Success Stories:
Tomakomai and the Illinois Basin – Decatur Project

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Industrial CCUS Sites
Illinois Industrial Sources CCS

Illinois Basin - Decatur Project

Class VI permit issued Feb 2015

Class VI permit issued Dec 2014

~800 meters

North
Project differences

• Tomakomai
  • Onshore to offshore storage
  • CO$_2$ from hydrogen production
  • Capture with amine process
  • 300,110.3 tonnes stored
  • Directional wells into target formations
  • Injection into 2 formations
  • Injection depth $\sim$1,000 m (Moebetsu Fm) and $\sim$2,400 m (Takinoue FM)

• Illinois Basin – Decatur Project
  • Onshore storage
  • CO$_2$ from ethanol production
  • Capture direct offtake from ethanol
  • 999,217 tonnes stored
  • Straight wells into target formation
  • Injection into 1 formation
  • Injection depth $\sim$2,000 m (Mt. Simon Sandstone)
Project similarities

- Public/private partnership
- Operated 3 years
- CO$_2$ stored in sandstone
- Caprock directly overlies injection reservoir
- Extensive public engagement
- Extensive monitoring programs
- Monitoring before, during, and after injection
Areas of Collaboration

Public Engagement

Monitoring

International Knowledge Sharing
JCCS’ Approach to Public Outreach

JCCS core principles:

Building trust
Being creative in connecting with individual audiences

Implementing our approach by:

1. Sharing accurate information
2. Maintaining cooperation
3. Encouraging conversation
4. Creating a personal connection
5. Considering benefits to communities

Objective:

Smooth delivery of the Tomakomai CCS Demonstration project without any opposition from the public

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Shared Lessons Drive Advancement

- Geology is site dependent and will always remain a key factor.
- Pilot and demonstration projects provided critical insights, allowing for advancement and economy of scale.
- Stakeholder engagement and outreach are essential.
- Baseline environmental assessments are critical.
- Flexible and adaptive monitoring is necessary.
- Necessary to incorporate technology changes into the life cycle of the project.
- Scientific and engineering timeframe often not aligned with policy.
- Policy drivers are necessary to facilitate commercialization.
- Regulatory, legal, and social factors require significant time investment.
BUILDING ON SUCCESS

- Connection: Social awareness and recognition connected with
- Detail: Additional Sites for Characterization
- Assurance: Flexible and Adaptive Monitoring Programs
- Infrastructure: Integrating Multiple Projects
- Governance: Regulations, Pore Space

- Systemic Connections for Technical, Regulatory, Social, and Legal
Thank You

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