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PS Advancing Carbon Capture and Sequestration in New York*

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Abstract

The New York State Energy Research and Development Authority (NYSERDA) is managing a number of carbon capture and geologic sequestration (CCS) initiatives on behalf of New York State. NYSERDA's CCS research projects include a statewide assessment of New York's geological sequestration potential, an evaluation of gas shale formations for potential CO₂ sequestration and enhanced gas recovery, a characterization of the geology in two areas of western New York State to further determine the feasibility of geological sequestration in those areas, an assessment of the potential for long-term CO₂ sequestration in central New York State, and an evaluation of the feasibility of enhanced gas recovery in central New York's deep sandstone gas reservoirs. Another major effort is the Jamestown OxyCoal project, a proposed 50 MWe (nominal) oxy-combustion circulating fluidized bed (CFB) power generating plant with carbon dioxide capture and sequestration. By using biomass as a co-fired feedstock, this power plant can operate with a negative carbon footprint. NYSERDA and the Empire State Development Corporation are working with the project developers to complete the engineering design of this innovative plant and drill a stratigraphic test well in the potential sequestration region. Finally, NYSERDA is part of an effort to define the key regulatory issues surrounding CCS. While CO₂ has long been injected underground for enhanced oil or gas recovery, sequestration for large-scale disposal and/or long-term storage is a relatively new technology with only a limited number of commercial operations around the world. As such, legal statutes, relevant common law and regulatory framework are underdeveloped and rarely extend beyond basic, first-order issues. These projects are an integral part of New York's efforts to mitigate the direct and indirect impacts of climate change on the state.

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