

**LIGNITE RESEARCH COUNCIL MEETING**  
**September 7, 2001**

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**V . Grant Round Application LRC – XLIII**

**TECHNICAL ADVISOR’S RECOMMENDATION**

**LRC - XLIII**

“Lignite Vision 21 Feasibility Project”

Submitted by Great Northern Power Development L.P.

Principal Investigator, Gerald E. Vaninetti

Request for \$673,250: Total Project Costs \$1,346,500

Timeframe: 14-months

**Description of the Project**

The overall goal of this project is to add a new 500 MW lignite-fired power plant in North Dakota. This grant application requests matching funding for the feasibility studies leading a decision point for the construction of a 500 MW power plant and mine. This Phase I feasibility includes studies of generation technologies, siting, environmental impacts, marketing, transmission and financing. Great Northern Power Development proposes the use of a Project Team, consultants and participation with other LV 21 grant parties. Great Northern Power Development will evaluate sites near Belfield, Crooked Creek and New Salem, North Dakota with the Belfield site identified as the most likely location. If the grant application is successful in Phase I, they plan to submit a request for the balance of a \$10 million grant for the construction phase of the project. The total cost for a 500 MW LV 21 Great Northern Power Development project could be in excess of \$700 million.

**Technical Peer Reviewer’s Comments**

The technical peer reviewers provide a variety of comments with recommendation to Fund or Funding May Be Considered.

Technical Reviewer 01-17; Fund:

- The project meets the program goals for increasing the use of lignite and creating new jobs.
- The study will compare PC versus CFB technology and provide information on IGCC (E-Gas, Shell, and Texaco).
- This proposal should be funded.

Technical Reviewer 01-18; Funding May Be Considered:

- The proposal should lead to a decision by September 2002.
- The schedule is very aggressive but achievable.
- This reviewer is concerned that potential partners should be identified before the project is funded.

Technical Reviewer 01-19; Funding May Be Considered:

- The schedule is aggressive.
- This proposal as the other LV 21 projects, lack sensitivity to visibility impairment
- If funded, all the LV 21 parties should participate in a required findings conference for the fall of 2002.

Technical Reviewer 01-20; Fund:

- The project meets the goals of the Lignite Research Council Vision 21 program.
- The project developers have little experience in this area; however, the consultants and feasibility manager bring continuity to the project.
- The developer proposes coordination to reduce overlap and costs. This greenfield project is challenging but should bring into focus where new lignite generation can be located.

Technical Reviewer 01-21; Funding May Be Considered:

- The purpose is very clear – a proposed 500 MW lignite-fired mine-mouth power plant.
- A major obstacle to construction of a plant near South Heart is air quality regulations due to the proximity of Theodore Roosevelt National Park. A second obstacle for this site is the availability of water.
- I recommend that the availability of water be included and the Montana location be excluded as a condition of funding.

**Technical Advisor’s Recommendation – FUND (with conditions)**

***I. I recommend funding Phase I of the Great Northern Power Development project in an amount not to exceed \$673,250 subject to the following guidelines:***

1. Approval of the detailed scope of work, budget and milestone chart by the Industrial Commission Technical Representative;
2. Approval of progress reports:
  - a. Progress reports should be submitted on the basis of activities and tasks; and
  - b. Reports should be submitted no less than quarterly;
4. Funds must only be used for the development and use of North Dakota lignite:
  - a. Activities and studies should promote economic, efficient and clean use of North Dakota lignite that can create jobs and economic growth in North Dakota; and
  - b. Activities and studies must evaluate North Dakota lignite-fueled generation options;
4. Studies and activities to maximize efficient use of available state and industry funds and avoid duplication:
  - a. To the extent practical and consistent with timely completion and to the mutual benefit of the parties while protecting each parties confidentiality, environmental, generation and transmission studies should be done in cooperation with other entities; and
  - b. The state should not fund duplicative studies by approved multiple LV 21 applicants.

**Conflict of Interest**

- None Identified