

WPPI Energy Response

WDNR and PSCW Questions on EPA's Clean Power Plan Proposal.

WPPI Energy appreciates the opportunity to provide input to the Wisconsin Department of Natural Resources (WDNR) and the Public Service Commission of Wisconsin (PSCW) regarding the U.S. Environmental Protection Agency's (EPA) Clean Power Plan proposal. We have participated actively with other Wisconsin utilities in analyzing and responding to the list of questions posed by the state regulatory bodies and endorse the joint utility responses being submitted separately. Our responses below stand in addition to, or in some cases, reinforcement of, the responses provided by the utility group.

Background

WPPI Energy is a regional, not-for-profit power company headquartered near Madison, serving 51 locally owned electric utilities in Wisconsin (41), Michigan (7) and Iowa (3). Through WPPI Energy, these public power utilities share resources and own generation facilities to provide reliable, affordable electricity to 200,000 homes and businesses in the three states. Our peak load in 2013 was 1,025 megawatts, and our annual energy sales to members in 2013 totaled 5,381 gigawatt-hours.

WPPI Energy relies upon a diversified power supply portfolio to serve our member utilities' needs. This portfolio includes "slice of system" power purchases from Midwest investor-owned utilities (IOUs) and ownership and purchases in nuclear, coal, natural gas and renewable generation sources. In 2013, our overall power supply mix was 54% coal, 23% nuclear, 10% natural gas and 13% renewables.

Like most Midwestern utilities, WPPI Energy and our 51 members have historically relied upon coal generation to meet a large portion of our baseload energy needs. In fact, for more than 100 years coal has been the dominant fuel source used to economically meet our member communities' energy needs. It has kept the lights on, allowing our communities to grow and our industries to flourish. We have encouraged EPA to carefully consider the range of reliability impacts new regulations will have on our communities. We have further urged EPA to recognize that the impacts of regulation are likely to fall disproportionately on those states and regions where economics have driven significant investment in coal-fired generation.

Early Action by WPPI Energy

Despite the role of coal in our generating portfolio, we have not ignored the impacts of our resource decisions. Our member utilities are an integral part of their communities. They are not just in the business of energy; they also have a strong sense of environmental responsibility to the cities and villages they serve.

For more than 10 years, WPPI Energy members have recognized the value of maximizing our lowest-cost and lowest-impact power supply resource: energy efficiency. In addition to our members' full participation in Wisconsin's Focus on Energy program, WPPI Energy has worked with members to manage complementary energy efficiency programs. In the last seven years alone, those efforts have resulted in a cumulative reduction in system demand of more than 50 megawatts (MW).

Since 2005, WPPI Energy has quantified and tracked our greenhouse gas (GHG) emissions levels and factored in the goal of emissions reduction in our power supply planning.

WPPI Energy Response

As a system, we've also embraced renewable energy power supply resources, now at more than 13% of our power supply portfolio, and adopted a specific, concerted emission reduction strategy in 2008 that led us to enter into a long-term power purchase agreement for approximately 160 MW of nuclear capacity in 2011.

As these examples demonstrate, for more than a decade, WPPI Energy and our 51 members have been taking proactive steps to reduce our GHG emissions. Some of these actions have come with an increase in near-term cost to our members in the form of higher wholesale prices. Yet members still endorsed these actions because they recognized the long-term value to their communities, their states and the country.

We have reviewed the proposed Clean Power Plan in detail and appreciate this opportunity to share some of our preliminary observations. Before answering the specific questions posed by the WDNR and PSCW, we highlight some of our most significant concerns with the draft rule.

Credit for Early Action

As an organization, WPPI Energy should be well-positioned to comply with a rule that limits CO₂ emissions. EPA's Clean Power Plan purports to reduce overall GHG emissions by 30% from 2005. Since 2005, WPPI Energy and our members have taken actions that reduced our CO₂ emissions by over 23%. However, the EPA's goal-setting mechanism and use of a 2012 baseline for the purpose of setting state goals generally fails to recognize emission-reducing actions taken by states prior to 2012. In many cases, early actions result in more stringent goals for the states that took such action. Examples of early actions taken by WPPI, and their effect on the EPA's goal-setting calculations, include the following:

- Aggressive energy efficiency efforts by WPPI and other Wisconsin utilities resulted in a high level of baseline energy efficiency in 2012, making Wisconsin's interim emission goal more stringent than it would have been had baseline energy efficiency been lower.
- WPPI's 2010 steam turbine upgrade project at Boswell Energy Center Unit 4 resulted in a lower baseline emission rate for the state of Minnesota in 2012, making the state's interim and final emissions goals more stringent.
- The 2011 extended power uprate at the Point Beach Nuclear Plant, supported by a power purchase agreement with WPPI, increased the state's "at-risk" nuclear capacity, resulting in more-stringent interim and final emissions goals.

Equity between States

By assigning state-by-state emission reduction requirements using a baseline year of 2012, the proposed rule often requires deeper cuts by states that have taken early action than by states that have not. Wisconsin, for example, would be expected to reduce its CO₂ emission rate by more than 34% by 2030. Minnesota, which is home to WPPI Energy's Boswell coal plant, would be required to reduce emissions by more than 40%. North Dakota, by contrast, would need to make a reduction of less than 11%.

Particularly troubling is the EPA's exclusion of out-of-state renewables in setting states' goals. This is a significant problem for Wisconsin and WPPI Energy because a significant portion of our renewable portfolio is located in other states. This creates a situation where WPPI Energy members are paying for renewable energy investments and the states where the investments are located will see less stringent emissions targets while Wisconsin's targets become more stringent.

WPPI Energy Response

Multi-state/Regional Approach

We believe that the most cost effective compliance regime will embrace regional solutions. While the draft rule does contemplate such regional solutions, the EPA's concept of a regional approach — under which participating states would average their emissions rate goals to create a single regional goal — is unrealistic, as there is little reason to expect that states with higher-than-average goals would be willing to accept a lower regional goal. We believe a more-realistic regional approach which would allow states to retain their individual goals, while providing for trading between states of credits representing tons of emissions or megawatt-hours of generation. EPA or another third party entity could provide a credit tracking system to be used by states wishing to participate.

Pace of Emission Reductions

The proposed rule's emission reduction goals are highly front-loaded. States would have until 2030 to comply with the rule's final emission goals, but Wisconsin's interim goal would require the state to be over 87% of the way toward this final goal during the decade beginning in 2020. While compliance with the interim goal would be measured on a 10-year average basis between 2020 and 2029, any under-compliance in the early years of this period would have to be compensated for by over-compliance in the later years. Since the state's plan may not be approved by EPA until as late as the middle of 2019, requiring such a significant emission reduction beginning only a half year later is not realistic.

Access to EPA Modeling Results

In its Regulatory Impact Analysis for the Clean Power Plan, the EPA claims that the proposed rule will result in a decrease in the electric bills paid by retail customers. Unfortunately, the EPA has provided access to only a limited number of detailed modeling files, making it difficult to evaluate important modeling assumptions, including the treatment of stranded costs from the large number of coal-fired plants that are projected to be retired. Importantly, none of the detailed modeling results made available by EPA cover the period after 2025 when the final goals take effect.

We believe in pursuing a balanced approach to protecting the environment and lowering our carbon emissions without placing an unfair economic burden on Wisconsin's homes and businesses. We are eager to work with our state regulators for sound energy and environmental policy that finds that right balance for Wisconsin.

Thank you again for the opportunity to provide input. Below, we provide our responses to those questions to which a joint utility response is not being provided, or to which an additional WPPI response is appropriate.

WPPI Energy Response

I. OVERARCHING ISSUES.

- b. **Stranded Costs.** How does the proposed rule impact previous investments in emission controls, including type and magnitude of impact? Does the proposed rule include options to avoid stranded costs? If not, what could EPA change to address this? Is a certain level of stranded costs acceptable, and if so, what level?

Response: The proposed rule would have a potentially significant impact on previous investments in emission controls, as EPA's modeling shows that a significant portion of the required emission reductions would be achieved through coal plant retirements. WPPI is currently participating in an air quality control system upgrade project to reduce mercury, particulate matter and SO₂ emissions at Boswell Unit 4 in Cohasset, Minnesota. WPPI's participation in the project was approved by the PSCW in Docket No. 6685-CE-110, at an estimated cost to WPPI of approximately \$96 million. The project is expected to be completed in December, 2015. In its IPM modeling, EPA shows Boswell Unit 4 as retiring by 2020. The proposed rule does not include provisions to avoid stranded costs, and it is not clear that EPA included stranded costs when it determined the estimated impact of the rule.

- c. **System- versus unit-based approach.** Please comment on the EPA's consideration of the electrical system as a whole in setting BSER (best system of emission reduction), and the EPA's interpretation of what is an 'adequately demonstrated' BSER. Would an 'inside the fence line' approach be more appropriate for goal setting and/or compliance? Why or why not? Please discuss any related legal concerns.

WPPI does not have a response.

II. SETTING STATE GOALS.

a. Baseline.

- iv. Please provide your estimate of the amount of reduction due to actions between 2005 and 2012 that have not been included in the goal setting for our state, and the cost of those measures since 2005.

Response: WPPI took a number of actions between 2005 and 2012 that were either not included by the EPA when setting Wisconsin's goal, or were included to the detriment of the state:

- In 2007, WPPI entered into an agreement to purchase 50 MW from the Top of Iowa II wind project in Iowa. Through the end of 2012, WPPI*

WPPI Energy Response

received approximately 613,000 MWh from Top of Iowa II. Rather than being considered in setting Wisconsin's goal, energy generated at Top of Iowa II in 2012 was counted as baseline renewable energy in determining the goal for the State of Iowa.

- In 2008, WPPI entered into an agreement to purchase 30 MW from the Barton I wind project in Iowa. Through the end of 2012, WPPI received approximately 280,000 MWh from Barton I. Rather than being considered in setting Wisconsin's goal, energy generated at Barton I in 2012 was counted as baseline renewable energy in determining the goal for the State of Iowa.*
- In 2011, WPPI entered into an agreement to purchase approximately 162 MW of incremental output resulting from an extended power uprate at the Point Beach Nuclear Plant. Through the end of 2012, WPPI received approximately 1.1 million MWh from Point Beach. Rather than providing Wisconsin any credit for adding this carbon-free generation, the extended power uprate resulted in a higher nameplate capacity for Point Beach, increasing the at-risk nuclear factor in the goal-setting calculation and increasing the stringency of Wisconsin's goal.*
- WPPI has long maintained an aggressive energy efficiency program, resulting in a total savings of approximately 350,000 MWh from 2005 through 2012. As a result of the state's high level of baseline energy efficiency in 2012, Wisconsin's interim emissions goal is more stringent than it would have been if baseline energy efficiency had been lower.*

Through the end of 2012, the actions listed above resulted in a net cost to WPPI of over \$60 million compared to purchasing an equivalent amount of energy from the MISO market.

In addition, as detailed below, in 2010, WPPI participated in a steam turbine upgrade project at Boswell Unit 4 that increased the plant's output by approximately 8.5%, with no increase in fuel input. Through the end of 2012, this resulted in the production of the equivalent of approximately 145,000 MWh of carbon-free generation from WPPI's portion of the unit. WPPI's cost for the project was approximately \$9.3 million. Because the project reduced the unit's emission rate in 2012, it resulted in a more stringent goal for Minnesota than would have resulted if the project had not been done. In addition, since the steam turbine has already been upgraded, a steam turbine upgrade will not be available as a potential heat rate improvement project for compliance purposes.

WPPI Energy Response

b. Building Blocks.

i. Building Block 1: Heat Rate Improvements.

2. What costs and timeframes would be needed to implement these heat rate improvements?

Response: The Boswell Unit 4 steam turbine upgrade project, described earlier in response to the following question, required approximately three years to complete, at a cost to WPPI of approximately \$9.3 million.

6. For utilities: please identify any heat rate improvements made since 2005 and provide specific cost and percentage change in heat rate for each unit.

Response: In 2010, WPPI participated in a steam turbine upgrade project at Boswell Energy Center Unit 4 in Cohasset, Minnesota. The project, approved by the PSCW in Docket No. 6685-CE-109, increased the output of WPPI's 20% share of the plant from approximately 107 MW to 117 MW, with no additional fuel input. This is equivalent to a heat rate improvement of approximately 8.5%. WPPI's cost for the upgrade project was approximately \$9.3 million.

7. For utilities: identify any heat rate changes from emission control projects and provide specific cost and percentage change in heat rate for each unit. Discuss whether these changes are considered in the baseline.

Response: As noted earlier, WPPI is participating in an air quality control system upgrade project at Boswell Unit 4 at an estimated cost to WPPI of approximately \$96 million. The project is expected to be completed in December, 2015. At this time, the effect of the project on the plant's heat rate is not known.

III. COMPLIANCE WITH THE RULE.

- e. **Expansion of renewables.** For utilities: how much additional renewable generation and what type do you anticipate using to comply with this rule? Are you likely to build this capacity in state or out-of-state? Please provide any costs estimates, if you have them, for this additional capacity, whether it is generation or transmission costs.

Response: Given the considerable uncertainty over potential changes between the proposed and final rule, and over the nature of the state plans that are to be developed under that rule, WPPI believes it would be premature to consider a specific compliance

WPPI Energy Response

strategy at this time. In the past, we have generally found wind to be the most economical source of renewable energy, and have found that prices for wind energy are generally lower from wind projects located in states that have better wind resources than Wisconsin.

- f. **Interstate effects - RE.** EPA states that renewable electricity purchased from out-of-state could count towards compliance if the states ensure that this electricity will not be double counted. Is this appropriate? Can you suggest any way to structure the program to ensure that such electricity is not double-counted?

Response: WPPI strongly agrees that renewable energy purchased from out-of-state should count toward compliance, as EPA has proposed. Purchasing renewable energy from out-of-state facilities is allowable under Wisconsin's renewable portfolio standard and is often more economical than purchasing from in-state facilities. Approximately half of WPPI's renewable portfolio is located in Iowa. Since WPPI's members are paying for these resources, they should clearly be able to take credit for the resource for compliance purposes. For a discussion of the avoidance of double-counting, please see the joint utility response to this question.

- j. **Federal enforceability of compliance measures.** If a program is explicitly used as a compliance measure under this program, EPA has stated that that program must become federally enforceable. Do you foresee any issues with having existing state programs (such as the RPS and Focus on Energy) become federally enforceable?

WPPI does not have a response.

