

MEETING MINUTES  
**LIGNITE RESEARCH COUNCIL – SPECIAL GRANT ROUND**  
Thursday, August 13, 2020 - 1:30 p.m. (CT) via WebEx

**LRC VOTING MEMBERS (or their authorized alternates) PRESENT:**

Jason Bohrer – Lignite Research Council, Chairman  
John Bauer – Great River Energy  
Wade Boeshans – BNI Coal, Ltd.  
Randy Christmann – North Dakota Public Service Commission  
Rita Faut – ND Farm Bureau  
Dave Glatt – North Dakota Dept. of Environmental Quality  
Charlie Gorecki - Energy & Environmental Research Center (EERC)  
Gerard Goven – Falkirk Mining Company  
Mark Hager – IBEW 11<sup>th</sup> District (ND)  
Don Hochhalter - North Dakota Department of Commerce  
Dale Johnson – Basin Electric Power Cooperative (Dakota Gas)  
Gavin McCollam – Basin Electric Power Cooperative  
Ed Murphy – North Dakota Geological Survey  
Gerry Pfau – Minnkota Power Cooperative  
Phillips – Coal Conversion Counties  
Jay Skabo – Montana-Dakota Utilities Co.  
Brad Tollerson – Otter Tail Power Company  
Bryan Walther – North American Coal Company

NOT in Attendance-Al Rudeck, Kai Xia, Jeff Delzer & Ray Holmberg.

**OTHERS PRESENT:**

Dave Allard – Lignite Energy Council  
Karlene Fine – North Dakota Industrial Commission  
Jonathan Fortner – Lignite Energy Council  
Angie Hegre - Lignite Energy Council  
Mike Holmes – Lignite Research Council  
Andrea Pfennig- North Dakota Industrial Commission

**GUESTS:**

Dan Gallagher, Dakota Gasification Co.  
Chris Breiner, Basin Electric Cooperative  
Jason Maier, Basin Electric Cooperative  
Tyler Hamman, Basin Electric Cooperative  
Dan Laudal, Minnkota Power Cooperative

**I. CALL TO ORDER**

**Meeting called to order:**

Lignite Research Council (LRC) Chairman, Jason Bohrer, called the LRC meeting to order at 1:37 p.m. (CT) on August 13, 2020 via WebEx conferencing.

## II. APPROVAL OF MINUTES

### **Approval of May 14 and June 8, 2020 LRC Meeting Minutes:**

Bohrer asked for a motion to approve both sets of minutes for the LRC meetings. Wade Boeshans so moved; seconded by John Phillips. Motion carried.

## III. PROGRAM FINANCIAL SUMMARY

### **Program Financial Summary:**

Karlene Fine shared the financial summary regarding the Lignite Research, Development and Marketing Program. (A copy of the financial summary is available in the Lignite Research Program files.)

Fine shared the 2019-2021 budget spreadsheet with the group. She reviewed the cash balance as of June 30, 2020 of \$29 million and outstanding commitments of \$31 million. Although this shows a negative, Fine was not concerned as these projects come due at various times. Fine shared the remaining un-committed balance between the two categories of Small Research/Education/Demonstration Projects and Advanced Energy Technology Projects totaling \$12.9 million. Fine shared that the \$10 million oil and gas revenues will take a few more months to get to the LRC account.

Fine briefly commented on the four Advanced Energy Technology Projects. Project Carbon (now complete) was \$3.2 million, Project Tundra Feed (this is the one you are looking at an additional \$5 million for today), Pre-feed Study for the CCS at Coal Creek \$4.2 million and we are in the process of EERC taking the lead on this, and the last one recently approved for Midwest Ag for \$3.3 million.

Angie Hegre emailed the financial spreadsheet one week prior to the meeting to the LRC members so the group saw all the details provided by Karlene Fine.

## IV. GRANT ROUND XCIII (93) APPLICATIONS

- **LRC-XCIII (93A) Project Tundra FEED Amendment**

Submitted by: Minnkota Power Cooperative

Principal Investigator: Gerry Pfau

Project Duration: 13 months

Request for: Increase of \$5,000,000, Making total NDIC investment \$20,000,000

Total Project Costs: \$46,006,695

Holmes shared the objective of the ongoing work in Project Tundra is to complete a front-end engineering design (FEED) study for a commercial carbon capture system retrofitted onto a power plant fueled by North Dakota lignite. This proposed amendment would increase the scope related to a near-term focus on CO<sub>2</sub> storage adjacent to the plant. At this time, market conditions

in the oil fields have changed and Minnkota – the operator of the Young Station – would expand on the option of geologic storage near the plant and Center Mine. While CO<sub>2</sub> would be stored in the short term near the plant, the long-range plan is still focused on enhanced oil recovery in North Dakota’s oil fields. The goal of Project Tundra remains to implement carbon capture, utilization, and storage (CCUS) in North Dakota, preserving the use of lignite, revitalizing legacy oil fields and creating a new CO<sub>2</sub> EOR industry.

Holmes said that the three technical peer reviewers gave the proposal an average weighted score of 231.3 out of 250 points with very favorable reviews and comments. The weighted score was 225 out of 250 points from reviewer 23-01, 239 out of 250 points from reviewer 23-02, and 230 out of 250 points from reviewer 23-03. Technical peer reviewers 23-01, 23-02, and 23-03 all recommended to **fund** the project.

As the Technical Advisor for this project, Holmes recommended **fund** based on the three very positive technical reviewers’ feedback. The project represents the next step toward commercial carbon management in North Dakota, and would benefit the entire lignite industry as well as oil, in the long term. In the near term there is more of a focus on geologic storage, because of low oil prices and the maturity of most of the North Dakota oil fields.

Holmes shared that funding would be subject to the Technical Advisor participating in project reviews and reviewing the project management plan with the project manager, including the revised budget.

Holmes said that Minnkota Power, BNI Energy and EERC have conflicts of interest on this project.

Gerry Pfau, Minnkota Power Cooperative, presented on behalf of the applicant. (A copy of his Power Point presentation is available in the LRP files.)

- **LRC-XCIII (93) B: Naphtha and Tar Oil Overhead Refining Project**

Submitted by: Dakota Gasification Company

Principal Investigator: Dan Gallagher

Project Duration: 4 months

Request for: \$142,500

Total Project Costs: \$285,000

Holmes described the project proposed by Dakota Gasification Company (DGC) focuses on an engineering study to upgrade and increase the value of its naphtha and tar oils. The proposed project would fund engineering and design activities to explore the feasibility of constructing a hydrotreater at the Synfuels Plant in order to further refine the naphtha and tar oil overheads into a stream suitable for gasoline blendstock. The Synfuels Plant was originally constructed in the early 1980s to turn lignite into synthetic natural gas. Since that time, many products have been added for commercial sale, such as fertilizers, carbon dioxide and several other byproducts. This project would seek to increase the product line at DGC and would provide an additional option for any future lignite gasification applications.

Holmes said that the three technical peer reviewers gave the proposal an average weighted score of 181.3 out of 250 points. The weighted score was 171 out of 250 points from reviewer 23-04, 185 out of 250 points from reviewer 23-05, and 188 out of 250 points from reviewer 23-06. Technical peer reviewers 23-05 and 23-06 recommended **fund** and technical peer reviewer 23-04 recommended **funding may be considered** for the project.

As the Technical Advisor for this project, Holmes recommended **fund** based on the three technical reviewers' feedback and review. Holmes stated two of the reviewers recommended **funding**, and one recommended that **funding may be considered**. The proposed project is a great fit for the Lignite Research Program, as a pursuit of a new market for lignite byproducts at Dakota Gasification Company (DGC). DGC has done a great job of expanding their product portfolio to improve the overall economics of the facility. This has been critical for the site and North Dakota as a whole. The project also would expand the product suite options for any future lignite gasification system.

Holmes shared that funding would be subject to the Technical Advisor participating in project reviews and reviewing the project management plan with the project manager, including the staffing plan and the test plan.

Holmes said that Basin Electric Power Cooperative and Dakota Gasification Company both have conflicts of interest on this project.

Dan Gallagher, Dakota Gasification Company, presented on behalf of the applicant. (A copy of his PowerPoint presentation is available in the LRP files.)

## **V. 2020 CALENDAR**

Bohrer announced that the next LRC meeting is scheduled for November 12, 2020. Bohrer reminded the group that the upcoming grant application deadline is October 1, 2020.

## **VI. OTHER BUSINESS**

**Voting:** Due to the meeting being done in a WebEx format and not in person, there was two options for voting. A confidential email sent from a third-party voting site called Simply Voting was sent to the present voting members. The group also had the option to email Karlene Fine, ND Industrial Commission directly with their vote.

**Adjournment:** There being no further business, Bohrer requested a motion for adjournment of the LRC meeting. Wade Boeshans so moved; seconded John Bauer. Motion carried.

**GRANT ROUND XCIII (93) Ballot Results:** Jason Bohrer announced (via email) following the meeting the results of the ballots concerning the LRC's recommendations to the NDIC regarding the Grant Round XCII (93) proposals as follows

### **LRC-XCIII (93) A Project Tundra FEED Amendment**

Submitted by: Minnkota Power Cooperative

Principal Investigator: Gerry Pfau

Project Duration: 13 months

Request for: \$5,000,000 additional (\$20,000,000 total NDIC)

Total Project Costs: \$46,006,695

**Fund:** 17 votes Do Not Fund: 0 vote Abstain: 1 vote

### **LRC-XCII (93) B: Naphtha and Tar Oil Overhead Refining Project**

Submitted by: Dakota Gasification Company

Principal Investigator: Dan Gallagher Project

Duration: 4 months

Request for: \$142,500

Total Project Costs: \$285,000

**Fund:** 16 votes Do Not Fund: 0 vote Abstain: 2 votes

The North Dakota Industrial Commission meeting, when these recommendations will be considered, will be held on August 20, 2020.

Angie Hegre, recording secretary