

**MEETING MINUTES**

**LIGNITE RESEARCH COUNCIL – GRANT ROUND 104**

Thursday, May 9, 2024 - 1:30 p.m. (CT)

Bismarck State College – National Energy Center of Excellence Room #335

**LRC VOTING MEMBERS PRESENT:**

Jason Bohrer – Lignite Research Council, Chairman  
Jay Kost – The Falkirk Mining Company  
Mike Heger – BNI Energy (on-line)  
Bryan Walther – North American Coal Company  
Gavin McCollam – Basin Electric  
Dale Johnson – Dakota Gas  
John Bauer- Rainbow Energy Center  
Tim Hagerott – Minnkota Power Cooperative  
Jay Skabo – Montana-Dakota Utilities Co.  
Dave Glatt – North Dakota Department of Environmental Quality  
Randy Christmann – North Dakota Public Service Commission  
Tom Oakland – North Dakota Commerce  
Mark Hager – IBEW 11<sup>th</sup> District ND  
Todd Porter – North Dakota House of Representatives  
Dale Patten – North Dakota Senate  
Bill Sawyer – ALLETE (on-line)  
Joseph Heringer – Land Board  
Rita Faut – North Dakota Farm Bureau

**OTHERS PRESENT:**

Reice Haase – North Dakota Industrial Commission  
Brenna Jessen – North Dakota Industrial Commission  
Erin Stieg – North Dakota Industrial Commission  
Mike Holmes – Lignite Research Council  
Angie Hegre - Lignite Energy Council  
Jonathan Fortner – Lignite Energy Council  
Brian Kalk – EERC  
Donn Stephen – Coyote Creek Mine  
Brad Zimmerman – Otter Tail Power Company  
Jessica Bell – Rainbow Energy Center  
Geoff Simon – ND Coal Conversion Counties Assoc.  
Conway Nelson – Rainbow Energy Center (presenter)  
Greg Henthorne – AmeriCarbon Products, LLC  
Claire Vigessa – NDTA (presenter)  
Kay LaCoe – Lignite Energy Council (presenter)  
Brent Sanford – Energy Workforce Considerations (presenter)

**OTHERS ON-LINE:**

Karen Tyler- North Dakota Industrial Commission  
Amra Hinkel  
David Berry – AmeriCarbon Products, LLC

## I. CALL TO ORDER

### Meeting called to order:

Lignite Research Council (LRC) Chairman Jason Bohrer called the meeting to order at 1:35 p.m. (CT) on May 9, 2024.

## II. APPROVAL OF MINUTES

### Approval of November 9, 2023, LRC Meeting Minutes:

Bohrer asked for a motion to approve the minutes from the above-listed meeting. Randy Christmann so moved; seconded by Jay Skabo. Motion carried.

## III. UPDATES

### Program Management & Financial Report:

Reice Haase 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, and the meeting packet provided.)

During the committee's meeting, Haase presented a diagram outlining the Industries, Agencies, and Programs under the North Dakota Industrial Commission (NDIC), highlighting the changes made during the 68th Legislative Assembly. Notably, he drew attention to the recent inclusion of the IJA Grid Resilience grant program. Furthermore, he emphasized the legislative-directed studies undertaken by the State Energy Research Center, alongside the ongoing research activities of the Oil and Gas Research Program and CSEA.

Haase displayed a high-level dashboard view summary of all the Industrial Commission-managed funds to the committee. Haase shared that the Lignite Research Fund availability as of May 9, 2024, is \$5.2 million which is dollars available to commit to new projects. Haase shared that there are three projects before the committee today with an ask of \$3.6 million.

Haase brought forth to the committee the Lignite Research fund cash balance of \$26.9 million with \$21.6 million of that having outstanding project commitments. Haase shared that the total of \$5.2 million is uncommitted and available while considering new projects.

For the Lignite Research Fund, Haase provided a cumulative view of the fund. Since the program's inception in 1987, 255 cumulative projects have been funded. Each of those projects brings private capital, and private match back to the state of North Dakota. That private match has equaled \$2.8 Billion project value that has been invested in the state of ND thanks to projects approved through this program. Currently there are 20 active projects.

In addition, Haase shared the 2023-2025 biennium appropriation and forecasted income. Sharing a graphic showing the Lignite research fund money coming from the Coal Severance Tax, Coal Conversion Tax, Research Tax and formula funding from Oil Production and Extraction Taxes showing a total of \$18.5 million through the course of the biennium.

The financial data was emailed before the meeting to the LRC members.

## **R&D Update:**

Holmes shared the current project split of the R&D program. Sharing that 19% are carbon management projects, 23% are rare earth elements – critical minerals, 50% are other emerging markets, and 8% are miscellaneous. He stated that the funding investment and the dollar split show 70% of the funding is focused on carbon management, carbon capture, and storage.

Holmes shared the roadmap ahead sharing the importance of support to enhance the performance of the existing fleet, investing in transformational research, focusing on carbon capture utilization and storage, leveraging international R&D breakthroughs, and having a renewed focus on additional value propositions for lignite and Polygeneration opportunities.

Holmes shared that thanks to the Legislature this last session there is a current study on the Next Generation Plant of the Future with the EERC. This study is looking at various aspects like technology, financing, location, permit challenges, etc. This project should be completed by the end of the year.

Holmes shared the opportunity of unlocking the full potential of conventional EOR in ND. He stated that 358 million tons of CO<sub>2</sub> would be needed to produce up to 1 billion barrels of incremental oil. Holmes also shared that the Bakken, if given 2-3 billion tons of CO<sub>2</sub>, could produce 4-7 billion tons of incremental oil. He shared that this is a tremendous commodity opportunity.

Holmes gave an overview of the status of the active carbon management projects and those that were completed in 2023. He shared a summary of emerging market projects including Rare Earth Elements, Core CM initiative, Germanium and Gallium projects. He also updated the group on projects making building materials, and carbon materials we can make from lignite such as lithium-ion battery anodes, graphene, graphite, asphalt, tires, etc. A detailed list of the projects can be found at [ndic.nd.gov/research-grant-programs/lignite-research-program](http://ndic.nd.gov/research-grant-programs/lignite-research-program)

## **IV. GRANT ROUND 104 APPLICATION**

### **LR-104A: Continued Funding for Regional Lignite Public Affairs Program**

Submitted by: Lignite Energy Council

Request for: \$1,800,000

Total Project Costs: \$3,600,000

Principal Investigator: Kay LaCoe

Project Duration: 3 years

The purpose of this grant is to strengthen the reputation and awareness of coal-based electricity. This proposal is for three years. The project will use strategic communication, data-driven campaigns, educational outreach, and lignite-based market development. The goal is to maintain public favor of coal-based electricity. Efforts are needed to showcase reliability, economic importance, and tech advancements of the coal industry. The strategy involves targeted awareness campaigns to educate the community and policymakers about energy challenges, solutions, and the vital role of coal-based electricity. The project will disseminate messages to promote the goals and merits of the lignite industry through media visits, chamber events, news releases, and social media. Focus on developing and enhancing educational and marketing initiatives that promote the benefits and affordability of coal-based electricity. This will help maintain lignite electricity's status as a cornerstone of the regional energy supply.

Haase shared that both reviewers recommended funding. The proposal received an average score of 207 out of 250. He stated that funding would be subject to semi-annual reporting to the Industrial Commission.

Haase stated conflicts of interest included Lignite Energy Council and members.

Kay LaCoe of the Lignite Energy Council presented on behalf of the applicant.

A copy of the PowerPoint presentation is available in the LRP files.

**LRC-104B: Phase I Bridge Study for CCS at Coal Creek Station**

Submitted by: Rainbow Energy Center

Request for: \$1,094,416

Total Project Cost: \$2,188,833

Principal Investigator: Conway Nelson

Project Duration: 10 months

Holmes shared Rainbow Energy Center is proposing to continue optimizing the process design and economics for a carbon capture system at the Coal Creek Station. The bridge study would be performed in parallel to the ongoing redundancy and Front-End Engineering and Design studies to reduce risks and optimize costs. The project would leverage state funding with matching cash from REC over the 10-month effort.

Holmes shared that the proposed project is important to the Lignite Research Program, as part of the carbon management efforts for North Dakota lignite. Results would be valuable for any plant considering carbon capture and storage in the immediate region. All three of the technical reviewers recommended funding, and the proposal received an average score of 225 out of 250. The project leverages state funding through industry cash equivalent and in-kind cost share.

Holmes shared that the funding would be subject to the Technical Advisor participating in the project reviews and reviews the project management plan with the project team. Holmes stated the conflicts of interest included EERC, Rainbow Energy Center and North American Coal, Falkirk mine (indirect).

Conway Nelson of Rainbow Energy Center presented on behalf of the applicant.

A copy of the PowerPoint presentation is available in the LRP files.

**LRC-104C: Lignite Conversion Reactor Optimization for Commercial Carbon Pitch Manufacturing**

Submitted By: AmeriCarbon Products, LLC

Request for: 743,809

Total Project Cost: \$1,488,809

Project Duration: 18 months

Holmes shared AmeriCarbon is proposing to optimize their reactor design as the move toward commercial application in North Dakota. Their technology would make coal tars and pitch for use in production of graphite, asphalt binder, and other carbon materials. The applicant is requesting funding for 18 months to optimize their lignite conversion reactor in parallel to efforts to develop designs for generating the end products. The end goal is to provide design and economic information needed to make a decision for commercialization in North Dakota. The expected outcomes of the project include optimized design and economics for the reactor and increased understanding of the commercial opportunity for North Dakota Lignite.

As the technical advisor, Holmes recommends funding. AmeriCarbon is proposing to optimize their reactor design as the move toward commercial application in North Dakota. Their technology would make coal tars and pitch for use in production of graphite, asphalt binder, and other carbon materials. This project would provide 50% match with in-kind funding from AmeriCarbon and in-kind cost services from North American Coal. He shared that all three of the technical reviewers recommended funding, and the proposal received an average score of 218 out of 250. The project would leverage state funding through funding from the project participants.

Holmes shared that the funding would be subject to the Technical Advisor participating in the project reviews and reviews the project management plan with the project team. Conflicts of interest include North American Coal–Falkirk Mine.

David Berry from AmeriCarbon presented on behalf of the applicant.

A copy of the PowerPoint presentation is available in the LRP files.

#### **V. North Dakota Transmission Authority Request for \$582,795: IJJA Grid Resilience FY2024 – Claire Vigesaa**

DOE Award (FY22 & FY23) May 2023 \$7.5 million. 68<sup>th</sup> ND Legislative Assembly (15%) Match \$1,124,856. Total of \$8,623,893. Administrative Contract with EERC.

Twelve applications received November 2023. Total project cost \$33,102,334. Total grant request \$17,355,257. Total Grant Dollars Available: \$8,183,093.

**FY22 & FY23 Grant Round 1:** Four highest scored projects

- Capital Electric Coop. \$321,930. Converting OVHD to URD State/Federal Highway Crossing.
- OtterTail Power Co. \$4,432,088. Next Generation Grid Resiliency.
- Northern Plains Electric Coop. \$586,000. Electronic SCADA Recloser Installation.
- McKenzie Electric Coop. \$2,843,075. Capacitor Banks, Communications, SCADA Controls.

**FY24 IJJA Grid Resilience Grant Round 2:**

DOE IJJA FY24 Formula Grant \$3,885,295

State (15% Match required) \$582,795

Vigesaa explained with the timing off for Legislative appropriation, and the emergency Commission funding limited, he asked LRC to cover the gap to bridge the 15% match dollars until a request can be made to the 69<sup>th</sup> ND Legislature. Vigessa said it is not likely that it will be drawn on because of the timing of the legislature and because it takes these projects awhile to get through the process, likely these won't start construction until spring of 2025. Randy Christmann raised concern commenting there is a possibility that if legislature doesn't approve funding, then LRC will pay the bill and asked for clarification as to why this is the LRC and not the renewable program being asked. Haase explained the rationale for coming to lignite was two-fold. One being the amount available in the lignite research funds and the demand for projects, they felt that lignite had more available in the fund. The second is the build out of transmission would align with the goals of lignite research program. Bohrer shared the importance of being collaborative but also exercise our due diligence when these types of things come up and make sure these dollars are a direct benefit to the lignite industry itself.

Jason Bohrer requested a motion to send this request forward to the Industrial Commission for consideration. Joe Heringer so moved, seconded by Jay Skabo. The motion carried.

**VI. Voting Process** – Ballots distributed, returned and tabulated.

**VII. Energy Workforce Considerations – Brent Sanford**

Brent Sanford joined the group to give a Bismarck State College Polytechnic update. He shared the strategic focus of BSC is agriculture, energy, and cybersecurity defense. He displayed facility images showing the AI and VR labs, flex labs, digital hive, and live event venue. He shared workforce challenges, and the energy enrollment numbers at BSC continue to decline. Sanford shared solutions including industry collaboration, public-private partnerships, BSC to ND workforce needs, leveraging the polytechnic mission, developing a talent pipeline, and engaging government leaders.

**VIII. RESULTS**

**LRC-104A: Continued Funding for Regional Lignite Public Affairs Program**

Submitted by: Lignite Energy Council

Fund: 13 votes

Do Not Fund: 1 vote

Abstain: 0 votes

---

**LRC-104B: Phase I Bridge Study for CCS at Coal Creek Station**

Submitted by: Rainbow Energy Center

Fund: 13 votes

Do Not Fund: 0 votes

Abstain: 1 vote

---

**LRC-104C: Lignite Conversion Reactor Optimization for Commercial Carbon Pitch Manufacturing**

Submitted By: AmeriCarbon Products, LLC

Fund: 13 votes

Do Not Fund: 0 votes

Abstain: 1 vote

---

Chairman Bohrer requested a motion to present the results to the Industrial Commission at the May 28, 2024 meeting. Rita Faut so moved, seconded by Jay Skabo. The motion carried.

---

**IX. OTHER BUSINESS**

Bohrer announced that the next NDIC meeting is scheduled for May 28, 2024. Bohrer reminded the group that the fall grant application deadline is October 1, 2024, and the next LRC meeting is tentatively November 13, 2024.

**Mike Holmes Contract**

- Jay Kost inquired about Mike Holmes' employment status as the technical advisor.
- Bohrer provided background information:
  - The Industrial Commission (IC) and Lignite Research Council (LRC) agreed 24 years ago to share a full-time high-level research position, which would support both IC and R&D activities on behalf of the LRC.

- This contract has been in place since 2000 with minimal changes and an automatic renewal mechanism.
- The Lignite Research Fund finances this full-time role, demonstrating collaboration between industry and state.
- Recently, the IC notified LRC about reworking this contract, and a draft for review by the Attorney General is anticipated.

**Discussion Points**

- Jay Kost questioned the timing of this review, given current industry challenges and EPA regulations.
- John Bauer emphasized the irreplaceable value of Mike Holmes to the council, comparing his impact to Dave Glatt for NDDEQ and Lynn Helms for Oil and Gas.
- Bryan Walther expressed disappointment about potential changes, highlighting Mike Holmes' expertise and contributions.
- Rita Faut noted that losing Mike Holmes would greatly affect the council's continuity and consistency.

**Review of Contract**

- Joe Heringer reminded the council members that the industrial commission has a duty to review the contract terms and expenses.
- Bohrer concurred, emphasizing the council's responsibility to ensure funds are used effectively and the LRC's capabilities remain intact.
- Bohrer had requested a six-month contract extension to allow for a thorough review while maintaining current advisory functions.

**Committee Consensus**

- The committee supported reviewing the contract, stressing the need to retain Mike Holmes' institutional knowledge and assistance.
- Randy Christmann highlighted the importance of IC and council collaboration.
- Bohrer agreed, suggesting that an extension would allow for a productive dialogue between LRC and IC to maintain the advisory position's value.
- Bill Sawyer also supported extending the contract through the interim period.

**Motion and Resolution**

- Jay Kost moved to request a six-month extension of the current contract and propose a collaborative meeting with the IC to discuss the contract details.
- John Bauer seconded the motion.
- The motion passed.

**Next Steps**

- Bohrer will formalize the extension request and meeting proposal for the upcoming NDIC meeting.

**X. ADJOURNMENT**

There being no further business, Jason Bohrer requested a motion to adjourn the LRC meeting. Jay Skabo so moved, seconded by Rita Faut. The motion carried.

The North Dakota Industrial Commission meeting, when these recommendations will be considered, will be held on May 28, 2024.

Angie Hegre, recording secretary

