

**MEETING MINUTES**  
**LIGNITE RESEARCH COUNCIL**  
**November 15, 2010**  
**Best Western Doublewood Inn, Bismarck, ND**

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

Wade Boeshans - BNI Coal, Ltd.  
Sheldon Buck – Prairie Mines & Royalty, Ltd.  
Randel Christmann, North Dakota State Senate (District 33); Lignite Research Council Vice-Chairman  
Carroll Dewing - The Falkirk Mining Company  
John Dwyer - Lignite Energy Council; Lignite Research Council Chairman  
Bob Fagerstrom - Dakota Gasification Company  
Michael Fluharty – Basin Electric Power Cooperative  
Layton Freborg - North Dakota State Senate (District 8)  
Joe Friedlander - The Coteau Properties Company  
Shane Goettle - ND Department of Commerce  
Keith Hill - SaskPower  
Carlyle Hillstrom - North Dakota Farm Bureau  
Mike Holmes - Energy & Environmental Research Center  
Brian Kalk - ND Public Service Commission  
Bob Montgomery - Westmoreland Coal Company  
Ed Murphy, -North Dakota Geological Survey  
Terry O’Clair - ND Department of Health  
Gerry Pfau - Minnkota Power Cooperative, Inc.  
Jan Rudolf - Otter Tail Power Company  
Josh Skelton - Minnesota Power  
Andrea Stomberg - Montana-Dakota Utilities Co.  
Jenny Tennant - U. S. Department of Energy – National Energy Technology Laboratory  
Rich Voss - Great Northern Project Development  
John Weeda - Great River Energy

**OTHERS PRESENT:**

Dave Allard - Lignite Energy Council  
Steve Benson, Ph.D. – Microbeam Technologies, Inc.  
Charlie Bullinger – Great River Energy  
Jim Deutsch – ND Public Service Commission  
Karlene Fine - North Dakota Industrial Commission  
Vicki Gilmore - Lignite Energy Council  
Kris Hanson – Montana-Dakota Utilities Co.  
Michael L. Jones, Ph.D. - Lignite Research Council  
Margaret Laumb – Microbeam Technologies, Inc.  
Sandi Tabor - Lignite Energy Council

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Lignite Research Council (LRC) chairman John Dwyer called the LRC meeting to order at 12:05 p.m. (CST) November 15, 2010 at the Best Western Doublewood Inn, Bismarck, ND.

**Approval of May 17, 2010 LRC Meeting Minutes:**

Dwyer asked for a motion to approve the minutes of the May 17, 2010 LRC meeting. Andrea Stomberg so moved; seconded by John Weeda. Motion carried.

**Program Financial Summary:**

Karlene Fine gave a brief financial summary regarding the Lignite Research, Development and Marketing Program (Program).

Fine said that available funding for the 2009-2011 biennium (as of 11/15/10) is: \$277,776 for administration of the Program (the \$277,776 includes \$275,000 for an economic study the ND Legislature directed the ND Industrial Commission (NDIC) to complete; these numbers include \$163,576.75 that has been expended on the study); \$367,490 for litigation; \$0 for non-matching Lignite Marketing Feasibility Study (LMFS) projects; \$1,096,300 for Small Research projects; \$0 for marketing projects; and \$4,658,200 for Demonstration Projects. (The \$4,658,200 for Demonstration Projects does not include the commitment of \$15,853,807 over future biennia for the Lignite Vision 21 Program projects (the Coal-to-Liquids project, the Spiritwood Energy project or the Great Northern Project Development project).

**Approval of Revised Annual Budget for the Program for 2009-2011 Biennium:**

Karlene Fine requested that the LRC vote to approve transfer of budget authority from the Small Research line item of the Program's annual budget for the 2009-2011 biennium to the Administrative line item, in the amount of \$100,000 for the biennium. After discussion concerning this revising of the Program's annual budget for the 2009-2011 biennium, Dwyer asked for a motion to approve the revised annual budget. The annual budget adopted by the LRC in November of 2009 contained the following line items: \$3,953,850 for Demonstration Projects, \$648,150 for Small Research Projects, \$273,000 for Marketing Projects, \$500,000 for Lignite Energy Council Lignite Vision 21, and \$375,000 for Administration. Total: \$5,750,000. The revised annual budget requested will be: \$3,953,850 for Demonstration Projects, \$598,150 for Small Research Projects, \$273,000 for Marketing Projects, \$500,000 for Lignite Energy Council Lignite Vision 21, and \$425,000 for Administration. Total: \$5,750,000.

Shane Goettle so moved; seconded by Andrea Stomberg. Motion carried.

**Program's Project Updates:**

Jones, technical advisor to the NDIC and the LRC, gave updates about the Program's active R&D projects (eight of which concern carbon capture and storage, six demonstration projects, four Lignite Vision 21 Program-related projects, two gasification projects, one beneficiation project, and one NOx-related project.) He also briefly discussed the four Lignite Vision 21 Phase V studies and four Requests for Proposals concerning beneficiated use of CO2.

**Grant Round LXX (70) Applications:**

**Grant Round LXX(70) Grant Application LRC-LXX-A: "Agglomeration and Ash Deposition Management in Fluidized Bed Combustion"; Submitted by: Microbeam Technologies, Inc.; Request for: \$50,000 (in Small Research Project funds); Total Project Costs; \$300,000; Project Manager: Margaret Laumb; Project Duration: Two Years.**

Jones said that the goal of this project is to develop a computer-based management tool that can aid in minimizing ash-related problems (bed agglomeration and ash deposition) and increase efficiency and reliability of lignite coal-, biomass-, coal-, and petroleum-coke fired fluidized bed combustion systems. The tool will include the effects of fuel impurities, bed materials, additives, and operating conditions.

Jones said that the three technical peer reviewers for this proposal gave the proposal an average weighted score of 186.7 out of 250 points. The weighted score was 146 out of 250 points from reviewer 10-10, 193 out of 250 points from reviewer 10-11 and 221 out of 250 points from reviewer 10-12. Technical peer reviewer 10-10 recommended that funding may be considered; technical peer reviewers 10-11 and 10-12 recommended that the proposal be funded.

As technical advisor to the NDIC and LRC, Jones recommended that the project be funded, contingent on the following:

- A. Details of tool development methodology provided to and accepted by Technical Advisor
- B. Matching funding received from all the parties or revised scope of work focused on lignite; received and approved by Technical Advisor.

Jones said that Montana-Dakota Utilities Co. is the conflict-of-interest party for proposal LRC-LXX-A.

Dr. Steven Benson of Microbeam Technologies, Inc., introduced Margaret Laumb of Microbeam Technologies, Inc., who gave a presentation in support of proposal LRC-LXX-A.

**Grant Round LXX(70) Grant Application LRC-LXX-B: “Center for Air Toxic Metals® Affiliates Program – 3-Year Continuation of Membership”; Submitted by: Energy & Environmental Research Center; Request for: \$45,000, 3-Year Term (in Small Research Project funds); Alternative \$18,000 for 1-Year Term (in Small Research Project funds); Project Manager: John H. Pavlish**

Jones said that this project will use a cradle-to-grave approach to solve scientific and environmental issues related to the production of energy and industrial processes in an environmentally responsible manner and to assist impacted organizations to meet pending regulations and to control challenges.

Jones said that the three technical peer reviewers for this proposal gave the proposal an average weighted score of 197.3 out of 250 points. The weighted scores were 191 out of 250 points from reviewer 10-13, 212 out of 250 points from reviewer 10-14, and 189 out of 250 points from reviewer 10-15. All three technical peer reviewers recommended that the project be funded.

As technical advisor to the NDIC and LRC, Jones recommended that the project be funded (Small Research Project funds), contingent on the following:

- A. Confirmation of US DOE funding.
- B. Confirmation of participation of additional industry partners in Center for Air Toxic Metals (CATM) Affiliates Program.

Jones said that EERC is the conflict-of-interest parties for proposal LRC-LXX-B.

Mike Holmes of EERC gave a presentation in support of proposal LRC-LXX-B.

**Nominating Committee Report, Vote re: Election of LRC Chairman, LRC Vice Chairman and Other LRC Executive Committee Members:**

Senator Layton Freborg gave the nominating committee report regarding the names on the ballot for the positions of LRC Chairman, LRC Vice Chairman and the other LRC Executive Committee members for the Jan. 1, 2011 – Dec. 31, 2012 term of service. He read the following names of proposed nominees: LRC Chairman: John W. Dwyer, Lignite Energy Council; LRC Vice Chairman: Randel Christmann, State Senator; Other Members of the LRC Executive Committee: Luther Kvernen, Minnkota Power Cooperative; Charlie Bullinger, Great River Energy, Gary Loop, Dakota Gasification Company (Bob Fagerstrom – Alternate); Ed Murphy, ND Geological Survey; and Layton Freborg, State Senator. John Dwyer requested nominations from the floor. Hearing none, Freborg moved that the LRC cast a unanimous ballot for the names on the ballot. John Weeda seconded; motion carried.

**Grant Application Deadline Dates; Next LRC Meeting:**

Grant application deadline dates for 2011 are April 1 and October 1. The next LRC meeting has been scheduled for 12:00 p.m. (CDT) May 17, 2011 at the Best Western Doublewood Inn, Bismarck.

**NDIC Meeting :**

Dwyer said that the LRC's recommendations concerning the two Grant Round LXX(70) requests will be considered by the NDIC at its next meeting (date to be determined).

**Other Business**

Keith Hill of SaskPower, Sheldon Buck of Prairie Mines & Royalty, Ltd., and Jenny Tennant of National Energy Technology Laboratory gave brief updates about their respective entities' projects.

There was brief discussion about EPA's standards regarding CO2 regulation, and about the upcoming 2011 ND Legislative Session.

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**Ballot Results: LRC's Recommendations to NDIC Regarding Grant Round LXX(70) Proposals:**

Dwyer announced the results of the LRC's confidential ballots concerning the LRC's recommendations to the NDIC regarding the Grant Round LXX(70) proposals, as follows:

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**Grant Round LXX(70) Grant Application LRC-LXX-A: "Agglomeration and Ash Deposition Management in Fluidized Bed Combustion"; Submitted by: Microbeam Technologies, Inc.; Request for: \$50,000 (in Small Research Project funds); Total Project Costs; \$300,000; Project Manager: Margaret Laumb; Project Duration: Two Years.**

**Fund:** 21 votes. **Do Not Fund:** 2 votes. **Abstained:** 1

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**Grant Round LXX(70) Grant Application LRC-LXX-B: "Center for Air Toxic Metals® Affiliates Program – 3-Year Continuation of Membership"; Submitted by: Energy & Environmental Research Center; Request for: \$45,000, 3-Year Term (in Small Research Project funds); Alternative \$18,000 for 1-Year Term (in Small Research Project dollars); Project Manager: John H. Pavlish; Total Project Costs: \$4,500,000**

**Fund:** 24 votes.

**Adjournment:**

There being no further business, Dwyer requested a motion to adjourn the LRC meeting. Senator Randel Christmann so moved; seconded by Wade Boeshans. Motion carried. The meeting adjourned at 1:25 p.m. (CST) November 15, 2010.

Vicki Gilmore, Recording Secretary

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