

Technical Reviewers' Rating Summary

Proposal Number Application Title Submitted By
 Request For Total Project Costs

Section A. Scoring

Statement	Weighting Factor	G-50-06A	G-50-06B	G-50-06C	Average Weighted Score
1. Objectives	9	5	3	3	27
2. Achievability	7	4	3	4	21
3. Methodology	8	5	4	4	32
4. Contribution	8	4	4	5	32
5. Awareness / Background	5	5	4	4	20
6. Project Management	3	4	4	3	9
7. Equipment / Facilities	2	5	3	3	6
8. Value / Industry - Budget	4	4	3	4	12
9. Financial Match - Budget	4	5	4	5	16
Average Weighted Score		228	178	198	201
	Total: 50				250 possible points

OVERALL RECOMMENDATION

FUND	X	X	X
FUNDING TO BE CONSIDERED			
DO NOT FUND			

Section B. Ratings and Comments

1. The objectives or goals of the proposed project with respect to clarity and consistency with North Dakota Industrial Commission/Oil and Gas Research Council goals are:

the proposed work clearly is consistent with the goals and objectives of the NDIC and OGRC.
 - Reviewer: G-50-06A
 - Rating: 5

What quantities of CCUS are current and how will the study expand and increase CCUS rates? What economic return can be realized and when can stakeholders see that return?
 - Reviewer: G-50-06B
 - Rating: 3

The goals of the program are clearly stated at a very high level.
 - Reviewer: G-50-06C
 - Rating: 3

Thank you for your comments. The PCOR region currently has a number of active CCUS projects – in terms of CO₂ geological storage, approximately 1.1 Mt per year is stored in saline formations and approximately 5Mt per year is associated storage, incidental to EOR

operations. The PCOR Initiative will expand and increase CCUS deployment by identifying and addressing key challenges, both technical and non-technical, through collaboration and knowledge sharing with partners and stakeholders. The current timescale for CCUS deployment in the US has been positively impacted by recent 45Q tax legislation, which offers up to \$50/tonne for dedicated (saline) storage and up to \$35/tonne for associated storage. Monetization of these tax credits requires project construction to commence by 2024, and several projects (e.g. Tundra) are pursuing an aggressive timescale for construction and operation. Establishing reliable supplies of CO₂ supplies will allow exploitation of EOR opportunities in both conventional and unconventional oilfields.

- Applicant

2. With the approach suggested and time and budget available, the objectives are:

There success with the first phases of this activity leads one to expect similar level of success with the current activity

- Reviewer: G-50-06A

- Rating: 4

What timeline exists for greater implementation of CCUS?

- Reviewer: G-50-06B

- Rating: 3

The project timeline and budget appear to be reasonable and achievable. The Abstract does indicate an anticipated increased scope and cost-share requirements in years 2-5, however details of the increased scope are not provided. It does indicate the potential for industry partner cost sharing.

- Reviewer: G-50-06C

- Rating: 4

Thank you for the comments. The current timeline for CCUS deployment in the US is being largely driven by the 45Q tax credit availability, which requires project construction to commence by 2024. In Canada, current carbon tax requirements being phased in from federal legislation could impose similar incentives and timescales.

- Applicant

3. The quality of the methodology displayed in the proposal is:

No comment

- Reviewer: G-50-06A

- Rating: 5

No comment

- Reviewer: G-50-06B

- Rating: 4

The project description and methodologies are described at a very high level due to the large scope of the project, so it is not possible to assess the quality of specific methodologies.

- Reviewer: G-50-06C

- Rating: 4

Thank you for the comment.

- Applicant

4. The scientific and/or technical contribution of the proposed work to specifically address North Dakota Industrial Commission/Oil and Gas Research Council goals will likely be:

The work proposed has the potential to very significantly impact the ND oil industry. It will open new avenues for significant growth and potentially many high paying jobs and economic activity in the state.

- Reviewer: G-50-06A

- Rating: 4

Possible to realize an industry of CCUS within North Dakota at some point.

- Reviewer: G-50-06B

- Rating: 4

The proposed project outcomes align very well with the Oil and Gas Research Council goals and could be extremely significant.

- Reviewer: G-50-06C

- Rating: 5

Thank you for these comments.

- Applicant

5. The background of the principal investigator and the awareness of current research activity and published literature as evidenced by literature referenced and its interpretation and by the reference to unpublished research related to the proposal is:

World class staff available for the work.

- Reviewer: G-50-06A

- Rating: 5

No comment

- Reviewer: G-50-06B

- Rating: 4

The principal investigator has relevant and current experience in the area of the proposed project. The resumes provided are summary level and do not identify specific professional publications.

- Reviewer: G-50-06C

- Rating: 4

Thank you for the comment. All of the key personnel in this project are qualified and experienced geoscientists and engineers with CCUS expertise.

- Applicant

6. The project management plan, including a well-defined milestone chart, schedule, financial plan, and plan for communications among the investigators and subcontractors, if any, is:

No comment

- Reviewer: G-50-06A

- Rating: 4

No comment

- Reviewer: G-50-06B

- Rating: 4

Good description with a Gantt chart/schedule, communication schedule and financial summary.

- Reviewer: G-50-06C

- Rating: 3

Thank you for the comment.

- Applicant

7. The proposed purchase of equipment and the facilities available is:

No comment

- Reviewer: G-50-06A

- Rating: 5

No comment

- Reviewer: G-50-06B

- Rating: 3

Did not identify significant equipment or facilities purchases.

- Reviewer: G-50-06C

- Rating: 3

The PCOR Initiative will function through collaboration and knowledge/technology transfer amongst partners and stakeholders, leveraging expertise, knowledge and results from various commercial and research projects. Consequently, we do not anticipate any requirements to purchase equipment or facilities.

- Applicant

8. The proposed budget “value”¹ relative to the outlined work and the commitment from other sources is of:

No comment

- Reviewer: G-50-06A

- Rating: 4

No comment

- Reviewer: G-50-06B

- Rating: 3

Budget appears reasonable. See note above regarding identified potential increased scope/cost in years 2-5.

- Reviewer: G-50-06C

- Rating: 4

Thank you for the comment.

- Applicant

9. The “financial commitment”² from other sources in terms of “match funding” have been identified:

The assembled team of contributors is very impressive. It represents members from many areas who will be involved with successful projects in this area. The effort is highly leveraged

- Reviewer: G-50-06A

- Rating: 5

Multiple partners and stakeholders add benefit across the board.

- Reviewer: G-50-06B

- Rating: 4

Excellent job obtaining DOE financial support as well as a very broad array of industry and governmental partnership members. Potential for future matching funding from industry partners.

- Reviewer: G-50-06C
- Rating: 5

Thank you for these encouraging comments.

- Applicant

1 “value” – The value of the projected work and technical outcome for the budgeted amount of the project, based on your estimate of what the work might cost in research settings with which you are familiar. A commitment of support from industry partners equates to a higher value.

2 “financial commitment” from other sources – A minimum of 50% of the total project must come from other sources to meet the program guidelines. Support less than 50% from Industrial Commission sources should be evaluated as favorable to the application; industry partnerships equates to increased favorability.

General Comments

The proposed next phase of the PCOR activity is critically important for the state of ND and the ND oil industry. I believe it represents a highly leveraged investment by the OGRC that will pay significant dividends in the future. I recommend funding of this project

- Reviewer: G-50-06A

Public outreach on the program could be of benefit. Can the study be completed and data brought to benefit by 2024 deadline. Current lawsuit regarding pore space in North Dakota be addressed. Any data regarding actual economic return in real dollars be attained.

- Reviewer: G-50-06B

This project aligns very well with the NDIC Oil and Gas Research Council goals and has the potential for an extremely significant impact on ND Oil and Gas as well as other industries. The extremely broad support for the project by elected officials, industry partners, national laboratories, trade associations, and Canadian organizations speaks to the need and potential benefits. The abstract describes the project at a very high level and will require skilled leadership to manage the scope, schedule and cost. The proposed leadership appear to have the required experience.

- Reviewer: G-50-06C