Time's Ticking" Embarking on the Wyoming Trails Carbon Hub | Project "WyoTCH"

Presented by Tracey Ziev, Carbon Solutions LLC 2024 FECM/NETL Carbon Management Conference DE-FOA-0002730



Acknowledgement & Disclaimer

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Project Overview

Objective: This project will kick off development of a commercial-scale pipeline to transport anthropogenic CO_2 in support of the Wyoming Trails Carbon Hub "WyoTCH". This FEED study will enable the planning of a transformative, statewide pipeline system capable of transporting up to approximately 14 MtCO₂/yr, with a final buildout (outside of the scope of this project in design) for up to 45 MtCO₂/yr.

Performance Dates:

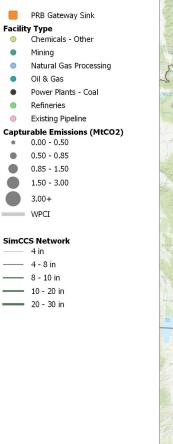
Oct 2023 – Mar 2025

Funding: Total: \$4,966,023 DOE - \$3,000,000 Cost share - \$1,966,023

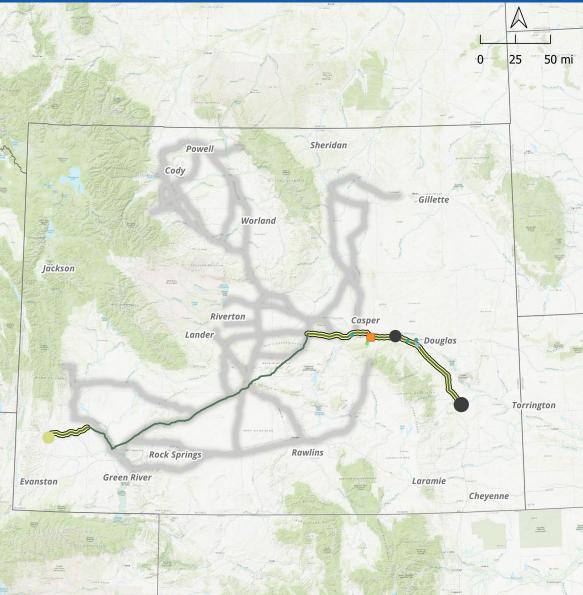




WyoTCH Pipeline



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Project Background

Why Wyoming?

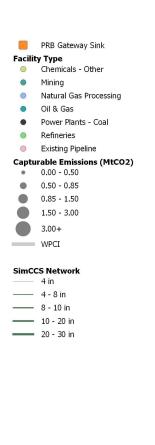
- Wyoming Pipeline Corridor Initiative
- Class VI primacy
- State & federal investments including CarbonSAFE storage projects & direct air capture (DAC) hubs.
- Private industry projects.

Project Benefits

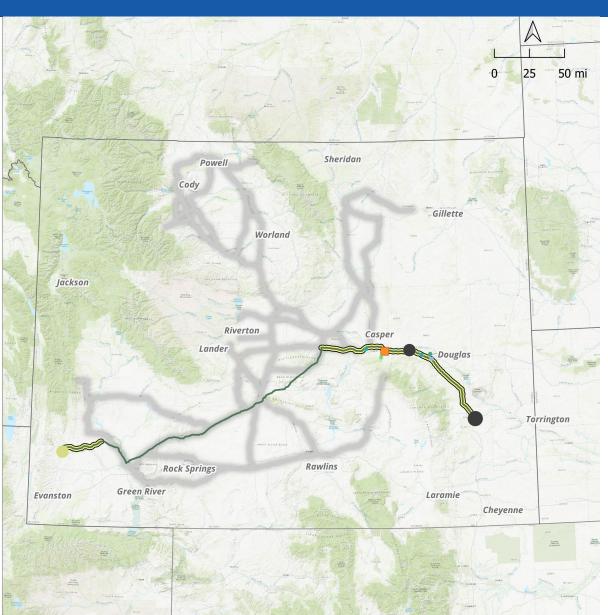
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- Open-access pipeline to support statewide carbon management.
- Accelerate Wyoming net-zero economy.
- Sustainable job creation.

WyoTCH Pipeline



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Technical Project Scope & Milestones

- Task 1: Project Management
- Task 2: Engineering Design Package
 - Engineering Design Due Mar 2025
 - Cost Estimate Due Mar 2025
- Task 3: Regulatory Plan
 - Initial plan due Jan 2024
 - Final plan due Mar 2024

- Task 5: Business Case Analysis
 - Feasibility Plan Due Aug 2024
 - Initial Business Case & Market Analysis Due Aug 2024*
 - Final Business Case & Market Analysis Due Mar 2025
 - Full Concept Study Due Mar 2025
- Task 6: Environmental Heath & Safety
 - ES&H Initial Analysis Due Jan 2024
 - ES&H Final Analysis Due Mar 2024
 - Environmental Questionaire Due Nov 2024



Community Benefits Scope & Milestones

- Task 4.1: Community & Labor Engagement
 - ADR process description Due Jun 2024
 - Learning/resource/information needs assessment – Due Mar 2025
- Task 4.2: Job Quality & Skilled Workforce
 - Apprenticeship tracking system Due Jun 2024
 - Identify partners for CCUS workforce development – Due Jan 2024
 - Template for employee satisfaction survey – Due March 2025

• Task 4.3: Diversity, Equity, Inclusion, & Accessibility

- DEIA Accessibility training Due Jan 2024
- Universal design checklist & training Due Jun 2024
- Create a list of diverse subcontractors and vendors and recommendations for expanding supplier diversity.

• Task 4.4: Justice40

- Develop stakeholder geodatabase Due Jun 2024
- Create presentation of project risks & benefits – Due Mar 2025



Project Success Criteria

- Final pipeline route that minimizes project execution risks including land access, natural hazards, and impacted communities.
- FEED study for the pipeline with costs, materials, and logistics to satisfy capital-raising requirements and begin pipeline construction at the earliest possible date.
- Regulatory Plan that develops material to submit regulatory documents to the State and Federal governments at the earliest possible date after project completion.
- Outreach and engagement plan that develops trust/social license with impacted communities and stakeholders, and highlights the social, economic, and environmental opportunities and challenges of the pipeline.
- Business case that supports business development including attracting near- and long-term capital investors—for the first-stage pipeline and the greater Project WyoTCH—as well as support/buy-in from the State government.
- ES&H Plan that addresses all major environmental safety and health issues for the project, including addressing NEPA requirements, hazardous materials, and emergency preparedness.
- CO₂ source commitment letters, potentially including offtake agreements, that commit to 10–25 MtCO₂/yr of supply for the first-stage Project WyoTCH.
- CO2 sink commitment letters that commit to storing all CO₂ provided by source commitment (i.e., at least 10-25 MtCO₂/yr.).



Project Status & Accomplishments

• Task 1: Project Management

- Revised SOPO and CBP to incorporate SOPO
- Execute risk mitigation plans for project challenges
- Monitor impact of project delays for overall schedule & budget impact

• Task 2: Engineering Design Package

- Rebaselined EDP schedule to accommodate delayed initial route selection
- Completed miscellaneous engineering deliverables (3)
- Engineering route review and hydraulic analysis for one segment completed, other segments in progress

• Task 3: Regulatory Plan

- Completed initial regulatory plan
- Research state & county level regulatory issues for final regulatory plan
- Some local issues on hold until engineering route evaluation is complete

• Task 4: Community Benefits Plan

- Completed document outlining alternative dispute resolution processes
- Completed DEIA accessibility training
- Developed accessible design guidance & training
- Developed apprenticeship program tracker
- Developed initial stakeholder database
- First community engagement planned this week

• Task 5: Business Case Analysis

- Feasibility Plan completed
- Initial Business Case & Market Analysis Due Aug 2024, currently in progress, expected this week.

• Task 6: Environmental Heath & Safety

- ES&H Initial Analysis completed
- Several deliverables complete or near complete including hazardous material inventory & waste management plan.



Lessons Learned

- A well thought out risk management plan helps keep the project moving when it encounter challenges.
- A lot can change in the CCUS landscape between proposal submission and project authorization re-examining route feasibility and adjusting can avoid unnecessary rework.
- Keeping all project team members informed of critical points in engineering design process helps manage expectation surrounding potential source or sink changes.



Questions?

