THE PLAINS CO_2 REDUCTION (PCOR) PARTNERSHIP: COLLABORATIVE U.S.–CANADA CARBON CAPTURE AND STORAGE DEMONSTRATION ACTIVITIES

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ABSTRACT

In February 2009, the U.S.–Canada Clean Energy Dialogue was begun to facilitate the building of a new low-carbon energy economy. This Dialogue created ways to collaborate key clean energy science and technology issues, including the development of carbon capture and storage (CCS) technology to control greenhouse gas emissions. Examples of these collaborative efforts are exemplified within the Plains CO_2 Reduction (PCOR) Partnership's efforts.

The PCOR Partnership is one of seven regional partnerships established by the U.S. Department of Energy National Energy Technology Laboratory to assess and develop CCS opportunities. The PCOR Partnership covers an area of over 1.4 million square miles in the central interior of North America and includes all or parts of nine states and four Canadian provinces.

The PCOR Partnership has teamed with industrial partners in Canada for two large-scale CCS demonstrations designed to establish the technical and economic efficacy of CCS in the region. Additionally, these two activities further support the U.S.–Canada Clean Energy Dialogue. Apache Canada Ltd. operates a combined enhanced oil recovery/sequestration activity where acid gas (approximately 70% CO_2 and 30% H_2S) from the Zama, Alberta, gas plant is injected into pinnacle reef structures for use as a miscible flood agent. The second demonstration, Spectra Energy's proposed Fort Nelson CCS project, aims to inject sour CO_2 (a mixture of CO_2 and H_2S) to a depth of approximately 7200 feet into a saline formation in the northeastern corner of British Columbia.