

Testimony

Energy Development and Transmission Committee

Monday October 14, 2013

Roughrider Room, State Capitol, Bismarck, ND, 1:35 pm

North Dakota Department of Health

Good afternoon Chairman Wardner and members of the Energy Development and Transmission Committee. My name is David Glatt, Chief of the Environmental Health Section for the North Dakota Department of Health. The Department has responsibility for the implementation of many of the environmental protection programs in the state of North Dakota. I am here today to provide you with a brief description of the current status of carbon dioxide regulations being proposed by the U.S. Environmental Protection Agency and update you on our evaluation of the existing state regulation which addresses technically enhanced naturally occurring radioactive materials (TENORM).

As part of his overall Climate Action Plan released on June 25, 2013, President Obama laid out a directive to the U.S. Environmental Protection Agency (EPA) to establish Power Sector Carbon Pollution Standards for new and existing power generation facilities. In the first phase of the plan and as provided for under section 111(b) of the Clean Air Act, emphasis will be to establish carbon emission standards for new power generation facilities. Section 111(b) is a federal program designed to address new, modified and reconstructed sources by establishing standards of performance. On September 20, 2013, the EPA proposed carbon emission limits for new electric generation facilities as follows:

Natural Gas Fired Stationary Combustion Turbines:

Large Natural Gas Units (>850 mmBTU/hr):

1,000 pounds of CO₂/MWhr

Smaller Natural Gas Units (<850 mmBTU/hr):

1,100 pounds of CO₂/MWhr

EPA believes that the new natural gas fired stationary combustion turbines can meet the proposed standard without the need for add on control technology.

Fossil Fuel Fired Utility Boilers and Integrated Gasification Combined Cycle Units

These performance standards are based on the performance of new efficient coal units implementing partial carbon capture and storage (CCS). Two limits are being proposed depending upon the compliance period that best suits the unit.

12 Month Operating Period

1,100 lb CO₂/MWh

84 Month Operating Period

1,000 – 1,050 LB CO₂/MWh

The longer compliance period option is believed to provide flexibility in operation by allowing facilities to phase in the use of partial CCS. For comparison purposes, the current fleet of coal fired electric generation facilities in North Dakota emit an estimated 1,800 lbs CO₂/MWh to 2,400 lbs CO₂/MWh.

EPA believes that with current and planned technology implementation of CCS projects combined with the availability of geologic storage sites that the technology is available to meet the proposed standard.

The state is looking at the proposal and will be providing comment within the 60 day comment period. One of our initial concerns regarding the proposal is the cost and long term viability of some of the technologies being proposed. Typically, a period of operation of a full scale facility is desired to determine if in fact the technology is feasible and available, especially when lignite coal is used as the feed stock.

The second phase of the Climate Action Plan will address CO₂ emissions from existing power generation facilities under section 111(d) of the Clean Air Act. Section 111(d) is a state based program for existing sources where EPA establishes the guidelines and the states design the programs to fit the unique circumstances of the state. EPA is on schedule to propose the 111(d) guidelines by June 2014 and is intending to make them final by June 2015. Because of the state lead nature of the statute EPA is engaging in extensive stakeholder outreach seeking input on the various carbon reduction options and approaches available to states before making any proposals. EPA is currently emphasizing flexible and pragmatic approaches needed to reduce carbon pollution from existing emission sources. The state is evaluating how to approach this new rule making process by considering the following:

- How do we bridge the environmental protection control investments of the past to the new carbon control investments in the future?
- How do we develop a state carbon reduction strategy when we acknowledge the regional multi state nature of the energy producing organizations?
- What credit should be given to technologies that reduce carbon emissions that have been implemented by electric generation facilities?
- How do we acknowledge and reconcile the state and regional economic impact of a carbon control strategy?
- Should we explore the potential for averaging carbon emissions from all energy production facilities, which include wind, hydroelectric, solar, coal, natural gas and nuclear when we consider total energy production and from that establish a lbCO₂/MW produced?
- How will a strategy address states with increasing energy demands now and into the future?

These are just some of the questions being evaluated by the Department as we move forward addressing the issue of the federal Climate Action Plan. It is important to note that not all states are in agreement with the federal Climate Action Plan. Some see it as too limited and desire significant movement forward in controlling carbon emissions while others see it as an overreach of the federal government having a significant impact on the local economies. We anticipate that the final path forward will include a combination of what the technology will allow, cost of implementation and policy decisions relating to how the state will move forward in the development of its energy resources.

TENORM Regulatory Developments

The state currently regulates the storage and disposal of Technically Enhanced Naturally Occurring Radioactive Material or TENORM. TENORM is generated from the physical process of concentrating NORM during oilfield development. TENORM can be found in many areas including filter socks, pipe scale or sludge found in tank bottoms. At present the state generates significant quantities of TENORM generated from oilfield activities necessitating special handling and disposal. In North Dakota TENORM can be defined as any material from oilfield development that exhibits a radioactive concentration of 5 picu/gram. This concentration is considered very conservative and may be close to background concentration. Pursuant to state rule, any material that exhibits a radioactive concentration above 5 picu/gram should be transported to a facility approved to handle such wastes. At the present time disposal facilities of this nature can only be found at out of state locations. Industry and environmental groups have asked the state to evaluate the standard, handling practices and determine if current record keeping is sufficient to address TENORM in the state.

To determine if the TENORM standard is appropriate the Department will be conducting the following activities:

- A contract between the Department and the Argonne National Laboratories designed to research, model and report on the environmental and public health risks associated with the generation, transportation, storage and long term disposal of TENORM may be signed in the near future. The study is anticipated to be completed in the middle of next year.
- The Department will collect representative samples from oilfield development activities to determine the range of potential TENORM concentrations and the quantity generated in North Dakota.
- Evaluate how best to monitor and track the generation and disposal of TENORM in the state.

The results of the evaluation will be used to determine if the existing TENORM standard and waste tracking methods are sufficient to address the amount of waste being generated in North Dakota. Based upon the current time tables we are expecting the study and standard evaluation to be complete by next summer.

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