August 29, 2014

To: **Angela Dickens, Wisconsin Department of Natural Resources**
Delanie Breuer, Public Service Commission of Wisconsin

Subject: **WDNR and PSCW Questions on EPA's Clean Power Plan Proposal**

The undersigned groups thank you very much for this opportunity to respond to these questions and help inform the state's comments to EPA on this important rule proposal.

I. Overarching Issues

Electric reliability is always a concern for all stakeholders. There is no reason to think that the reduction schedule that EPA has proposed for Wisconsin will pose a threat to system reliability. Integration of renewable resources and increased dispatch of natural gas are long-standing functions of grid operators in Wisconsin and throughout the Midwest. The EPA deliberately created a long compliance horizon in the Clean Power Plan in order to provide all stakeholders with sufficient time to take thoughtful, informed, and deliberate actions. With over a ten year compliance period currently envisioned, states have more than a sufficient amount of time to anticipate any adverse impacts that the Clean Power Plan may have on electric reliability and subsequently address them in coordination with regional grid operators and other states.

Stranded costs are a concern for ratepayers but more so for shareholders. Cost period is a more important overarching issue and we are encouraged that EPA designed a proposed rule that is based on the strategies with the lowest cost. Furthermore, states have the authority to pursue a compliance strategy that bests fits their unique circumstances. If a state made avoiding stranded costs a priority in its compliance plan, the state is empowered to do that under the Clean Power Plan so long as it achieves the necessary reductions. The Clean Power Plan is an opportunity for both utilities and independent power producers to maximize their value to their shareholders and to ratepayers by making smart investments in clean energy technologies.

We are concerned that among the issues the Department has identified you are not seeking comment on any of the potential benefits of the rule. We believe the biggest overarching issue is whether the proposed rule will make a significant difference in mitigating the adverse environmental and public health impacts that are certain to come absent this rule and many other actions. We would also suggest that the Department analyze the potential co-benefits that the Clean Power Plan may have, and implement compliance measures that help the Department

fulfill other statutory and regulatory obligations. Given the Department's mission, it is somewhat shocking that in your list of roughly 80 questions not one of them hints at environmental or human health protection. The Department can and should see the Clean Power Plan as a powerful regulatory vehicle toward a cleaner environment and a healthier population, and should solicit feedback from all stakeholders to help find opportunities for co-benefits, and specifically in how the Clean Power Plan may help power producers comply with existing laws and regulations.

A system approach to setting BSER is clearly superior to a unit-based approach. A unit-based (inside the fence-line) approach is bound to cost more and achieve far, far less (assuming it's a half-way honest approach to addressing the problem of global warming). The system approach to setting the BSER better accounts for the integrated nature of our electrical system and provides a much greater range of compliance measures than does a unit-based approach. A unit-based approach would exacerbate utility concerns over compliance costs and decrease the Department's flexibility in creating a least-cost compliance strategy.

II. Setting State Goals

a. Baseline

We are supportive of an implementation plan that recognizes and rewards early action; early action that has occurred in the past AND early action as defined as action that can be taken between now and the time when state implementation plans are submitted and approved. It's important to distinguish the setting of a baseline for the purposes of setting a reduction target as opposed to setting a baseline for the purpose of compliance budgets. EPA set the reduction targets for each state based on calculations of emission reduction opportunities between the time they wrote the rule (most recent reliable data – 2012) and a flexible target date in the future. They also calculated what the emission reductions would be between 2005 and 2030. Neither of these exercises has any impact on whether or not utilities receive "credit" for early reductions.

The concept of credit for early reductions only makes sense in the context of compliance requirements. EPA has not proposed ANY compliance requirement limitations, so their proposal is silent on the issue of credit for early reductions and would therefore presumably allow states to attribute credit for early actions. To the extent that the baseline is set to reward early action for the purpose of compliance, the threshold question is whether you want that baseline set by EPA or, as EPA is proposing in its draft rule, to leave it to the states to determine the best way to reward early action in the compliance requirements (implementation plan). This question is extremely confusing because it is asked in a way that suggests a lack of understanding of what EPA has proposed, yet we know that DNR staff understands the proposed rule very well.

b. Building Blocks

The "Building Block" approach to setting state goals is both appropriate and legally defensible. The EPA is required to make a determination of "best system of emissions reduction" ('BSER') for existing sources of pollution under CAA 111(d), It is based on a standard of performance that "reflects the degree of emission limitation achievable through the application of the best system of emission reduction...adequately demonstrated."[1] The EPA's approach to BSER is a systems approach, accounting for the integrated nature of the electrical system and the fungibility of electricity. The Building Blocks are measures that combine direct actions on the specific, carbon pollution-emitting EGUs (Building Block 1) with indirect actions that have an impact on those specific, carbon-emitting EGUs (Building Blocks 2, 3, and 4) that result in a reduction of carbon pollution.

The "Building Blocks" approach is the 'best' system of emission reduction because they achieve the desirable level of reductions of the pollutant, incentivize the deployment and further development of technology and practices that reduce the pollutant, are largely consistent with a general, historical trend of 'decarbonization' of the energy sector, dating back to the Industrial Revolution, and, lastly, achieve the desirable reductions at appropriate costs consistent with existing sector practices and technologies. This determination is in line with both the judicial authority granted to the EPA to regulate carbon pollution under the CAA as well as other administrative rulemaking proceedings where the EPA has determined BSER.

i. Block 1: Heat Rate Improvements

For the sake of calculating the state goals, the application of a uniform increase in the improvement of the heat rate of affected EGUs is appropriate. It is in no way construed by the EPA to be a legally binding compliance measure. While some EGUs in Wisconsin may not be able to achieve a 4% improvement in heat rate or a 2% improvement through equipment upgrades, compliance options for Wisconsin are not limited to a general heat rate improvement. Wisconsin can easily pursue compliance measures ranging from determining which affected EGUs are ripe for retirement to an efficiency-based re-dispatch, among countless others that are relevant to Building Block 1.

The absence of any questions related to what possible co-benefits this Building Block may have is glaring. Improving the efficiency of affected EGUs could result in substantial reductions of other pollutants regulated under the CAA and that affect environmental and public health in Wisconsin. Additionally, re-dispatching from less efficient EGUs (presumably older)

[1] 42 U.S.C. §7411(a)(1)

to more efficient EGUs (presumably newer) would also result in less emissions of other pollutants, as the newer units are likely to have greater and more effective pollution controls. Any reduction in the use of coal-fired EGUs or improvement in the efficiency of coal-fired EGUs have significant and quantifiable impacts on environmental and public health and should be considered by the Department in its formulation of a compliance strategy for Wisconsin.

ii. Block 2: Increased Dispatch of NGCC Units

According to a report by the Massachusetts Institute of Technology, natural gas combined cycle power generators are able to operate at capacities as high as 85%.[2] While there are a variety of factors that determine dispatch, there is no technical limitation for NGCC to ramp up their capacity to factor to at least 70%, as assumed by the EPA. An analysis conducted by Synapse Energy Economics, Inc. concluded that in the eGRID subregions that Wisconsin is in, there is a combined potential to increase generation from NGCC to 54 TWh assuming an 80% capacity factor.[3] They also conclude that there is "ample, existing, unused potential that would require no additional plant construction costs to displace the generation from existing coal capacity."[4]

iii. Block 3b: Increased Generation of Renewable Energy

The method employed by the EPA to calculate the renewable energy goal for each state is based on a regional average of existing state renewable energy portfolio standards (RPS). RPSs are a widely used and understood policy mechanism used by states to meaningfully develop renewable energy resources in their respective states. However, a technical potential analysis may be more appropriate in setting the renewable energy goal for each state, as it does a better job at accounting for the specific circumstances for each state and better illustrates the enormous potential that Wisconsin has to develop its own renewable energy resources. The Department should be soliciting feedback with regards to the economic and environmental benefits of developing in-state renewable energy resources and what compliance options would be best to encourage the development of renewable energy in Wisconsin.

There is significant technical potential in Wisconsin to greatly expand our use of renewable energy. In July 2012, NREL published a report that performed a technology-by-technology

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[2] Rachakonda, Anil, "Potentially available natural gas combined cycle capacity : opportunities for substantial CO_2 emissions reductions." 2010. Accessed at: http://dspace.mit.edu/handle/1721.1/62774.
[3] Synapse Energy Economics, "Displacing Coal: An Analysis of Natural Gas Potential in the 2012 Electric System Dispatch," at 6. August 2013. Accessed at: http://www.synapse-energy.com/Downloads/SynapseReport.2013-09.EF.Displacing-Coal.13-020.pdf
[4] *Id.*, at 1.

analysis on the renewable energy potential in the U.S.[5] Broadly, the results of the report represents the "achievable energy generation of a particular technology given system performance, topographic limitations, environmental, and land-use constraints." This report analyzed the technical potential of several renewable energy technologies in every state in the U.S. The report found that Wisconsin has enormous technical potential for renewable energy: the potential for approximately 3,523 GW of installed capacity and upwards of 6,347 TWh of generation capacity. Contrast this with our current installed RE capacity of 1.684 GW and only 4.75 TWh of generation. It is therefore entirely possible for Wisconsin to expand renewable generation to 11% of total generation relying only on in-state resources.

However, it is not necessary that Wisconsin derives all of its renewable energy generation from in-state sources. The Clean Power Plan makes it explicitly clear that out-of-state renewable generation can be counted as a state's compliance measure. There is already a sufficient system to track renewable energy credits (RECs) and it wouldn't likely need any major modifications in order to be used to account for and verify out-of-state purchases of RE.

iv. Block 4: Energy Efficiency

Energy efficiency is the most cost-effective compliance measure available to states. According to the American Council for an Energy-Efficient Economy, on a levelized cost of energy (LCOE) basis, energy efficiency is the least cost resource—with an average cost of 2.8 cents per kWh.[6] Even more compelling, energy efficiency had a cost of only 1.5 cents per kWh in Wisconsin in 2012.[7] Not only is energy efficiency a "no regrets" policy for Wisconsin's overall energy policy based on its cost alone, it has enormous potential to be an effective compliance measure in Wisconsin.

Focus on Energy has a proven track record of success. It provides almost $3 in economic benefits for every $1 spent on its energy efficiency programs. The Focus on Energy program should remain the centerpiece of Wisconsin's energy efficiency strategy, and serve as the compliance vehicle for Building Block 4 of the Clean Power Plan. In 2009, the Energy Center of Wisconsin ("ECW") determined that by 2012, Wisconsin could obtain annual energy savings equivalent to 1.6% of total electricity sales.[8] Contrasted with EPA's assumption that Wisconsin will achieve energy savings equal to 1.5% of total electricity sales by 2020, we have an enormous opportunity to make energy efficiency a central compliance strategy in

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[5] National Renewable Energy Laboratory, "U.S. Renewable Energy Technical Potentials: A GIS-Based Analysis." July 2012. Accessed at: http://www.nrel.gov/docs/fy12osti/51946.pdf

[6] Maggie Molina, ACEEE, "The Best Value for America's Energy Dollar: A National Review of the Cost of Utility Energy Efficiency Programs," at iii. March 2014. Accessed at: http://www.aceee.org/research-report/u1402

[7] *Id.*, at 19. See Table 3.

[8] Energy Center of Wisconsin, "Energy Efficiency and Customer-Sited Renewable Resource Potential in Wisconsin," at EE-2. Accessed at: http://psc.wi.gov/reports/documents/wipotentialfinal.pdf

Wisconsin. In this same report, ECW found that Wisconsin could achieve cumulative energy efficiency savings of 13.0% of total electricity sales by 2018.[9] This stands in stark contrast to EPA's assumption that Wisconsin can achieve cumulative energy efficiency savings of 12.17% by 2030. By expanding the Focus on Energy program that provides funding for qualifying energy efficiency projects around our state, Wisconsin can achieve the goal EPA set for our state under the Clean Power Plan, and in the process actually reduce energy bills for many business and home owners.

c. Alternative Approaches

There are many aspects of the Clean Power Plan that are conservative projections of what states can achieve. Clean Wisconsin believes that our state is well positioned to far exceed the requirements that the EPA is proposing, and so an even less stringent approach will only limit our potential for greater carbon pollution reductions and public health benefits. Further, a shorter compliance window as outlined in the alternative approach provides less time for states in implementing their plans.

III. Compliance with the Rule

a. Compliance Flexibility

The flexibility in the rule is extremely robust. That's a good thing. EPA is basically giving the states 100% latitude in deciding how to reduce its emissions. The only sidebar on how reductions can be made is requiring that they be made within the source category – the electric sector. This is a critical distinction for many reasons including legal reasons. Given that EPA is required to set a BSER for each major source of stationary emissions it is important that they not require or allow one source to count reductions in another source that is yet to be regulated. There may be limited exceptions to this general rule and you have noted one in your question which is CHP. The proposed rule is somewhat vague on the treatment of CHP and we would argue that the emission reductions achieved by reducing fossil heating that is replaced with the waste heat from a CHP unit is integral to the EGU. In the case of CHP units owned by utilities this rule seems to clearly be the best opportunity to capture those emission reductions but even in the case of an industrial self-generator, we view this rule as an opportunity that such potential projects do not fall between the regulatory cracks.

EPA is also affording states tremendous flexibility in giving states a timeline with two compliance dates, one of 2030 which is 15 years from now and 12 years after EPA is likely to

[9] *Id.*

approve state plans, and an interim goal which an average over 10 years (from 2020 to 2030). States need to show progress towards the average reduction (they can't wait until the last minutes) but this is still very flexible. This gives states ample time to enact any necessary legislation and undergo the long-term planning necessary to ultimately implement compliance plans in an informed, deliberative, and comprehensive way.

b. Responsible Parties

As you have described emission limit approaches and portfolio approaches the proposed rule does not seem to preclude either approach but rather encourage both. In addition to utilities is makes sense to for states to be responsible parties for lots of reasons. Beyond utilities and the state there may be other appropriate responsible parties but it becomes increasingly difficult to identify the legal implications.

c. Rate and Mass based Standards

It would be useful if EPA would give more guidance on acceptable methodologies for determining mass-based targets. It would also be useful if EPA did this calculation for each state and offered those as alternative targets. Although the fact that they allow states to propose their own conversion methods is another good example of unprecedented flexibility.

d. Use of New Facilities for Compliance

We do not see any significant problems with using newly constructed EGU's (e.g. new NGCC units) that are allowable under 111(b) to be used for compliance under 111(d). We understand why EPA did not spend more time defining their use or including them in one of the building blocks – because they were focused on the lowest cost solutions, but we do think that new, natural gas fired combined heat and power units in particular, could play an important role in compliance with the proposed rules.

e. Interstate Effects – RE

We do feel it is appropriate to count renewable generation from other states as long as it is not double counted. As mentioned earlier, the EPA explicitly states that renewable energy generated out of state will count toward a state's compliance plan, and there already mechanisms in place to track RECs. Augmenting these existing mechanisms to be useful for compliance accounting

and verification should not be a major, or even a minor, obstacle in complying with the Clean Power Plan.

Thank you very much for this opportunity to comment.

Sincerely,

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