

MEETING MINUTES
LIGNITE RESEARCH COUNCIL

May 21, 2013

Ramada Bismarck Hotel (Judicial Room), Bismarck, ND

MEMBERS (or their authorized alternates) PRESENT:

Wade Boeshans - BNI Coal, Ltd.
Sheldon Buck – Prairie Mines & Royalty Ltd.
Randel Christmann, North Dakota Public Service Commission; Lignite Research Council Vice-Chairman
Jeff Delzer – North Dakota House of Representatives
Carroll Dewing – The Coteau Properties Company
John Dwyer - Lignite Energy Council; Lignite Research Council Chairman
Bob Fagerstrom – Dakota Gasification Company
Gerard Goven – The Falkirk Mining Company
Paul Govig – North Dakota Department of Commerce
Mark Hager - International Brotherhood of Electrical Workers
Ray Holmberg - North Dakota Senate
Mike Holmes – Energy & Environmental Research Center
Carlyle Hillstrom – North Dakota Farm Bureau
Ned Kruger - North Dakota Geological Survey
Luther Kvernen - Minnkota Power Cooperative, Inc.
Matthew Lund – Montana-Dakota Utilities Co.
John Phillips – North Dakota Coal Conversion Counties Association
Al Rudeck – Minnesota Power
Nanette Salamon, P.E. – SaskPower
Rich Voss – Great Northern Power Development
John Weeda - Great River Energy

OTHERS PRESENT:

Dave Allard - Lignite Energy Council
Charlie Bullinger – Great River Energy
Stacey Dahl – Minnkota Power
Jim Deutsch – North Dakota Public Service Commission
Karlene Fine - North Dakota Industrial Commission
Vicki Gilmore - Lignite Energy Council
Curtis Jabs – North Dakota Transmission Authority
John Kay – Energy & Environmental Research Center
Jason Laumb– Energy & Environmental Research Center
Mike McGroddy – NET Power
Emily McKay – Bismarck State College
Michael L. Jones, Ph.D. - Lignite Research Council Technical Advisor; Lignite Energy Council
Jay Kost – The Falkirk Mining Company
Mac McLennan – Minnkota Power
Larry Robinson – Valley City State University
William (Bill) Sawyer – Minnesota Power / ALLETE
Vicky Steiner – ND Association of Oil & Gas Producing Counties and ND Coal Conversion Counties Association
Steve Van Dyke – Lignite Energy Council

Lignite Research Council (LRC) chairman John Dwyer called the LRC meeting to order at 1:30 p.m. (CDT) May 21, 2013 at the Ramada Bismarck Hotel, Bismarck, North Dakota.

Approval of November 13, 2012 LRC Meeting Minutes:

Dwyer asked for a motion to approve the minutes of the November 13, 2012 LRC meeting. Carlyle Hillstrom so moved; seconded by Al Rudeck. Motion carried.

Program Financial Summary:

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

Fine said that the Program's available funding for the 2011-2013 biennium (as of 4/30/13) includes: \$246,217 for administration of the Program; \$509,184 for litigation (Minnesota); \$0 for non-matching Lignite Marketing Feasibility Study (LMFS) projects; \$226,199 for Small Research Projects; \$498,300 for Marketing Projects; and \$6,504,000 for Demonstration Projects. (The \$6,504,000 for Demonstration Projects does not include the commitment of \$12,482,309 over future biennia for the Lignite Vision 21 Program projects (the Coal-to-Liquids project, the Spiritwood Energy project and the Great Northern Project Development project).

The proposed Program annual budget allocation of \$6,177,000 for the 2013-2015 biennium: \$375,000 for administration of the Program, \$1,500,000 for non-matching Lignite Marketing Feasibility Study (LMFS) projects, \$750,000 for Small Research Projects; \$600,000 for Marketing projects, and \$2,202,000 for Demonstration Projects.

Program's Project Updates:

Jones, technical advisor to the NDIC and the LRC, gave updates about active R&D projects (four carbon capture and storage projects, three gasification projects, three demonstration projects, three Lignite Vision 21 Program (LV21) projects, two metal emissions projects, one education/public relations project and two NOx projects. He also summarized the Enhance, Preserve and Protect project's goals of preserving and protecting the existing lignite fleet in North Dakota, supporting existing partners in the development of new lignite facilities, and exploring new avenues to develop value-added opportunities for lignite and combustion waste products. At the Nov. 19 2013 LRC meeting, Jones said he will give an update about the project's progress.

Grant Round LXXV (75) Grant Application LRC-LXXV-A: "Advancing CO₂ Capture Technology: Partnership for CO₂ Capture (P CO₂C) Phase III"; Submitted by: Energy & Environmental Research Center; Request for: \$500,000; Total Project Costs: \$5,398,000; Principal Investigator: John Kay. Project Duration: 24 Months.

Jones said that the overall goal of the Phase III activity is to advance the state of CO₂ capture technology and create tools for managing CO₂ capture decisions through pilot-scale and systems engineering analyses.

Jones said that the three technical peer reviewers for this proposal gave the proposal an average weighted score of 182.8 out of 250 points. The weighted score was 196 out of 250 points from reviewer 13-1, 152.5 out of 250 points from reviewer 13-2 and 200 out of 250 points from reviewer 13-3. Technical peer reviewers 13-1 and 13-3 recommended that the project be funded; technical peer reviewer 13-2 recommended that funding is to be considered. As technical advisor to the NDIC and LRC, Jones recommended that the project be funded, subject to the following contingencies:

- Matching funding received from all of the parties.
- Technical advisor participates in Advisory group to recommend technologies selected for additional work under this program.
- Decision support tools available to LEC membership.

Jones said that the Energy & Environmental Research Center (EERC) is the conflict-of-interest party for proposal LRC-LXXV-A. John Kay of the EERC gave a presentation in support of proposal LRC-LXXV-A.

Grant Round LXXV (75) Grant Application LRC-LXXV-B: “Energy Curriculum Project”; Submitted by: Bismarck State College; Request for: \$75,000; Total Project Costs: \$155,000; Principal Investigator: Emily McKay. Project Duration: 16 Months.

Jones said that the overall objective of the proposed project is development of energy curriculum in North Dakota Studies for students in 4th grade and 8th grade. Online modules will be developed with two weeks of content related to all of North Dakota’s energy resources. Curriculum would be added to the North Dakota Studies courses as part of the state educational standards.

Jones said that the three technical peer reviewers for this proposal gave the proposal an average weighted score of 164.3 out of 250 points. The weighted score was 152 out of 250 points from reviewer 13-4, 204 out of 250 points from reviewer 13-5 and 137 out of 250 points from reviewer 13-6. Technical peer reviewer 13-4 recommended funding to be considered, 13-5 recommended fund, and 13-6 recommended do not fund.

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

- Matching funding received.
- The technical advisor is provided with materials that demonstrate schedule and qualification of team members.
- Technical advisor participates in decisions on additional team members to ensure successful completion of the program.
- The materials developed will be available to all programs working on enhanced STEM training for teachers.
- The team agrees to consult with higher education institutions other than Valley City State University on the program and seek their input where appropriate.
- The team provides monthly updates to the Technical Advisor that he can share with the ND Industrial Commission on progress.

Jones said that Great River Energy, Basin Electric Power Cooperative, Minnkota Power Cooperative, MDU Resources Group, Minnesota Power, Xcel Energy, Otter Tail Power Company, The North American Coal Corporation and BNI Coal, Ltd. are conflict-of-interest parties for proposal LRC-LXXV-B.

John Weeda of Great River Energy and Emily McKay of Bismarck State College were the presenters in support of the proposal.

Grant Round LXXV (75) Grant Application LRC-LXXV-D: “Feasibility Assessment of the NET Power Electric-Generation Technology when fueled with North Dakota lignite”; Submitted by: ALLETE, Inc.; Request for: \$150,000; Total Project Costs: \$1,000,000; Principal Investigator: William Sawyer. Project Duration: 5 Months.

Jones said that the objective of the proposed project is to determine the feasibility of an innovative clean coal power generation cycle which uses CO₂ as the working fluid, pressurized combustion and gasification when it is applied to North Dakota lignite.

Jones said that the three technical peer reviewers for this proposal gave the proposal an average weighted score of 195 out of 250 points. The weighted score was 185 out of 250 points from reviewer 13-7, 218 out of 250 points from reviewer 13-8 and 182 out of 250 points from reviewer 13-9. Technical peer reviewers 13-7 and 13-8 recommended that the project be funded; technical peer reviewer 13-9 recommended funding to be considered.

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

- Matching funding received.
- The team demonstrates to the Technical Advisor that lignite properties / gasification experience are accounted for in the project.

Jones said that Minnesota Power, BNI Coal, Ltd. and Dakota Gasification Company are the conflict-of-interest parties for proposal LRC-LXXV-D.

Mike McGroddy of NET Power and William Sawyer of ALLETE, Inc. were presenters in support of the proposal.

Motion for Closed Confidential Session re: Grant Round LXXV (74) Grant Application LRC-LXXV-C: “Implementation of Regional Lignite Energy Marketing Plan – Phase VI”; Submitted by: Lignite Energy Council; Request for: \$1,800,000 (\$600,000 Annually for Three Years); Total Project Costs: \$3,600,000; Principal Investigator: Lignite Energy Council.

Dwyer asked for a motion to close the meeting prior to the confidential session regarding LRC-LXXV-C (“Implementation of Regional Lignite Energy Marketing Plan – Phase VI”.) Luther Kvernen so moved; seconded by Mike Holmes. The meeting closed for confidential session at 3:02 p.m.

Motion to Open Session Following Closed Confidential Session:

Dwyer asked for a motion to open the meeting following the confidential session. John Weeda so moved; seconded by Carlyle Hillstrom. The meeting opened at 3:40 p.m.

Grant Application Deadline Dates; Next LRC Meeting:

Upcoming grant application deadline dates are October 1, 2013 and April 1, 2014. The next LRC meeting has been scheduled for Nov. 19, 2013 at Ramada Bismarck Hotel, Bismarck.

2013 ND Legislative Session

Sen. Ray Holmberg, Rep. Jeff Delzer and Randel Christmann spoke briefly about the 2013 North Dakota Legislative Session. The Legislature authorized a line item of \$19.5 million for Lignite R&D Program funding for the 2013-2015 biennium.

New Executive Order 2013-05

There was brief discussion about Gov. Jack Dalrymple’s new Executive Order 2013-05 dated April 23, 2013 which rescinds Executive Order 2013-02. The new Executive Order includes language describing the Governor’s authority to reestablish the Lignite Research Council to consist of 30 members.

Ballot Results re: LRC’s Recommendationsto NDIC Regarding Grant Round LXXV (75) Proposals LRC-LXXV-A, LRC-LXXV-B, LRC-LXXV-C and LRC-LXXV-D:

Dwyer announced the results of the LRC’s confidential ballots concerning the LRC’s recommendations to the NDIC regarding the three Grant Round LXXV (75) proposals as follows:

-Grant Round LXXV (75) Grant Application LRC-LXXV-A: “Advancing CO₂ Capture Technology: Partnership for CO₂ Capture (PCO₂C) Phase III; Submitted by: Energy & Environmental Research Center (EERC); Request for: \$500,000 (Demonstration); Total Project Costs: \$5,398,000; Principal Investigator: John Kay. WITH CONDITIONS.

Fund: 19 votes. Do Not Fund: 2 votes.

-Grant Round LXXV (75) Grant Application LRC-LXXV-B: “Energy Curriculum Project”; Submitted by: Bismarck State College; Request for: \$75,000 (Education); Total Project Costs: \$155,000; Principal Investigator: Emily McKay.
WITH CONDITIONS.

Fund: 20 votes. Do Not Fund: 1 vote.

-Grant Round LXXV (75) Grant Application LRC-LXXV-C: “Implementation of Regional Lignite Energy Marketing Plan – Phase VI”; Submitted by: Lignite Energy Council; Request for: \$1,800,000 (\$600,000 Annually for Three Years) (Marketing); Total Project Costs: \$3,600,000; Principal Investigator: Lignite Energy Council;
WITH CONDITIONS.

Karlene Fine, Executive Director of NDIC, said that she recommends funding of \$600,000 now (for the first of the three years), and the proposers are to return in one year with details regarding request for further funding.

Fund: 20 votes. Do Not Fund: 1 vote.

-Grant Round LXXV (75) Grant Application LRC-LXXV-D: “Feasibility Assessment of the NET Power Electric-Generation Technology when fueled with North Dakota lignite”; Submitted by: ALLETE, Inc.; Request for: \$150,000 (Small Research); Total Project Costs: \$1,000,000; Principal Investigator: William Sawyer.
WITH CONDITIONS.

Fund: 19 votes. Do Not Fund: 1 vote. Abstain: 1.

NDIC Meeting:

Dwyer said that the LRC's recommendations concerning the Grant Round LXXV (75) requests will be considered by the ND Industrial Commission at its meeting on May 28, 2013.

Thanks, Praise for LRC Chairman John Dwyer:

Randel Christmann praised and thanked LRC Chairman John Dwyer for what he has done for the lignite industry over the years.

Adjournment:

There being no further business, Dwyer requested a motion to adjourn the LRC meeting. Luther Kvernen so moved; seconded by Carroll Dewing. Motion carried. The meeting adjourned at 4:00 p.m. May 21, 2013.

Vicki Gilmore, Recording Secretary
