

**Testimony**  
**Energy Development and Transmission Committee**  
**October 3, 2011; 11:30 a.m.**  
**North Dakota Department of Health**

Good morning, Chairman Wardner and members of the Energy Development and Transmission Committee. My name is L. David Glatt, Chief of the Environmental Health Section for the North Dakota Department of Health. The Environmental Health Section is responsible for the implementation and enforcement of many of the environmental protection programs in the state. These programs include the federal Clean Air Act, Clean Water Act, Safe Drinking Water Act and Resource Conservation and Recovery Act.

There are many environmental protection rules and policies that regulate coal mining and combustion activities. The state is continuously evaluating each for its potential to impact the environment and ability to be implemented by the state and industry. It is the objective of the Department of Health to implement programs and policies while taking into consideration the limits of technology, cost, and impact on public and environmental health. Because of the number of current and potential environmental regulations associated with coal energy generation, I will limit my discussion today to those issues which are currently of biggest concern to the department. The issues of most concern to the department today are as follows:

**1 Hour Sulfur Dioxide Standard**

The federal rule establishes the maximum ambient sulfur dioxide concentration that may occur in air an hour. Although the state has not objected to the numeric standard established by the U.S. Environmental Protection Agency (EPA), we have objected to the method proposed to determine if a given area is in attainment with the standard. The EPA has proposed to require that states determine compliance with the 1 hour standard through the use of air quality models. The state has objected to this method for the following reasons:

- The EPA has not developed a modeling protocol which states can use to determine compliance and, as such, has not solicited public comment on the appropriate modeling methodology.
- Air quality models may significantly over predict and, therefore, misrepresent the actual air quality. Inaccurate model outputs may result in the installation of pollution control equipment that would not ordinarily be required if actual monitoring data was used.
- The state has challenged the use of models in federal court requesting that the EPA be required to solicit public comment regarding the use of air quality models. The state believes that actual monitoring data must be used to determine attainment, or at the minimum, be used to ground truth model results.

The state has challenged the EPA rule in federal court regarding the use of models to determine compliance. Recent developments are starting to indicate that the EPA may pursue development of modeling guidance for public comment. However, a timeline for development, or public comment, has not been disclosed.

### **Best Available Control Technology (BACT) and Best Available Retrofit Technology (BART)**

It is our contention that Congress, through the passage of the Clean Air Act, provided the EPA authority to establish specific standards or rules, but left the decisions of how to implement the federal requirements to the states. This was a clear acknowledgment that the states were in a better position than the federal government to address the specific and unique environmental, economic and social circumstances that occur in each state. Currently, we are involved in two court cases where the federal EPA has challenged a state decision regarding appropriate NO<sub>x</sub> control technology for lignite fired cyclone boilers in North Dakota. After completion of a top down technical evaluation and public review process, the state has determined that selective non catalytic reduction (SNCR) is the appropriate control technology for cyclone coal fired boilers. The EPA believes that Selective Catalytic Reduction (SCR), a more expensive technology and unproven for treatment of North Dakota lignite emissions, is the most appropriate technology. We disagree with the EPA determination for the following reasons:

- North Dakota lignite is unique in that it contains some of the highest sodium concentrations found in coals worldwide.
- Cyclone boilers exhibit higher operating temperatures than other boilers resulting in aerosolization of the sodium. Aerosolized sodium is a catalyst poison for selective catalytic reduction pollution controls. The rate at which the catalyst will be poisoned by the sodium found in North Dakota lignite is not known.
- Due to the sodium content found in the North Dakota air emissions, SCR vendors will not guarantee the operation of the technology.
- The state is not aware of any studies that have been conducted on North Dakota lignite that have evaluated the effectiveness of SCR technology in removing NO<sub>x</sub>.

The EPA has objected to the state's determination that SNCR, plus separated overfired air is the appropriate NO<sub>x</sub> control technology in North Dakota. The state and the EPA currently are waiting for a determination by a federal judge in Bismarck as to whether the BACT decision made by the state to require SNCR technology was arbitrary.

In a related but separate case, the EPA has proposed to substitute its determination for the state's and would require that SCR be installed for both the Minnkota and Leland Olds electric generation units to control NO<sub>x</sub> emissions. This action is being proposed under a Regional Haze Program Federal Implementation Plan, for which the EPA is currently is soliciting public comment. It is important to note that the Regional Haze Program is not

about public health. Rather it addresses improvement of visibility in our Class I areas such as the Theodore Roosevelt National Park. The state has determined that the visibility improvement between the removal efficiency of a SNCR and SCR would not be perceptible to the human eye. An EPA public hearing on the issue will be conducted in Bismarck on October 13<sup>th</sup> and 14<sup>th</sup>.

### **Coal Combustion Waste**

The EPA has proposed to increase regulation of Coal Combustion Waste (CCW) in response to the Tennessee Valley Authority disaster. This event occurred when a coal waste storage pond failed releasing thousands of tons of waste into a nearby stream and community. Currently, the states have responsibility to ensure the safe disposal of CCW without EPA oversight. The EPA has proposed to either regulate the waste as 1) hazardous under the Subtitle C program which would require an extensive permitting requirements relating to pond design, handling, monitoring and disposal requirements (giving the EPA oversight responsibility) or 2) as a Subtitle D non hazardous waste giving the states more control over how to regulate the waste. The state supports the non hazardous designation for CCW for the following reasons:

- Current state regulations address pond design, liner design, ground water monitoring, post closure care and financial assurance. The current state regulations address essentially all of the concerns identified by the EPA, with the exception that they do not have direct enforcement authority. No additional regulation is required.
- If additional regulation is deemed necessary by the EPA a non hazardous designation with state control and limited EPA oversight is preferred.
- Hazardous designation has the potential to impact the beneficial use of coal ash.
- The state is concerned that the additional cost to implement the program in any form will not result in increased environmental protection in North Dakota.

The EPA is still considering the appropriate regulations for CCW with a decision to come sometime in the future.

### **Greenhouse Gas Regulation**

The state continues to track Greenhouse Gas regulation with the primary concern that additional federal regulations will be passed without a clear path of how states and utilities will attain compliance. At the present, the state is required by federal law to address greenhouse gas generation in the following manner:

- Major sources of greenhouse gases currently submit their greenhouse gas generation amounts to the EPA on a yearly basis.
- New sources, which have the potential to emit 100,000 tons per year or more of greenhouse gases, must go through a BACT review process. This will

include evaluating carbon capture, carbon sequestration and operational efficiencies.

- Major modifications to sources that have the potential to increase greenhouse gas emissions by 75,000 tons per year or more must also go through a BACT review process for greenhouse gases.

### **Utility MACT**

The state is waiting for a final rule regarding the control of several pollutants which include mercury, acid gases and metals. This will impact coal fired power plants. The current concern relates to the extent of the rule, the number of parameters required for control, the expense and ability to monitor compliance and the expense and availability of control technologies.

It is important to note that the state is committed to providing the most cost-effective, common sense environmental controls for all major industries throughout the state. North Dakota continues to maintain compliance with all ambient air quality standards (one of only 6 to 12 states to be able to make that claim on any given year). Emissions from the coal industry have declined in recent years and will continue to decline when we implement our Regional Haze Plan. We should continuously strive to improve environmental quality while ensuring the economic viability of our industries.

This concludes my testimony for today, I would be happy to address any questions you may have.