Grant Round Application for LRC-LXV (65)

TECHNICAL ADVISOR COMMENTS
LRC-LXV (65) – A

"CO_2 Capture Demonstration Project"
Submitted by: Basin Electric Power Cooperative
Request for: $2,700,000; Total Project Costs: $5,400,000
Project Manager: James Sheldon; Project Duration: 6 months

Description of the Project: Basin Electric Power Cooperative (BEPC) proposes to conduct a Front End Engineering and Design (FEED) study involving the application of Powerspan's technology to remove 90% of the carbon dioxide (CO_2) from a 120 MW flue gas slipstream of Unit 1 of the Antelope Valley Station. The FEED study will provide BEPC with the necessary information (engineering detail, schedule, and cost estimate (+/- 15%)) to evaluate the economic viability of the project.

Technical Peer Reviewers' Key Comments:

All Reviewers

- The objectives are very clear and most likely achievable; the scientific contributions will be significant;
- The background of the investigator(s) is better than average; budget is of average-to-high value;
- The project management plan has shortcomings.

Reviewer 08-13

The participants in this proposal provide a unique combination of expertise and interest capable of solving technical and scientific aspect of this project. The major flaw in this proposal is inadequate project management details. A statement of work including tasks with milestone charts and budget detail would improve the proposal.
Recommendation: Fund

Reviewer 08-14

A CO_2 capture project from a lignite-fired power plant with subsequent CO_2 sequestration is a necessary step towards evaluating and demonstrating technically- and economically-feasible carbon management technologies. These technologies are necessary to ensure that lignite-fired power plants will remain operational as carbon management legislation is implemented. However, there is no project management plan for a project of this size and there is a minimum cost share when this project should be of interest to many other utilities and coal mining companies.
Recommendation: Funding may be considered

Reviewer 08-15

This proposal does not include a comparison of other technologies that can achieve the same objective of 90% capture. As a reviewer, it is important to understand why BEPC selected this technology for a FEED study. The proposal does not contain a milestone chart, detailed schedule, financial plan, or communication plan for the six-month FEED study. **Recommendation: Funding may be considered**

Technical Advisor's Recommendation: Fund (Demonstration project funds)
The demonstration of cost-effective, environmentally sound capture and storage of CO_2 is critical to the future of the lignite industry. It is necessary and appropriate for increased public-private investment in carbon capture and storage research, development, demonstration, and deployment of technologies in order to achieve greenhouse gas management objectives already being established, or being contemplated, by various governmental bodies. Should the Lignite Research Council recommend funding for this project, the following contingency should be considered:

- Applicant submittal of a detailed scope of work with a corresponding milestone chart and detailed budget is a prerequisite to receiving NDIC funds.

Conflict of Interest: BEPC