

LIGNITE RESEARCH COUNCIL MEETING
April 26, 2001

IV A. Grant Round Application LRC - XLI A

TECHNICAL ADVISOR'S RECOMMENDATION

LRC - XLI A

“Lignite Vision 21 Project Gascoyne, North Dakota”

Submitted by Montana-Dakota Utilities Co.

Project Manager, C. Wayne Fox; Principal Investigator, Bruce Imsdahl

Request for \$10,000,000: Total Project Costs \$740,000,000

Timeframe: 8 years

Description of the Project

The objective of the Lignite Vision 21 Project (LV 21) is the construction of a new 500MW, lignite-fired base load power plant in Gascoyne, North Dakota, utilizing a pre-existing lignite mine. As submitted by Montana-Dakota Utilities Co. (MDU), Phase I includes feasibility and permitting studies including: 1) Siting and Environmental Analysis; 2) Electric Power Market Analysis; 3) Mine Plan and Costing Analysis; 4) Transmission; 5) Socioeconomic Impact; 6) Generating Plant and Lignite Combustion Product Utilization Design; and 7) Project Management. The Phase I budget contains an estimated time frame of three years; Industrial Commission request of \$3,000,000; and total cost of \$6,400,000. The MDU LV 21 Gascoyne project Phase II includes: 1) Transmission Siting and Permitting; 2) Generation Plant and Lignite Combustion Product Utilization Design; and 3) Project Management and Reporting. The Phase II budget contains an estimated time frame of one year; Industrial Commission request of \$7,000,000; and total cost of \$14,000,000. MDU proposes Phase III with two tasks: 1) Construction of the Generation Plant, Transmission Lines and Lignite Mine. Phase III contains an estimated time frame of four years; no funds are requested from the Industrial Commission during Phase III; and \$720,000,000 of total Phase II costs.

To summarize the estimated time frames and costs, MDU requests \$10,000,000 from the North Dakota Industrial Commission during the first four years of the eight-year project. The Phase I request is \$3,000,000 and Phase II is \$7,000,000. MDU estimates \$740,400,000 for total project costs.

Technical Peer Reviewer's Comments

The technical peer reviewers provide a variety of comments as follows:

Technical Reviewer M-4; Fund:

- “This project has the potential to consume four million tons” and “bring significant income to the state.”
- The project is estimated to cost \$740,000,000 but the Commission is not being asked to fund Phase III.

Technical Advisor's Recommendation LRC - XLI A

Technical Peer Reviewer's Comments (continued)

Technical Reviewer M-5; Funding May Be Considered:

- The objective to build a 500 MW plant is very clear and the utilization of coal combustion ash is an added attraction.
- Crucial air modeling studies are not a part of this project, but will be conducted by MDU separately.

Technical Reviewer M-6; Fund:

- The project clearly meets Commission and Lignite Research Council goals.
- The air quality investigation in this area of the state may be advantageous and the study is very necessary.

Technical Reviewer M-7; Fund:

- The project will benefit North Dakota and could be an economic boost for the Gascoyne area.
- Employing existing technology may lower cost but using established technology may sacrifice the benefits of new technology and adversely impact future economic benefit of the plant.

Technical Reviewer M-8; Funding May Be Considered:

- Air quality is a turnkey decision but the modeling analysis is not a part of the proposal.
- The proposal did not convey an achievable outcome of new plant construction.

Technical Advisor's Recommendation – FUND

I. I recommend funding Phase I and Phase II of the MDU project in an amount not to exceed \$2,850,000 subject to the following guidelines:

1. Approval of the Phase I and Phase II detailed scope of work, budget and milestone chart by the Industrial Commission Technical Representative;
2. Review of the air quality modeling;
3. 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;
5. 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.

Technical Advisor's Recommendation – FUND (Phase I and Phase II continued)

6. If MDU does not proceed to Phase III with construction of a LV 21 Gascoyne plant, then MDU will return a portion of the Phase I and Phase II costs.
7. A Phase I project cost to the Commission of \$1,800,000 with a decision date of December 2002.
8. MDU should work to accelerate the completion date for Phase II.

II. I recommend funding in an amount not to exceed \$7,150,000 upon receipt of a written commitment from MDU for Phase III construction of a new lignite-fired Gascoyne power plant subject to the following guidelines:

1. Approval of the Phase III detailed scope of work, budget and milestone chart by the Industrial Commission Technical Representative and Lignite Research Council;
 - a. Approval of progress reports;
 - b. Progress reports should be submitted on the basis of activities and tasks; and
 - c. Reports should be submitted no less than semi-annually; and
2. Payments based on the estimated \$7,150,000 with disbursement spread over the Phase III project as a percentage of the estimated total project costs.
3. MDU and the Industrial Commission negotiate a return to the Lignite Research Fund conditioned on commercial operation of a Lignite Vision 21 Gascoyne power plant.
4. MDU should work to accelerate completion of Phase III.

Funding is subject to continuing legislative appropriations for the lignite research, development and marketing program and continuing Industrial Commission support for the Lignite Vision 21 Project.

Further, I encourage Montana-Dakota Utilities and Westmoreland Power Inc, to jointly develop the Gascoyne site as appropriate for their mutual interests. At the time this proposal was submitted and at the time my recommendation was submitted to the Lignite Research Council, it was my understanding that the Gascoyne coal reserves was owned by Knife River Corporation and any ownership interest by Westmoreland was not finalized.

Confidentiality

Montana-Dakota Utilities Co. has requested the right of confidentiality for feasibility study results subject to the condition of NDCC 54-17.5-06. North Dakota Century Code 54-17.5-06 establishes confidentiality for material or data that are trade secrets, or commercial, financial or proprietary information.

Conflict of Interest

MDU Resources Group
Knife River Corporation