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Carbon Dioxide (CO₂) Pipelines for Carbon Sequestration: Emerging Policy Issues

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Summary:

Congress is examining potential approaches to reducing manmade contributions to global warming from U.S. sources. One approach is carbon capture and sequestration (CCS) -- capturing CO₂ at its source (e.g., a power plant) and storing it indefinitely (e.g., underground) to avoid its release to the atmosphere. A common requirement among the various techniques for CCS is a dedicated pipeline network for transporting CO₂ from capture sites to storage sites. In the 110th Congress, a number of bills include aspects of CCS, but do not discuss in any detail proposals for pipeline infrastructure to transport captured CO₂ from sources to storage sites.

Many bills that mention some form of CCS focus on incentives for enhancing CO₂ capture and/or on characterizing geologic reservoirs. Some bills, such as S. 962 and H.R. 931, include sections on promoting the development of technologies needed to separate and capture CO₂ at its source, often as part of research and development provisions. Other bills, such as H.R. 1267 and S. 731, call for enhancing or expanding the national capability to assess potential U.S. capacity for safe and long-term CO₂ storage in geologic reservoirs.

That CCS and related legislation generally focuses on the capture and storage of CO₂, and not on its transportation, reflects the current perception that transporting CO₂ via pipelines does not present a significant barrier to implementing large-scale CCS. Notwithstanding this perception, and even though regional CO₂ pipeline networks already operate in the United States for enhanced oil recovery (EOR), developing a more expansive national CO₂ pipeline network for CCS could pose numerous new regulatory and economic challenges.

There are important unanswered questions about pipeline network requirements, economic regulation, utility cost recovery, regulatory classification of CO₂ itself, and pipeline safety. Furthermore, because CO₂ pipelines for EOR are already in use today, policy decisions affecting CO₂ pipelines take on an urgency that is, perhaps, unrecognized by many.

Federal classification of CO₂ as both a commodity (by the Bureau of Land Management) and as a pollutant (by the Environmental Protection Agency) could potentially create an immediate conflict which may need to be addressed not only for the sake of future CCS implementation, but also to ensure consistency of future CCS with CO₂ pipeline operations today.

In addition to these issues, Congress may examine how CO₂ pipelines fit into the nation's overall strategies for energy supply and environmental protection. If policy makers encourage continued consumption of fossil fuels under CCS, then the need to foster the other energy options may be diminished -- and vice versa. Thus decisions about CO₂ pipeline infrastructure could have consequences for a broader array of energy and environmental policies.