

US EPA ARCHIVE DOCUMENT

## **Joint XL Project Proposal**

### **Wisconsin Department of Natural Resources' and the Wisconsin Electric Power Company's Integrated Air Quality Strategy for the Wisconsin Electric Power Company**

#### **Introduction**

The Wisconsin Department of Natural Resources (“WDNR”) and the Wisconsin Electric Power Company (“Wisconsin Electric” or the “Company”) have developed this joint proposal under U.S. EPA’s Project XL Pilot Program to pilot an integrated air quality strategy for Wisconsin Electric’s coal burning power plants.

Wisconsin Electric, a subsidiary of Wisconsin Energy Corporation, produces, delivers, and sells electric energy in an area of about 12,000 square miles in the southeastern, east central, and northern portions of Wisconsin and the Upper Peninsula of Michigan. It operates 6 coal fired electric generating stations. It also operates 3 natural gas fired generating stations, several hydroelectric generating stations, a wind turbine, and a nuclear power plant.

Wisconsin Electric provides power to approximately 2.3 million people. The Company also purchases natural gas, transports it to Wisconsin through pipeline companies and distributes and sells it in a territory of about 3,800 square miles primarily in the area west and southwest of Milwaukee, an area along the Michigan border, the Appleton area, and the Prairie du Chien area. Wisconsin Electric also provides steam service for heating and manufacturing processes to about 500 customers in Milwaukee through a small coal burning unit.

As part of its corporate mission, Wisconsin Electric is committed to improving the quality of life in the area it services. Consistent with this mission, Wisconsin Electric continually works to improve the compatibility of its operations with the environment by integrating environmental factors into its planning and operating decisions and minimizing the environmental impacts of its operations by meeting or surpassing environmental standards. Consistent with this corporate mission, Wisconsin Electric has been working with WDNR to develop this XL project, which will result in emission reductions throughout the Wisconsin Electric system to the benefit of its customers and the residents of its service territory.

#### **WDNR and Wisconsin Electric’s Proposed XL Project**

WDNR and Wisconsin Electric propose as part of their XL project to implement an integrated air quality approach at all 6 of Wisconsin Electric’s coal burning steam electric generating stations, including the Presque Isle facility located in the Upper Peninsula of Michigan. Under Project XL, Wisconsin Electric will accept enforceable system-wide limitations and

requirements on emissions of sulfur dioxide (“SO<sub>2</sub>”), nitrogen oxides (“NO<sub>x</sub>”), and particulate matter at its coal burning plants, and it will accept work practice requirements to address carbon monoxide emissions at those plants. The proposed emission limits will be phased in over a 10 year period ending in 2010. Wisconsin Electric will meet certain interim limits for NO<sub>x</sub>, SO<sub>2</sub> and particulate matter in 2005. These proposed limits are more stringent than the limitations to which Wisconsin Electric is currently subject. To achieve these limitations, Wisconsin Electric will be required to reduce emissions from its system of coal burning units.

In exchange for agreeing to comply with more stringent limitations than currently required, Wisconsin Electric will receive flexibility with regard to making certain physical or operational changes at its non-nuclear generating stations. Specifically, under the XL Project, Wisconsin Electric will be able to make physical or operational changes at its facilities without triggering New Source Review (“NSR”) or Prevention of Significant Deterioration (“PSD”) and New Source Performance Standards (“NSPS”) as long as the change either (1) qualifies for an exemption from NSR/PSD under 40 CFR § 52.21 or (2) emissions following the proposed modification do not exceed pounds per hour (“lbs/hr”) limits set for each generating unit based on actual emissions during the period 1995 – 2000. By limiting emissions from physical changes that do not otherwise qualify for a PSD/NSR exemption, the XL Agreement will ensure that emissions from the Wisconsin Electric System will not exceed previously permitted emission levels. Wisconsin Electric and WDNR believe that this permitting proposal will provide Wisconsin Electric with the flexibility and the incentive to make improvements to its generating system. These improvements will ultimately enable it to produce power for its customers more efficiently and in a manner compatible to the environment.

This proposed XL project would not absolve Wisconsin Electric from having to meet any new federal or state statutory or regulatory requirements adopted at a later date.

### **Environmental Benefits of the Proposed XL Project**

WDNR’s and Wisconsin Electric’s proposed XL project will result in emission reductions in SO<sub>2</sub>, NO<sub>x</sub> and particulate matter from the coal burning electric generating units within the Wisconsin Electric System and will require Wisconsin Electric to maintain and implement good combustion practices at its coal burning units to manage carbon monoxide emissions. The emission reductions proposed as part of this XL project are more stringent than requirements currently in place for the Wisconsin Electric System and will require Wisconsin Electric to reduce its emissions over the next ten years. Specifically, Wisconsin Electric proposes to achieve a rate based SO<sub>2</sub> limit of 0.6 lbs/mmBTU and a rate based particulate matter limit of 0.03 lbs/mmBTU by December 31, 2010, with interim limits of 0.9 lbs/mmBTU of SO<sub>2</sub> and 0.06 lbs/mmBTU of particulate matter to be achieved by December 31, 2005. Wisconsin Electric’s current system wide weighted average rate for SO<sub>2</sub> is approximately 0.96 lbs/mmBTU, and its system-wide weighted average rate for particulate matter is already about 0.03 lbs/mmBTU.

Under this proposal, Wisconsin Electric will also meet by May 1, 2010 a rate based NO<sub>x</sub> limit of 0.15 lbs/mmBTU. An interim NO<sub>x</sub> limitation of 0.25 lbs/mmBTU will be achieved by 2005, though WDNR is proposing an ozone season NO<sub>x</sub> emission rate limit of 0.25 to 0.29

lbs/mmBTU in 2007 for electric generating units. Wisconsin Electric's current system wide weighted average NOx rate is approximately 0.43 lbs/mmBTU.

Wisconsin Electric will meet these limits on a system-wide basis – averaging between its coal burning units to determine the system-wide emission number. Wisconsin Electric, however, would like the option to participate in any emission trading programs that may be developed during the term of the proposed XL project under which Wisconsin Electric would otherwise have been eligible to participate.

In addition to the proposed limitations on SO<sub>2</sub>, NO<sub>x</sub> and particulate matter, Wisconsin Electric and WDNR propose to work together toward achieving certain performance goals with regard to mercury and greenhouse gas emissions. With regard to mercury, Wisconsin Electric proposes a goal of reducing mercury emissions from its coal burning facilities by 10% from 1997-1999 levels by 2005. It further proposes to reduce mercury emissions from a mix of coal burning sources, other compliance options, and other mercury emitting sources by 40% from 1997-1999 levels by 2010. Wisconsin Electric and WDNR will also work together to implement its early reduction registry system for greenhouse gases. Wisconsin Electric intends to take action to reduce emissions of greenhouse gases and will register any reductions which occur. Wisconsin Electric and WDNR believe that these goals and the environmental commitments on NO<sub>x</sub>, SO<sub>2</sub>, particulate matter and carbon monoxide represent superior environmental performance since they are beyond current regulatory requirements.

### **Cost Savings and Paperwork Reduction**

In addition to the environmental benefits discussed above, Wisconsin Electric and WDNR believe that this project will result in additional flexibility as well as cost savings to the company and WDNR. Under the proposed XL project, Wisconsin Electric will have the flexibility to make modifications to its generating units without obtaining an NSR/PSD or NSPS permit in certain instances. This proposed permit flexibility will enable Wisconsin Electric to better maintain and operate its generating units in a cost effective and timely manner. Wisconsin Electric will also be able to implement efficiency projects at its facilities which it would not otherwise implement under the current regulatory schemes because of the costs associated with determining the applicability of NSR/PSD permitting requirements. Wisconsin Electric believes that these efficiency projects will enable it to meet the demands for power in its service area at a lower cost per megawatt hour. Wisconsin Electric also believes that these cost savings may enable it to invest more in cleaner forms of power generation to meet increasing customer demands for power and to investigate methods of reducing pollution from its coal-fired generating plants. This Agreement will also result in more predictable expenditures on environmental control equipment and correspondingly more predictable rates for Wisconsin Electric's customers.

Further, the reduction in the amount of time and paperwork associated with routine permit modifications and the certainty that this proposal provides with regard to major source permitting will also provide cost savings to WDNR and U.S. EPA. This project will reduce the time and paperwork costs associated with the review by WDNR and U.S. EPA of permit applications for physical and operational changes at the Wisconsin Electric generating stations. WDNR currently faces tight budget constraints in the Air Management Program. Reducing staff time and

paperwork costs associated with permitting activities for Wisconsin Electric will allow WDNR to allocate its scarce resources to other sources that need permits.

### **Stakeholder Involvement**

Wisconsin Electric and WDNR are committed to working with their stakeholders to make this proposed XL project a success. Wisconsin Electric has contacted certain of these stakeholders, outlined the proposed project and elicited their desire to work with Wisconsin Electric in this project. Wisconsin Electric is currently contacting additional stakeholders.

## **Innovation**

This proposed project represents an innovation from the current regulatory framework because it includes an integrated air quality approach over a ten year period. Unlike the current regulatory framework, this proposed project includes emission limitations and emission reduction requirements on a system-wide basis for SO<sub>2</sub>, NO<sub>x</sub>, and particulate matter which will become applicable to the company over the next ten years. It also contains work practice requirements to address carbon monoxide emissions and corporate goals for mercury and greenhouse gas emission reductions during the ten year period.

By setting forth interim and final limitations to be achieved by the company at 5 years and 10 years, this proposal provides Wisconsin Electric with the time to investigate the best methods to achieve these proposed limitations within the time period required, as opposed to the current regulatory scheme under which companies often have as little as 3 years from promulgation of a final rule to implement the emission control requirements of that rule. Under the current scheme, there is little time to develop innovative pollution prevention or pollution control strategies. There is also little time to determine how best to comply with emission reduction requirements so that the greatest environmental benefit can be achieved considering the cost of control or reduction. Under this proposal, however, Wisconsin Electric will be able to investigate the most appropriate pollution control options, and it will be able to investigate new pollution control strategies that it would not otherwise do under the current regulatory scheme. Wisconsin Electric and WDNR believe that this approach will result in greater environmental benefits at a lower cost than would be achieved under the current regulatory scheme.

## **Transferability**

Wisconsin Electric and WDNR believe that this proposed approach is readily transferable to other utilities and independent power producers.

## **Feasibility**

The management of Wisconsin Electric and WDNR fully support this project and intend to commit the resources – both financial and technical - necessary to implement it. Wisconsin Electric has the technical personnel who will be able to implement the elements of this proposal. Additionally, Wisconsin Electric has been working with WDNR on the project, and WDNR will allocate the resources necessary to implement the Final Project Agreement (“FPA”).

## **Accountability for the Proposed Limitations and Performance Goals**

As stated above, Wisconsin Electric proposes to make the following enforceable commitments which will be applicable to its coal burning generating units, excluding its 9 MW County Unit:

1. Nitrogen Oxides

Wisconsin Electric will meet the following NO<sub>x</sub> limitations across its coal burning units described above using averaging across the units:

- a. 0.25 lbs/mmBTU by May 1, 2005
- b. 0.15 lbs/mmBTU by May 1, 2010

2. Sulfur Dioxide

Wisconsin Electric will meet the following SO<sub>2</sub> limitations across its coal burning units described above using averaging across the units:

- a. 0.9 lbs/mmBTU by December 31, 2005
- b. 0.6 lbs/mmBTU by December 31, 2010

3. Particulate Matter

Wisconsin Electric will meet the following particulate matter limitations across its coal burning units described above using averaging across the units:

- a. 0.06 lbs/mmBTU by December 31, 2005
- b. 0.03 lbs/mmBTU by December 31, 2010

4. Carbon Monoxide

Wisconsin Electric will maintain and implement good combustion practices at all coal burning units covered by the Agreement to manage the emissions of carbon monoxide.

Wisconsin Electric proposes to demonstrate compliance with the NO<sub>x</sub> commitments discussed above on an annual average and a seasonal average basis. Compliance with the SO<sub>2</sub> requirements will be demonstrated on an annual average basis, and compliance with particulate matter requirements will be demonstrated using stack testing data. The annual and seasonal average will be demonstrated using the methodology required under the Federal Acid Rain program. Wisconsin Electric will maintain records demonstrating compliance with the proposed carbon monoxide requirements.

As stated above, Wisconsin Electric proposes to demonstrate compliance with the emission limitations discussed above on a system-wide basis. Wisconsin Electric and WDNR, however, believe that Wisconsin Electric should have the option of participating in an emission trading program for which it would otherwise be eligible in the event that such a program is adopted and the requirements of the program are equivalent or more stringent than the requirements proposed above. Wisconsin Electric and WDNR, therefore, propose that the FPA be reopened to address emission trading if a trading program is developed.

In addition to the enforceable commitments discussed above, Wisconsin Electric and WDNR also propose the inclusion of two corporate goals in this proposed project. These goals concern reductions in mercury and greenhouse gas emissions. With regard to mercury, Wisconsin Electric proposes a goal of reducing mercury emissions from its coal burning facilities by 10%

from 1997-1999 levels by 2005 and to reduce mercury emissions from a mix of coal burning sources, other compliance options, and other mercury emitting sources by 40% from 1997-1999 levels by 2010. Wisconsin Electric also proposes as part of the XL project to work with WDNR to implement its early reduction registry system for greenhouse gases, to take actions to reduce greenhouse gas emissions, and to register reductions in greenhouse gases.

Wisconsin Electric proposes to maintain records to demonstrate compliance with the enforceable commitments made under this XL project and to provide U.S. EPA, WDNR, and the stakeholders with information on its emissions and efforts to achieve its corporate goals for mercury and greenhouse gases in an annual report.

### **Shifting the Risk Burden**

This proposed XL project would not result in the transfer of risks of environmental pollution or contamination from one segment of the population to another. Indeed, Wisconsin Electric and WDNR do not anticipate that this project will result in increased risk from pollution to any segment of the population in the Wisconsin Electric service area. The project is anticipated to reduce pollution across the Wisconsin Electric system.

### **Requested Flexibility**

In exchange for the environmental commitments discussed above, Wisconsin Electric requests certain permitting flexibility for physical or operational changes at its non-nuclear generating plants. Under this proposed XL project, Wisconsin Electric will establish a cap on the maximum hourly emissions in lbs/hr for each of its coal burning facilities for purposes of determining the applicability of major source and NSPS permitting when the other permitting exemptions contained in the NSR/PSD rules do not apply. These maximum hourly emissions will be determined for each unit individually based upon a maximum hourly number achieved during the 5 years prior to this proposal and it would serve as an hourly cap on emissions for each respective generating unit for NSR/PSD and NSPS limits. The cap will become enforceable once the unit undergoes a physical or operational changes that is not otherwise exempt from NSR/PSD. Following a change, Wisconsin Electric will comply with the hourly emission cap on a rolling 24-hour average basis.

Under the proposal, Wisconsin Electric would determine the appropriate hourly emission cap for each unit and ensure that any proposed physical or operational change to that unit adheres to the hourly emission cap. If the emissions are maintained below the hourly emission cap, the project can be undertaken without NSR/PSD or NSPS permitting. If emissions for the proposed project exceed the hourly emission cap, major source permitting is necessary to comply with NSR/PSD requirements.

Wisconsin Electric will also establish maximum hourly emission caps for its oil and gas burning units and for its 9 MW County Unit. For these units, however, this cap would apply only to those physical or operational changes that are designed to maintain operation of the units as currently configured.

Wisconsin Electric and WDNR believe that this permitting approach will reduce the uncertainty that may exist when permitting physical or operational changes at electric generating sources by creating a “bright line” under which Wisconsin Electric could make physical or operational changes without constituting a “modification” for major source permitting purposes. Under the current regulatory scheme, any physical change that increases emissions from a generating unit is subject to NSR/PSD and/or NSPS review. To the extent that there is uncertainty among electric generators and state regulators concerning to what extent physical changes and replacements may occur without major source permitting, this approach would provide Wisconsin Electric with certainty with regard to permitting physical changes at its generating units while ensuring that actual emissions from the generating units will not increase beyond their pre-modification levels.

Wisconsin Electric also believes that the proposed approach will result in improvements at its generating units that would not otherwise occur absent this project. Under the proposed XL project, however, Wisconsin Electric will be both able and encouraged to implement energy efficiency projects which will be both environmentally and commercially beneficial.

### **Compliance and Enforcement Information**

To Wisconsin Electric’s knowledge, there are no ongoing enforcement actions or compliance issues with U.S. EPA, and the company is not currently a named party to any environmental litigation against U.S. EPA or the State of Wisconsin. Additionally, to Wisconsin Electric’s knowledge, the company does not have any on-going obligations under an administrative order or consent decree, nor is it involved in any relevant civil lawsuit relating to the environmental matters at its generating facilities

With regard to alleged violations of environmental regulations or permits in the last five years, on July 31, 1998, U.S. EPA issued a Finding of Violation (“FOV”) to Wisconsin Electric and its contractor, Sonag Company, Inc., relating to alleged violations by Sonag of the National Emissions Standard for Hazardous Air Pollutants (NESHAPS) during removal of Random Asbestos Containing Material (RACM) on February 12, 1998 at the Port Washington Power Plant. After discussions between EPA and Wisconsin Electric in September 1998, U.S. EPA deferred any enforcement action to WDNR. WDNR has been reviewing this matter and has informally communicated to Wisconsin Electric that it will not prosecute Wisconsin Electric with respect to this matter.

Wisconsin Electric also resolved the following matters with the Wisconsin Department of Justice (“DOJ”) within the last five years. First, WDNR issued Notices of Violation (“NOV”) on June 17, 1998 to Wisconsin Electric for alleged violation of the nitrogen oxides emission limit on May 17, 1998 when an equipment malfunction caused one of the combustion turbines at the Paris Generation Station to operate without the water injection system. Wisconsin Electric and the Wisconsin Department of Justice reached an agreement on September 16, 1999, to settle the claims. A satisfaction of judgement was issued by the Wisconsin DOJ on October 27, 1999. WDNR and U.S. EPA also issued NOVs (WDNR issued one on June 13, 1995 and another on December 6, 1995, and U.S. EPA issued one on March 29, 1996) to Wisconsin Electric because the company did not achieve the required SO<sub>2</sub> removal on Units 1 and 4 at the Port Washington

Power Plant for portions of 1994 and 1995. Wisconsin Electric and the Wisconsin Department of Justice reached an agreement on March 13, 1997, to settle the claims.

Finally, Wisconsin Electric also received a Letter of Violation (“LOV”), dated May 22, 1998, from the Michigan Department of Environmental Quality (“MDEQ”) citing that the slope on the coal pile at Presque Isle Power Plant was greater than the angle allowed in the permit. The coal pile restructuring was required for the construction activities related to the Units 1-4 baghouse installation. Subsequently, the coal pile was reconfigured to meet the slope requirements and the baghouse installation was completed.

### **Schedule**

As stated above, Wisconsin Electric and WDNR propose a 10 year span for this XL project with emission limitation milestones occurring in 2005 and 2010. Wisconsin Electric and WDNR anticipate that this XL project could be implemented as soon as practicable. Wisconsin Electric and WDNR believe that implementation of this project will require both a federal site specific rule applicable to permitting at one of its facilities and a revision to the State of Wisconsin State Implementation Plan (“SIP”) with regard to permitting at its remaining facilities. Wisconsin Electric and WDNR propose to work closely with U.S. EPA to ensure that these site specific rules/SIP revisions could be implemented as soon as practicable.

### **Conclusion**

WDNR and Wisconsin Electric are pleased to make this joint proposed XL project submittal and look forward to working with U.S. EPA to implement this XL project. For Wisconsin Electric, the primary contact for this proposed XL project is Kris McKinney, and he can be reached at (414)221-2157. For WDNR, the primary contact is John Shenot, and he can be reached at (608)267-0802. If you have any questions with regard to this proposal, please feel free to contact either of these individuals.

11111933v8