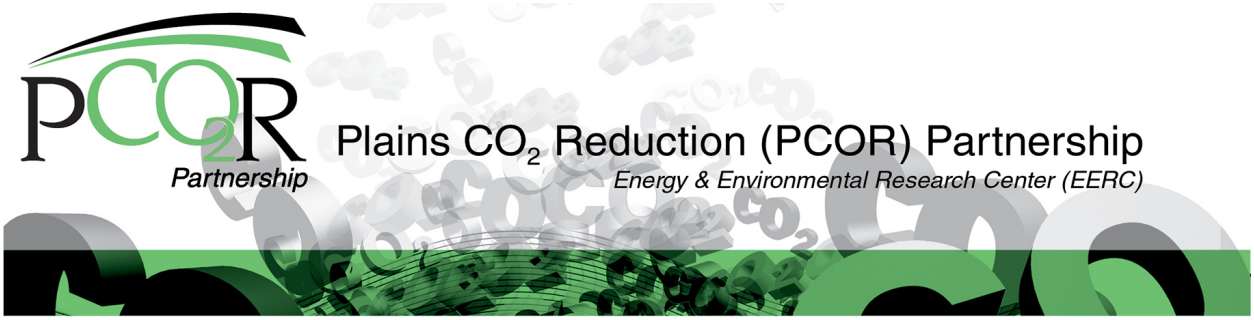

PCOR PARTNERSHIP INITIATIVE TO ACCELERATE CCUS DEPLOYMENT

Research Performance Progress Report (quarterly)

(for the period April 1 – June 30, 2021)

Prepared for:

AAD Document Control

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July 30, 2021

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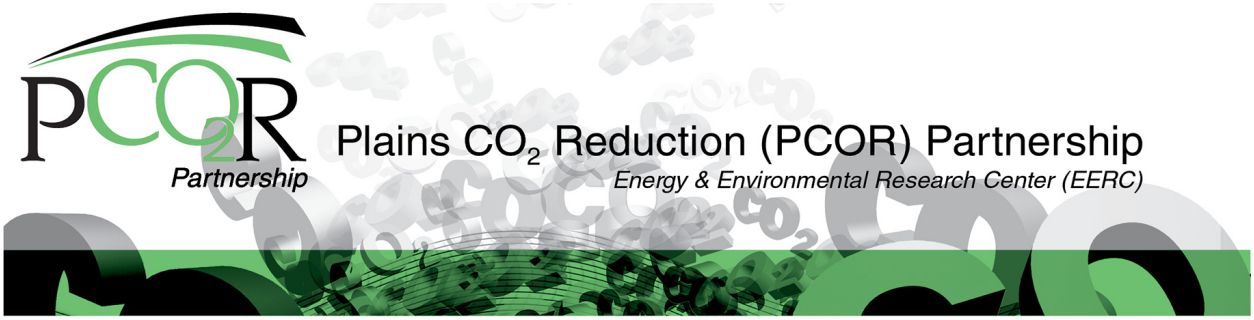


PCOR PARTNERSHIP INITIATIVE TO ACCELERATE CCUS DEPLOYMENT
Quarterly Progress Report
April 1 – June 30, 2021

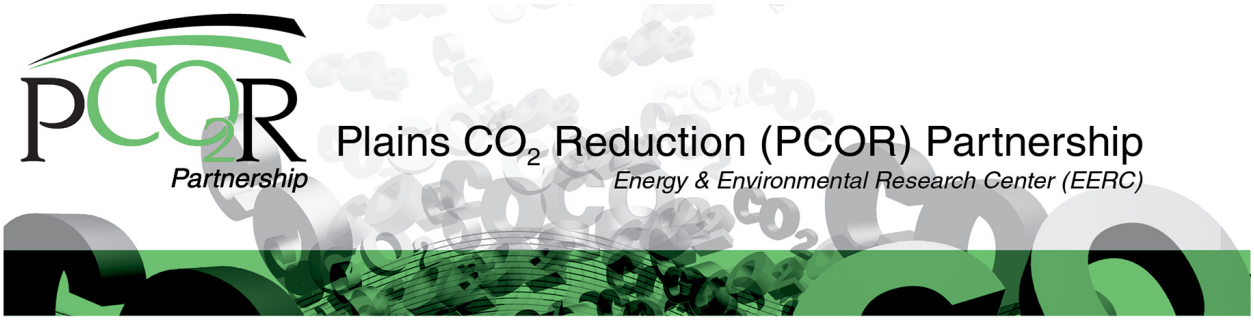
EXECUTIVE SUMMARY

The Plains CO_2 Reduction (PCOR) Partnership Initiative is one of four projects competitively awarded by the U.S. Department of Energy National Energy Technology Laboratory under the Regional Initiative to Accelerate CCUS (carbon capture, utilization, and storage). The PCOR Partnership Initiative is led by the Energy & Environmental Research Center with support from the University of Wyoming and the University of Alaska Fairbanks and includes stakeholders from the public and private sectors. The PCOR Partnership Initiative region includes all or part of ten U.S. states and four Canadian provinces. Two new members were welcomed to the PCOR Partnership Initiative: Occidental Petroleum and Woodside Energy, Ltd.

The final webinar in a series was held in lieu of an in-person annual membership meeting in 2020. "Regulatory & Policy Challenges Facing CCUS Commercialization" was presented by Fred Eames, partner at Hunton Andrews Kurth LLP. Planning efforts continued for the PCOR Partnership Initiative Annual Membership Meeting scheduled for September 13–14, 2021, in Jackson, Wyoming, and the Regulatory Roundup meeting scheduled for August 17–18, 2021, in Deadwood, South Dakota.

Two deliverables (Ds) were submitted: "Carbon Dioxide Storage Optimization" (D2) on April 30, 2021, and "PCOR Partnership Atlas" (D15) on June 30, 2021. D3 – Stacked Storage Opportunity Assessment was extended from June 30, 2021, to August 31, 2021, and divided into two reports due August 31, 2021, and March 31, 2022. Writing on the reports continued, and progress was made on the mechanical earth models. The journal article entitled, "Risk-Based Area of Review Estimation in Overpressured Reservoirs to Support Injection Well Storage Facility Permit Requirements for CO_2 Storage Projects," which was written for D14, was published in *Greenhouse Gases: Science and Technology*, on June 18, 2021. Milestone 5 – Data Shared with National Lab for National Risk Assessment Partnership (NRAP) Assessment was completed on July 30, 2021.

Collaborative efforts with the Petroleum Technology Research Centre on geologic modeling and numerical simulation focused on the region surrounding the Aquistore site continued. Testing of the NRAP Open-Source Integrated Assessment Model is complete. The PCOR Partnership Initiative joined the regional initiative outreach and engagement collaboration in the first meeting on June 29, 2021. Efforts to upgrade and update the PCOR Partnership Initiative partner website were initiated. Several white papers on topics of interest to the members are under development.



PCOR PARTNERSHIP INITIATIVE TO ACCELERATE CCUS DEPLOYMENT
Quarterly Progress Report
April 1 – June 30, 2021

INTRODUCTION

The Plains CO_2 Reduction (PCOR) Partnership Initiative is one of four projects operating under the U.S. Department of Energy (DOE) National Energy Technology Laboratory Regional Initiative to Accelerate CCUS (carbon capture, utilization, and storage). The PCOR Partnership Initiative is led by the Energy & Environmental Research Center (EERC) with support from the University of Wyoming (UW) and the University of Alaska Fairbanks (UAF) and includes stakeholders from the public and private sectors. The membership, as of June 30, 2021, is at 198 members. The PCOR Partnership Initiative region includes all or part of ten states (Alaska, Iowa, Minnesota, Missouri, Montana, Nebraska, North Dakota, South Dakota, Wisconsin, and Wyoming) and four Canadian provinces (Alberta, British Columbia, Manitoba, and Saskatchewan).

The goal of the PCOR Partnership Initiative is to identify and address regional capture, transport, and storage challenges facing commercial deployment of CCUS in an expanded region, compared to past initiatives. To achieve this goal, the PCOR Partnership Initiative will meet the following objectives:

1. Address key technical challenges by advancing critical knowledge and capabilities
2. Facilitate data collection, sharing, analysis, and collaboration
3. Evaluate regional infrastructure challenges and needs
4. Promote regional technology transfer

The project goal and objectives will be accomplished through five tasks over two budget periods (BPs), corresponding to a 5-year period of performance. The EERC and project partners will collaborate to identify and address technical challenges facing deployment of CCUS in multiple categories, including stacked storage opportunities, CO_2 storage performance and monitoring, and risk assessment. Existing data sets and technologies will be analyzed and evaluated to highlight current challenges limiting commercial adoption of CCUS, as well as to identify potential solutions. The project team will support the DOE National Risk Assessment Partnership (NRAP) and machine learning (ML) initiatives by drawing on data sets and experience available through the team. Assessments of infrastructure, site readiness, techno-economics, and socioeconomics will provide an overview of the CCUS landscape within the defined PCOR Partnership Initiative region. Potential business case scenarios will be evaluated, taking into account current economic incentives to identify opportunities in CCUS project development. Technology transfer activities will inform and educate CCUS stakeholders of

project learnings through annual membership meetings, regulatory roundup meetings, technical advisory board (TAB) meetings, webinars, reports, and conference presentations/papers. These activities will facilitate knowledge sharing and support DOE program goals.

ACCOMPLISHMENTS

Task 1.0 – Project Management and Planning

The objective of Task 1.0 is to manage and direct the project in accordance with a project management plan (PMP) to meet all technical, schedule, and budget objectives and requirements. Activities will be coordinated in order to effectively accomplish the work. The project manager will ensure that project plans, results, and decisions are appropriately documented and project reporting and briefing requirements are satisfied.

Significant accomplishments for Task 1.0 during the reporting period include the following:

- Compiled additional information to support the proposal for the FY21 add-on scope and funding, which was sent to the DOE project manager (PM).

- Presented an overview of the PCOR Partnership Initiative to DOE headquarters on April 22, 2021.

- Responded to DOE requests for information on various topics.

- Continued the PCOR Partnership Initiative webinar series held between September 2020 and April 2021 on a variety of topics in lieu of an in-person annual membership meeting in 2020. Activities included the following:
  - Held the final webinar on April 29, 2021, entitled "Regulatory & Policy Challenges Facing CCUS Commercialization," which was presented by Fred Eames, partner at Hunton Andrews Kurth LLP.

- Submitted an updated PMP on May 6, 2021, to the DOE PM to provide an update on deliverable dates.

- Continued to plan for the PCOR Partnership Initiative Annual Membership Meeting, which is scheduled for September 13–14, 2021, in Jackson, Wyoming. Activities included the following:
  - Sent a save-the-date eBlast to all partners on April 27, 2021.
  - Worked on the development of an agenda.
  - Worked on a PCOR Partnership Annual Membership Meeting website.
  - Sent an eBlast on June 15, 2021, to remind members to register for the meeting.

- Scheduled a 2-hour TAB meeting for September 15, 2021, in Jackson, Wyoming.

- Held progress meetings with UW and UAF. Discussed plans for a trip to Anchorage, Alaska, to meet with UAF representatives and others.

- Engaged in conversations with current and prospective partners regarding their continued involvement in the PCOR Partnership Initiative:
  - Welcomed new members Occidental Petroleum and Woodside Energy, Ltd.

Next steps to accomplish the goals under Task 1.0 include the following:

- Hold the PCOR Partnership Initiative Annual Membership Meeting in Jackson, Wyoming, scheduled for September 13–14, 2021.

- Hold a TAB meeting scheduled for September 15, 2021, in Jackson, Wyoming.

- Finalize negotiations for the FY21 add-on scope and funding.

- Track progress on project deliverables (Ds) and milestones (Ms) (see Tables 1 and 2).

Task 2.0 – Technical Challenges

In Task 2.0, the project team will support regional deployment of CCUS programs by focusing on key technical challenges in the PCOR Partnership Initiative region related to stacked storage opportunities; storage performance; monitoring, verification, and accounting (MVA) technology; and subsurface integrity. The EERC will collaborate with PCOR Partnership Initiative members to identify knowledge gaps and address regional challenges through targeted webinars, workshops, reports, and papers.

Progress on Task 2.0 is as follows:

- Submitted D2 entitled “Carbon Dioxide Storage Optimization” on April 30, 2021, for review.

- Extended the due date of D3 – Stacked Storage Opportunity Assessment from June 30, 2021, to August 31, 2021. While developing the deliverable, it was determined that the product would be improved by dividing it into two reports pertaining to 1) a focused stacked storage opportunity assessment in the PCOR Partnership region and 2) an evaluation of geomechanical modeling in stacked storage scenarios.
  - D3.A – a stacked storage opportunity assessment report will be delivered by August 31, 2021.
    - Conducted a literature search, created a report outline, and initiated writing of text. Continued inventory and research on formations within the PCOR Partnership region. Initiated collaboration with UW researchers.
  - D3.B – a report detailing the stacked storage scenario geomechanical modeling will be delivered by March 31, 2022.
    - Progressed on 1D mechanical earth model (MEM) development. Began effort to compile geomodels for simulation in 3D MEMs.

Table 1. Project Deliverables

Deliverable No. and Title	Planned Completion Date	Actual Completion Date	Verification Method	Comments
D1 – PMP	30 days after contract definitization	2/21/2020	PMP file submitted to DOE PM	
D2 – Report – Storage Optimization	4/30/2021	4/30/2021	Topical report submitted to DOE PM	Moved from 12/31/2020
D3.A – Report – Stacked Storage Opportunity Assessment	8/31/2021		Topical report submitted to DOE PM	Moved from 6/30/2021
D3.B – Report – Stacked Storage Scenario Geomechanical Modeling	3/31/2022		Topical report submitted to DOE PM	Created as second D3 report
D4 – Report – Regional Business Case Assessment	12/31/2021		Topical report submitted to DOE PM	Moved from 3/31/2021
D5 – Report – Subsurface and Legacy Well Integrity	12/31/2021		Topical report submitted to DOE PM	
D6 – Report – MVA Strategies	6/30/2022		Topical report submitted to DOE PM	
D7 – Report – Evaluation of Risk Management	9/30/2022		Topical report submitted to DOE PM	
D8 – Report – Regional Permitting Guidance	9/30/2022		Topical report submitted to DOE PM	
D9 – Report – Infrastructure, Scale-Up, and Techno-Economic Assessments	12/31/2022		Topical report submitted to DOE PM	
D10 – Report – NRAP Testing and Validation	3/31/2023		Topical report submitted to DOE PM	
D11 – Report – Basement Faulting and Stress State, Induced Seismicity	9/30/2023		Topical report submitted to DOE PM	
D12 – Report – Regional Socioeconomic Assessments	9/30/2023		Topical report submitted to DOE PM	
D13 – Report – Updated Regional Business Case Assessment	12/31/2023		Topical report submitted to DOE PM	
D14 – Report – Risk-Based Area of Review	1/31/2021	1/29/2021	Topical report submitted to DOE PM	Moved from 12/31/2020
D15 – PCOR Partnership Atlas	6/30/2021 and 3/31/2023	6/30/2021	Atlas submitted to DOE PM	Moved from 3/31/2021

Table 2. Milestone Status Report

Milestone No. and Title	Planned Completion Date	Actual Completion Date	Verification Method	Comments
M1 – Regulatory Roundup Scheduled	2/29/2020	3/31/2020	Reported in subsequent quarterly report	
M2 – Initial Techno-Economic Framework Established	4/30/2020	4/28/2020	Reported in subsequent quarterly report	
M3 –Annual Meeting Scheduled	3/31/2021	3/29/2021	Reported in subsequent quarterly report	
M4 – Regulatory Roundup Scheduled	3/31/2021	3/29/2021	Reported in subsequent quarterly report	
M5 – Data Share with National Lab for NRAP Assessment	6/30/2021	6/30/2021	Reported in subsequent quarterly report	Files added to EDX[1]
M6 – GHGT-16[2] Abstract Submitted	1/31/2022		Reported in subsequent quarterly report	
M7 – BP1 EDX Submitted	3/31/2022		Reported in subsequent quarterly report	
M8 – Draft Journal Article Completed	11/30/2022		Reported in subsequent quarterly report	
M9 – Regulatory Roundup Scheduled	3/31/2023		Reported in subsequent quarterly report	
M10 – GHGT-17 Abstract Submitted	1/31/2024		Reported in subsequent quarterly report	
M11 – Annual Meeting Scheduled	3/31/2024		Reported in subsequent quarterly report	
M12 – BP2 EDX Submitted	6/30/2024		Reported in subsequent quarterly report	

[1] Energy Data eXchange.
[2] 16th International Conference on Greenhouse Gas Control Technologies.

- Initiated work on D5 – Subsurface and Legacy Well Integrity, including a review of wellbore materials. Began collaboration with UW on the effort.

- Continued collaborative efforts in geologic modeling and numerical simulation focused on the region surrounding the Aquistore site with the Petroleum Technology Research Centre (PTRC). The geomodel was evaluated and additional revisions were completed to improve the simulation run time. The history-matching effort to match the field pressure data and saturation log data was completed on field data up to April 2021. Simulation efforts are ongoing. The structural framework for the model was created, and geologic properties were calculated. The simulation model is currently being built.

- Worked on white papers on approaches to geomechanical and geochemical evaluations.

- Worked on summer field activity plans for the field effort proposed in the FY21 add-on proposal.

Next steps to accomplish the goals under Task 2.0 in the coming quarter (Q) include the following:

- Submit the D3.A Stacked Storage Opportunity Assessment report.
- Continue collaboration efforts with PTRC.
- Initiate field activities.
- Continue work on white papers.

Task 3.0 – Data Collection, Sharing, and Analysis

In Task 3.0, the project team will collaborate with other DOE Fossil Energy (FE)-funded researchers to improve understanding of CO_2 injection and storage impacts. The project team will work with national laboratories to facilitate data sharing, support the development and validation of NRAP tools with site-specific data, and participate in development of ML-based tools/methods in a commercial setting.

Progress on Task 3.0 is as follows:

- Subtask 3.1 – Data Sharing:
  - Completed M5 – Data Shared with National Lab for NRAP Assessment on July 30, 2021. All files were added to EDX.
  - Geomodelers from the project team have finished conducting quality assurance/quality control (QA/QC) for a set of geologic models that include eight models encompassing ten different depositional environments. These ten depositional environments encompass a broad array of fundamental depositional settings that could be encountered in deep saline formations for clastic and carbonate systems around the world. The model sets (a total of 60 files, 15 grids, and three properties [porosity, permeability, and facies]) will be exported using several different file types and will be submitted under M7 – BP1 EDX Submitted (due March 31, 2022).
  - Reservoir engineers from the project team continued conducting QA/QC of available reservoir simulations for each of the geological models identified above. The simulation input files (.DAT) and output files (.OUT) containing injection rates, reservoir pressure, and reservoir gas saturation at each timestep will be submitted under M7 – BP1 EDX Submitted (due March 31, 2022).

- Subtask 3.2 – NRAP Validation:
  - The journal article entitled, “Risk-Based Area of Review Estimation in Overpressured Reservoirs to Support Injection Well Storage Facility Permit Requirements for CO_2 Storage Projects” was published in *Greenhouse Gases: Science and Technology*, on June 18, 2021. The online version of the paper may be found here: https://onlinelibrary.wiley.com/doi/abs/10.1002/ghg.2098. The article may be cited as Burton-Kelly, M.E., Azzolina, N.A., Connors, K.C., Peck, W.D.,

Nakles, D.V. and Jiang, T., 2021, Risk-based area of review estimation in overpressured reservoirs to support injection well storage facility permit requirements for CO_2 storage projects: Greenhouse Gas Science and Technology, https://doi.org/10.1002/ghg.2098. The manuscript was the content of D14.

  - NRAP tools testing is ongoing with the following activities:
    - Testing of NRAP Open-Source Integrated Assessment Model (Open-IAM) is complete. A report summarizing the NRAP Open-IAM testing is currently under review.
    - Additional testing of the DREAM (Designs for Risk Evaluation and Management Tool, Version 2020.01-2.0) tool is planned for Q3/Q4 2021 and will be documented as part of a second NRAP testing report.
  - Provided final set of feedback to Illinois Rocstar LLC, which is designing a proof-of-concept interface for DOE for the NRAP Open-IAM tool.

- Subtask 3.3 – Machine Learning:
  - The EERC continues to support the SMART (Science-Informed Machine Learning for Accelerating Real Time Decisions in Subsurface Applications) Initiative through the PCOR Partnership Initiative. The EERC is directly involved in Tasks 1, 2, 4, 5, and 6 of the SMART Initiative and is participating in the crosscutting groups for algorithms and data.
  - The EERC has developed techniques using ML-based predictive modeling (random forest, gradient boost, and neural network) to generate response surfaces for reservoir simulations. The technique is an improvement over traditional response surface modeling and can be used to extend a set of reservoir simulations into broader decision regions for optimizing storage performance.

Next steps to accomplish the goals under Task 3.0 in the coming quarter include the following:

- Subtask 3.1: Continue to QA/QC available geomodels and reservoir simulations that could be shared to accelerate CCUS technology development.

- Subtask 3.2: Continue to participate in the NRAP webinar series to learn about existing and forthcoming NRAP tools. Continue to troubleshoot and test the suite of NRAP tools described above. Summarize the RROM-Gen (Reservoir Reduced-Order Model – Generator), NRAP-Open-IAM, and DREAM testing results into D10 (Report – NRAP Testing and Validation).

- Subtask 3.3: Continue to track SMART Initiative activities to identify opportunities to leverage CO_2 storage project data sets for the validation and testing of ML-based approaches to modeling CO_2 and/or pressure in the subsurface.

Task 4.0 – Regional Infrastructure

The objective of Task 4.0 is to evaluate the regional needs, challenges, and potential economic impacts related to the development of safe and environmentally sound CO_2

transportation infrastructure to accelerate commercial CCUS project deployment. This evaluation will be accomplished by assessing existing infrastructure, scale-up challenges and needs, and techno-economic and socioeconomic impacts in the PCOR Partnership Initiative region and will be communicated through outreach activities.

Progress on Task 4.0 is as follows:

- Submitted the draft "PCOR Partnership Atlas" (D15) on June 30, 2021, for review. Subrecipients UAF and UW contributed to the development of the atlas.

- Developed a scope of work for Resolute Engineering to explore cost analyses on multiple pipeline routes with variable pipeline diameters.

- Joined the regional initiative outreach and engagement collaboration. Organized by Midwest Regional Carbon Initiative's Battelle team, the first meeting was held virtually on June 29, 2021. Members of each of the four initiatives were available to participate on the video call. Each of the seven participants on the call shared the status of their outreach activities, which were focused on preparing an outreach plan, gathering resources, and creating introductory project materials—print, web-based, website development, video, and even creating a podcast. The group seemed interested in continuing the effort to touch base quarterly as well as participate in information sharing, etc., to the mutual benefit of all programs.

- Worked on a white paper on the subject of pressure interference between wells.

Next steps to accomplish the goals under Task 4.0 in the coming quarter include the following:

- Incorporate image and text edits into the PCOR Partnership atlas (D15). Print copies to provide to members at the annual membership meeting in September 2021.

- Continue working on white papers on topics of interest to the members.

Task 5.0 – Technology Transfer

Task 5.0 will inform and educate stakeholders about CCUS technologies. Nontechnical challenges to CCUS deployment in the PCOR Partnership Initiative region will be identified and assessed, with an emphasis on regulatory issues and solutions. Business case scenarios for CCUS projects will be identified, reviewed, and developed. Outcomes of this task will be transferred to stakeholders through meetings, presentations, and webinars. Developed materials will be shared with DOE to support its broader FE program goals.

Progress on Task 5.0 is as follows:

- Presented "Risk-Based Area of Review (AOR): Methodology" for discussion purposes with the North Dakota Department of Mineral Resources on June 29, 2021.

- Continued planning efforts for the in-person Regulatory Roundup meeting scheduled for August 17–18, 2021, in Deadwood, South Dakota. Worked on development of an agenda. Met with presenters to discuss content of the planned meeting. Continued to invite attendees. The meeting has generated much interest.

- Followed development of policy and legislation in PCOR Partnership Initiative states.

- Continued development of the regional business model assessment (D4).

- Initiated efforts to upgrade and update the PCOR Partnership Initiative partner website. The feel of the website will be consistent with the updated public website launched last quarter. Activities included the following:
  - Worked on development of a site map.
  - Initiated updates to technical content.
  - Worked on development of an upgraded searchable PCOR Partnership products database user interface. Worked on development of product summaries to provide viewers information prior to opening a product. The searchable product database will also be available on the public website, with some products restricted to members for viewing.

- Initiated the development of permit application summaries, templates, and/or guidance on AOR determination strategies; low carbon fuel standards permeance certification; risk assessments; and monitoring, reporting, and verification (MRV) plans.

- Continued to work with EERC personnel to understand the carbon capture and storage CCS permitting process in North Dakota. There is coordination with the North Dakota CarbonSAFE (Carbon Storage Assurance and Facility Enterprise) project, a separate DOE-funded effort, working on permitting a CCS project in the PCOR Partnership Initiative region.

- Continued development of a white paper on pore space-leasing considerations and several white papers focused on lessons learned through the PCOR Partnership.

Next steps to accomplish the goals under Task 5.0 in the coming quarter include the following:

- Hold the Regulatory Roundup meeting scheduled for August 17–18, 2021, in Deadwood, South Dakota.

- Continue tracking and assessing Internal Revenue Service Section 45Q tax credit guidance, rulemaking, and congressionally proposed enhancements.

- Continue the evaluation and development of permitting guidance for Class VI applications.

- Launch the updated PCOR Partnership Initiative partner website.
- Complete the draft white papers.

CHANGES/PROBLEMS

The due date of D3 – Stacked Storage Opportunity Assessment was extended from June 30, 2021, to August 31, 2021. The product was divided into two reports: D3.A – a stacked storage opportunity assessment report that will be delivered by August 31, 2021, and D3.B – a report detailing the stacked storage scenario geomechanical modeling that will be delivered by March 31, 2022.

The delay in FY21 add-on funding is impacting the early phases of fieldwork in the proposed field project.

SPECIAL REPORTING REQUIREMENTS

None.

BUDGETARY INFORMATION

ENERGY & ENVIRONMENTAL RESEARCH CENTER

PLAINS CO_2 REDUCTION PARTNERSHIP INITIATIVE TO ACCELERATE CARBON CAPTURE, UTILIZATION, AND STORAGE DEPLOYMENT

DE-FE0031838

Project-to-Date Financial Report at June 30, 2021

($K)	Q4 Oct - Dec 2019	Q1 Jan - Mar 2020	Q2 Apr - Jun 2020	Q3 Jul - Sep 2020	Q4 Oct - Dec 2020	Q1 Jan - Mar 2021	Q2 Apr - Jun 2021	Q3 Jul - Sep 2021	Q4 Oct - Dec 2021	Q1 Jan - Mar 2022
Baseline Cost Plan										
Federal Share	63.8	81.4	213.9	239.6	914.0	914.0	914.0	914.0	914.0	914.0
Nonfederal Share	0.0	6.5	49.7	40.6	237.5	237.5	237.5	237.5	237.5	237.6
Total Planned	63.8	87.9	263.6	280.2	1151.5	1151.5	1151.5	1151.5	1151.5	1151.6
Cumulative Federal	63.8	145.2	359.1	598.7	1512.7	2426.7	3340.7	4254.7	5168.7	6082.7
Cumulative Nonfederal	0.0	6.5	56.2	96.8	334.3	571.8	809.3	1046.8	1284.3	1521.9
Cumulative Baseline Costs	63.8	151.7	415.3	695.5	1847.0	2998.5	4150.0	5301.5	6453.0	7604.6
Actual Incurred Cost										
Federal Share	63.8	81.4	213.9	239.6	296.8	376.4	1230.8			
Nonfederal Share	0.0	6.5	49.7	40.6	83.0	81.9	179.1			
Total Incurred Costs	63.8	87.9	263.6	280.2	379.8	458.3	1409.9			
Cumulative Federal	63.8	145.2	359.2	598.8	895.6	1272.0	2502.8			
Cumulative Nonfederal	0.0	6.5	56.2	96.7	179.8	261.6	440.7			
Cumulative Incurred Costs	63.8	151.7	415.4	695.5	1075.3	1533.6	2943.5			
Variance										
Federal Share	0.0	(0.0)	(0.0)	0.0	617.2	537.6	(316.8)			
Nonfederal Share	0.0	0.0	0.0	0.0	154.5	155.6	58.4			
Total Variance	0.0	(0.0)	(0.0)	0.0	771.7	693.2	(258.4)			
Cumulative Federal	0.0	(0.0)	(0.1)	(0.1)	617.1	1154.7	837.9			
Cumulative Nonfederal	0.0	0.0	0.0	0.1	154.5	310.2	368.6			
Cumulative Variance	0.0	(0.0)	(0.1)	(0.0)	771.7	1464.9	1206.5			

ENERGY & ENVIRONMENTAL RESEARCH CENTER

PLAINS CO_2 REDUCTION PARTNERSHIP INITIATIVE TO ACCELERATE CARBON CAPTURE, UTILIZATION, AND STORAGE DEPLOYMENT

DE-FE0031838

Project-to-Date Financial Report at June 30, 2021

($K)	Q2 Apr - Jun 2022	Q3 Jul - Sep 2022	Q4 Oct - Dec 2022	Q1 Jan - Mar 2023	Q2 Apr - Jun 2023	Q3 Jul - Sep 2023	Q4 Oct - Dec 2023	Q1 Jan - Mar 2024	Q2 Apr - Jun 2024	Q3 Jul - Sep 2024
Baseline Cost Plan										
Federal Share	424.3	424.3	424.3	424.3	424.3	424.3	343.1	342.9	342.9	342.9
Nonfederal Share	109.2	109.2	109.2	109.2	109.2	109.0	81.8	81.9	81.9	81.9
Total Planned	533.5	533.5	533.5	533.5	533.5	533.3	424.9	424.8	424.8	424.8
Cumulative Federal	6507.0	6931.2	7355.5	7779.7	8204.0	8628.2	8971.3	9314.2	9657.1	10000.0
Cumulative Nonfederal	1631.1	1740.3	1849.5	1958.7	2067.9	2176.9	2258.7	2340.6	2422.5	2504.4
Cumulative Baseline Costs	8138.1	8671.5	9205.0	9738.4	10271.9	10805.1	11230.0	11654.8	12079.6	12504.4
Actual Incurred Cost										
Federal Share										
Nonfederal Share										
Total Incurred Costs										
Cumulative Federal										
Cumulative Nonfederal										
Cumulative Incurred Costs										
Variance										
Federal Share										
Nonfederal Share										
Total Variance										
Cumulative Federal										
Cumulative Nonfederal										
Cumulative Variance										