



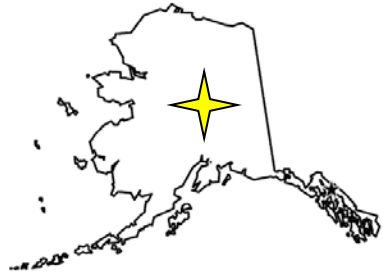
Fostering innovative solutions to Alaska's energy challenges through applied energy research at the University of Alaska

## Environmental Assessment for Proposed Coal-to-Liquids Plant

The Alaska Center for Energy and Power is leading a multidisciplinary team of University of Alaska researchers to identify the issues and opportunities associated with a potential coal-to-liquids (CTL) plant located at Eielson Air Force Base, approximately 25 miles southeast of Fairbanks.

ACEP has been asked to assess options for carbon dioxide (CO<sub>2</sub>) mitigation and sequestration options as well as strategies for other potential impacts associated with a CTL facility, such as water vapor and pollutants.

The two primary CO<sub>2</sub> capture options are being investigated including geologic sequestration, such as carbon dioxide storage in depleted oil reservoirs, un-mineable coal seams, mafic rock, etc, and biologic sequestration, such as absorption of CO<sub>2</sub> by willow crops or algae.

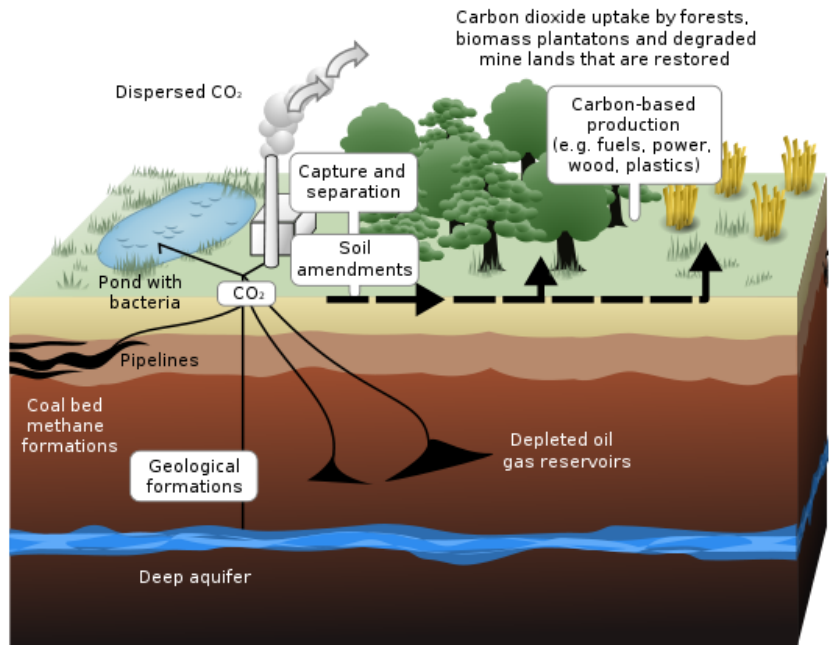


**Project location:** Fairbanks

The manipulation of the feedstock for the plant will be studied, including pre-processing of coal to remove potential pollutants or utilizing a combination of biomass and coal. In addition, a model to simulate the water vapor emissions of the plant has been built to assess possible ice fog issues.

Because this is new technology, it is also critical to assess the economic and financial implications of the project, including site-specific capital and operational costs to manage the CO<sub>2</sub>.

This study brings researchers from around the UA system to work together to identify the potential issues and create solutions. Partners include the Geophysical Institute, the Institute of Northern Engineering, the College of Engineering and Mines, the School of Natural Resources and Agricultural Studies, and the Institute for Social and Economic Research.



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