

**Testimony of the Honorable Joseph T. Kelliher
Chairman
Federal Energy Regulatory Commission
Before the
Committee on Energy and Natural Resources
United States Senate**

January 31, 2008

Mr. Chairman and members of the Committee, thank you for the opportunity to speak with you today about the regulatory aspects of carbon capture, transportation, and sequestration and two related bills, namely S. 2144, the “Carbon Dioxide Pipeline Study Act of 2007”, and S. 2323, the “Carbon Capture and Storage Technology Act of 2007”. I commend the Committee for holding this hearing.

Carbon Capture and Sequestration Technology

Development of carbon capture and sequestration technology is an important need. There are questions about carbon capture and sequestration technology. The two bills that are the subject of this hearing address this need by requiring studies and funding research and development and demonstration projects. If these efforts are successful, carbon capture and sequestration may become a practical reality.

S. 2144

S.2144 would direct the Secretary of Energy, in coordination with the Federal Energy Regulatory Commission (FERC), the Secretary of Transportation, the Administrator of the U.S. Environmental Protection Agency, and the Secretary of the Interior, to conduct a study to assess the feasibility of the construction and operation of pipelines to be used for the transportation of carbon dioxide for the purpose of sequestration or enhanced oil recovery and carbon dioxide sequestration facilities.

FERC has extensive experience in the siting and regulation of a wide variety of energy infrastructure projects, and we would be pleased to participate in the study required by S. 2144. In particular, FERC can play a helpful role examining regulatory barriers and regulatory options relating to the construction and operation of carbon dioxide pipelines, as provided by section 2(b) of the bill.

S. 2323

As I indicated above, there are questions relating to carbon capture and sequestration technology. This bill would address those questions directly, by funding carbon dioxide capture and storage research and development, and both carbon dioxide capture and sequestration demonstration projects. The bill has other provisions relating to establishment of an interagency task force to develop regulations for carbon dioxide capture and storage, an assessment of carbon dioxide storage capacity, and technology agreements.

Regulatory Aspects of Carbon Dioxide Transportation

While there are questions about carbon capture and sequestration technology, carbon dioxide transportation has been proven and storage of carbon dioxide has taken place for years. A network of carbon dioxide pipelines has been developed, mostly since the 1980s, to promote enhanced oil recovery in declining oil fields. There is also some experience with storage of carbon dioxide.

Up to this point, the injection of carbon dioxide into oil production reservoirs has been a means of increasing oil production, rather than an end unto itself. Storage takes place in the oil production fields themselves, rather than in reservoirs dedicated to carbon dioxide sequestration. Enhanced oil recovery results in the storage of carbon dioxide in depleted production reservoirs.

I am not aware of whether any information has been developed regarding the leakage of carbon dioxide from the existing pipeline network or production fields. This might be an area worthy of research and development.

Besides enhanced oil recovery, carbon dioxide has been used for other purposes, including refrigeration and cooling, casting metal molds, welding, sandblasting, methanol and urea production, carbonation, and medical purposes.

Construction of the U.S. carbon dioxide pipeline network began over 25 years ago, and that network now spans more than 3,900 miles. Siting of carbon dioxide pipelines has been governed by state law, and to my knowledge state siting has worked well. Under current law, there is no federal role in siting carbon dioxide pipelines. While operators of interstate carbon dioxide pipelines are free to set their own rates and terms of service, the U.S. Department of Transportation's Surface Transportation Board may hold proceedings to determine that rates are reasonable, but only if a third party files a complaint. Under the Interstate Commerce Termination Act of 1995, the Surface Transportation Board regulates interstate pipelines transporting commodities other than water, oil, or natural gas. The U.S. Department of Transportation's Office of Pipeline Safety,

within the Pipelines and Hazardous Materials Safety Administration (PHMSA), administers safety regulations governing interstate carbon dioxide pipelines.

The Committee expressed an interest in exploring the regulatory aspects of carbon dioxide transportation. FERC has a great deal of experience regulating energy infrastructure. The original mission of the agency was development of energy infrastructure, specifically licensing and regulating non-federal hydropower projects. Our infrastructure role has expanded over time to include natural gas pipelines and associated facilities, oil pipelines, and more recently we have been given a limited role in electric transmission siting.

The U.S. has used three different regulatory schemes for transportation of energy resources by pipeline that might be relevant to Congressional consideration of the regulatory aspects of carbon dioxide transportation. First, there is the model that has governed the existing carbon dioxide pipeline network, namely continuing the current regulatory scheme for interstate carbon dioxide pipelines. Under this approach, pipelines are sited under state law, transportation rates are set by the Surface Transportation Board when a complaint regarding rates is filed, and the Office of Pipeline Safety ensures safety.

Second, there is the oil pipeline model. Under this model, oil pipelines are sited under state law and FERC sets the transportation rate. FERC has no siting role or safety role (safety issues being handled by the Department of Transportation). This model has worked well for decades.

The third model is the natural gas pipeline model. Under the current version of this model, FERC both sites interstate natural gas pipelines and sets their transportation rates. It may be useful to note that the original version of the 1933 Natural Gas Act provided for state siting of interstate natural gas pipelines. However, in 1947 Congress reached the conclusion that state siting of natural gas pipelines had failed, and it was necessary to resort to federal siting. Congress amended the Natural Gas Act and provided for exclusive and preemptive federal siting of interstate natural gas pipelines. While the Commission is responsible for safety issues during the siting and construction phases, safety jurisdiction shifts to the Department of Transportation, though PHMSA, once construction is complete.

In my view, any of these three approaches could prove effective in overseeing a network of carbon dioxide pipelines. I have no reason to believe the existing regulatory scheme administered by the Surface Transportation Board is inadequate. In particular, I would not recommend that Congress preempt the states on siting carbon dioxide pipelines, by providing for exclusive and preemptive federal siting of carbon dioxide pipelines. The precondition that led Congress to such a course for siting natural gas pipelines – the failure of state

siting – does not exist here. Further, I would not recommend that Congress alter PHMSA’s safety role.

I appreciate the opportunity to testify before you today and would be pleased to answer any questions you may have.