

CLEAN RESOURCES

CLEAN TECHNOLOGY

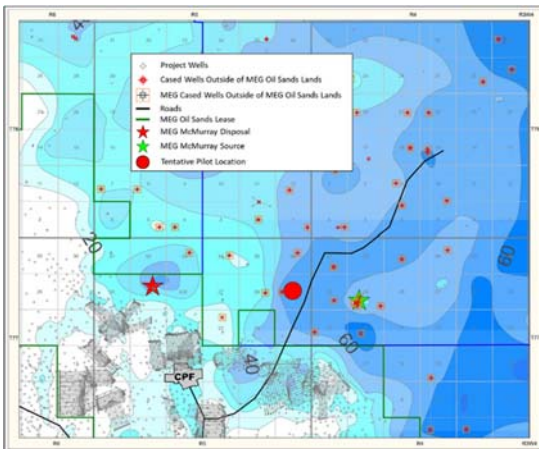
CARBON CAPTURE UTILIZATION AND STORAGE & HYDROGEN – CARBON CAPTURE AND STORAGE

FUNDING DETAILS

Emissions Reduction and Sequestration (ERASE) FEED Study

Carbon sequestration from oil and gas operations is needed to help transition our energy systems towards a low carbon future. Currently, carbon dioxide sequestration is allowed in suitable reservoirs below 1000m depth in Alberta. The safe use of suitable reservoirs that are less than 1000m depth and in close proximity to the oilsands operators will enable greater capture and likely more efficient sequestration from the oilsands, reducing the need for long pipelines to transport captured CO₂ to other reservoirs in the province.

In this project, MEG Energy will examine the feasibility of shallow aquifer CO₂ sequestration near one of its operations in the oilsands region. The project will conduct the appropriate geological and engineering studies to determine the ability of this reservoir to be used for CO₂ sequestration. The project results will support additional efforts in the region to reduce CO₂ footprints and inform carbon sequestration regulation in the province.



MEG Christina Lake Regional Project area with the tentative pilot location identified



RECIPIENT:
MEG Energy Corp.



PARTNERS:
None



TOTAL BUDGET:
\$2,978,875



AI FUNDING:
\$2,090,063



PROJECT DATES:
JAN 2021 –
NOV 2022



PROJECT TRL:
Start: 1-3
End: 4-6

APPLICATION

Carbon capture and sequestration (CCS) is an effective way to reduce the carbon footprint of energy use. The receiving reservoirs have contained methane and oil for millions of years, and over time the CO₂ will mineralize to form carbonate rock ensuring permanent storage. Sequestration enables the oil and gas producers to reduce their carbon footprint to meet low carbon standards and regulations. Shallow CO₂ sequestration can be a cost-effective method for oilsands operators to reduce their carbon footprint.

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PROJECT GOALS

- Commercial-scale geoscience and reservoir simulation study
- Detailed pilot scale geoscience and reservoir simulation study
- Site selection for pilot plant and CO₂ injection well
- Pilot program plan development, including a Measurement, Monitoring and Verification (MMV) plan
- 3D baseline seismic program over the pilot area
- Produce information to support regulatory discussions on shallow reservoir CO₂ sequestration potential in the oilsands region

BENEFITS TO ALBERTA

- Development of technology that allows Alberta’s oilsands industry to thrive in a low carbon economy
- Inform regulatory personnel about the potential for shallow reservoir CO₂ sequestration
- Enable commercial-scale, cost-effective sequestration of CO₂ in the oilsands region
- Creation of new jobs to deploy the technology at commercial scale across the oilsands sector
- Increase the opportunity for investment in Alberta’s oilsands industry
- Be recognized as a global leader in CCS solutions and a provider of clean, low carbon energy products



1 Publication



3 HQSP Trained



0 Patents



7 Project Jobs



10-100 Future Jobs



1 New Product/Service



0 Spinoff Company



Enables Emission Reductions



Market GHG reductions to be realized outside of Alberta’s emission reporting boundaries

CURRENT STATUS

JUN 2022

Pilot scale geoscience and reservoir simulation study as planned are complete. Potential pilot locations selected and confirmed. 3-d seismic is underway.