance, the state's natural gas pipeline infrastructure can affect these cost estimates and should be taken into account. Dairyland Power, We Energies and Wisconsin Power & Light have coal-based power plants located in southwestern and southeastern Wisconsin that would not have sufficient natural gas pipeline access if new natural gas combined cycle EGUs were constructed at these locations. Modifying the natural gas pipeline infrastructure comes at a significant cost. If new EGUs were instead located closer to existing natural gas pipelines then a modification of the existing electricity transmission infrastructure would be required. Modifying the electricity transmission infrastructure comes at a significant cost and requires a significant lead time to construct. EPA should more clearly state how these considerations were accounted for in the NSPS cost estimates.

Given the climate in Wisconsin and other northern states, the WDNR is concerned that a significant increase in natural gas consumption by EGUs could lead to a significant price increase for other sectors that frequently utilize natural gas, such as residential and commercial space heating. EPA should conduct a more region-by-region cost assessment on the impact of the proposed NSPS rule.

NSPS Review

EPA is required to review and, if appropriate, revise the NSPS at least every 8 years (i.e., 2020). Given the unresolved legal, availability, technical and cost issues associated with CCS technology, the WDNR supports an earlier review of the NSPS, perhaps in the 2014 – 2016 timeframe. Furthermore, an earlier review could also help ensure the accuracy of EPA's Integrated Planning Model (IPM) projections.

Exemption for Source Modifications

EPA should clearly state that EGUs making modifications are exempt from the NSPS requirements. Currently, there is some uncertainty in the regulated community that modifications, such as installation of pollution control equipment for other Clean Air Act requirements, will result in a source becoming subject to the proposed 1,000 lb CO_2/MWh emission rate limitation.

Emission Rate Threshold

EPA should consider a CO_2 emission rate above the currently proposed 1,800 lb CO_2/MWh threshold for the alternative 30-year compliance option. The proposed threshold was chosen by EPA based on an assumption that a supercritical coal boiler can meet this limitation. However, two supercritical coal boilers at We Energies – Elm Road are only achieving an average emission rate of approximately 1,950 lb CO_2/MWh.

Thank you for the opportunity to comment on the proposed GHG rule. Please contact Joseph Hoch of my staff at (608) 267 – 7543 or Joseph.Hoch@wisconsin.gov if you have any questions concerning our comments.

Sincerely,

Bart Sponseller
Bureau of Air Management – Director
Wisconsin Department of Natural Resources

cc: Pat Stevens – AD/8, WDNR
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