

Overview of Market for CO₂ in the Williston Basin for EOR, in Terms of Demand, Supply of CO₂ and Barriers to Development

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Abstract

The Williston Basin currently has CO₂ EOR in two older oilfields. Substantial opportunities exist for CO₂ EOR in the tertiary recovery of oil in other older fields and in the possibility of using CO₂ to enhance the relatively low rate of oil recovery in the recently developed Bakken formation.

Current CO₂ supplies are from capture at a coal power generation unit in Saskatchewan and a coal gasification unit in North Dakota. Large new sources of supply are potentially available from the retrofit of CO₂ capture at existing coal generation plants in Saskatchewan and North Dakota. Another source of supply is from long-term plans to extend a CO₂ pipeline from Wyoming into the Williston Basin in Montana.

A number of factors influence expanded production of oil from CO₂ EOR. On the production side, it is necessary to get co-operation among different owners in an oil field and to achieve sufficient scale to drive down costs. Technology is still under development with increased understanding of the potential for CO₂ for EOR in the Bakken being a critical factor in creating a large market for CO₂ in the Williston Basin. On the supply side, it is important to co-ordinate greenhouse gas regulatory and tax policy to encourage CO₂ capture. Lastly in terms of general market conditions, higher oil prices and the resulting greater ability to pay for CO₂ increase potential supplies of CO₂.

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Ian holds an honours degree in history from the Royal Military College in Kingston (1979), as well as an MBA from Queen's University (1993), also in Kingston. Ian is married, has three grown children and two step-children and lives in Regina, Saskatchewan.