

**MEETING MINUTES**  
**LIGNITE RESEARCH COUNCIL**  
**November 25, 2003**  
**Doublewood Inn, Bismarck, ND**

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

Richard Bergstad, International Brotherhood of Electrical Workers  
John Bluemle, ND Geological Survey  
Randy Christmann, North Dakota Senate  
John Dwyer, Lignite Research Council  
Tom Erickson, Energy & Environmental Research Center  
L. David Glatt, ND Department of Health  
Paul Govig, ND Department of Commerce  
Terry Graumann, Otter Tail Power Company  
Steve Hovey, BNI Coal  
Carlyle Hillstrom, North Dakota Farm Bureau  
Dennis James, The North American Coal Corporation  
Doug Kane, MDU Resources Group  
Luther Kvernen, Minnkota Power Cooperative  
Vernon Laning, Basin Electric Power Cooperative  
John O'Laughlin, Dakota Westmoreland Corporation  
John Pelerine, Great River Energy  
David L. Porsborg, Coal Conversion Counties Association  
Fred Stern, Dakota Gasification Company  
Susan Wefald, North Dakota Public Service Commission

**OTHERS PRESENT:**

Dave Allard, Lignite Energy Council  
Steve Benson, Energy & Environmental Research Center  
Clyde Bush, Basin Electric Power Cooperative  
Jeff Burgess, Lignite Vision 21 Program  
Jim Deutsch, ND Public Service Commission  
Karlene Fine, North Dakota Industrial Commission  
Vicki Gilmore, Lignite Energy Council  
Mike Holmes, Energy & Environmental Research Center  
Brad Manz, Bosco Engineering, Inc.  
Harvey Ness, Lignite Research Council  
Ron Ness, ND Petroleum Council  
Floyd Robb, Basin Electric Power Cooperative  
Jay Skabo, Montana-Dakota Utilities Co.  
Vicky Steiner, ND Coal Conversion Counties and ND Association of Oil and Gas Producing Counties  
Diane Stockdill, Great River Energy  
Mark Strohfus, Great River Energy  
Richard Weinstein, The Falkirk Mining Company

Lignite Research Council (LRC) chairman John Dwyer called the LRC meeting to order on November 25, 2003 at the Doublewood Inn, Bismarck, North Dakota.

**Approval of May 21, 2003 LRC Meeting Minutes**

Dwyer asked for a motion to approve the minutes of the May 21, 2003 LRC meeting. Carlyle Hillstrom so moved; seconded by Vernon Laning. Motion carried.

**Financial Summary as of November 17, 2003**

Dwyer said that the vote for the following action item will take place later in the meeting: Propose re-allocation of \$1,886,556 million from the demonstration projects and joint programs categories to the research projects category to fund proposed research projects and future grant rounds. He said that an estimated \$250,000 per grant round will be needed for the April 1 and October 1 grant rounds of 2004, and the April 1, 2005 grant round.

Harvey Ness, technical advisor for the North Dakota Industrial Commission (NDIC) and the LRC, summarized the Lignite Research, Development and Marketing Program (Program) financial information that is available on the NDIC web site. As of November 17, 2003, available funding balances from the Lignite Research Fund (LRF) for the 2003-2005 biennium were as follows: \$349,948 for administration of the Program; \$1,300,000 for non-matching funds for lignite marketing feasibility studies (LMFS); \$987,944 in uncommitted funds for small research projects; a continuing balance of \$155,000 for the joint programs with the U. S. Department of Energy, Electric Power Research Institute and other entities; and \$8,517,053 for demonstration projects. Ness said that construction commitments for the Lignite Vision 21 projects will be funded from the demonstration projects line item.

**Lignite Research, Development and Marketing Program Updates**

Ness said that there are currently 16 active projects, totaling \$25.1 million in NDIC funds. These projects include: one lignite marketing feasibility study (concerning Partners for Affordable Energy); 13 small research projects (including five mercury-related projects); and two Lignite Vision 21 (LV21) Program-related demonstration projects: Montana-Dakota Utilities Company/Westmoreland Coal Company's Lignite Vision 21 project for Gascoyne, ND, and Great Northern Power Development's Lignite Vision 21 feasibility project for the South Heart vicinity in North Dakota.

**Lignite Vision 21 Program Update**

Updates about the LV21 Program's environmental strategies and transmission issues were presented by Jeff Burgess, LV21 Program manager of environmental services. There are currently two applicants under contract with the NDIC for LV21 demonstration projects: Montana-Dakota Utilities Co./Westmoreland (contract approved May 2, 2001), and Great Northern Power Development (contract approved September 7, 2001). Great River Energy withdrew from the LV21 Program on December 31, 2002 and reimbursed NDIC \$500,000, as per its contract with NDIC.

**North Dakota Mercury Task Force**

Prior to discussing the grant applications, Ness spoke briefly about the North Dakota Mercury Task Force's projects. These include small-scale, large-scale/slip stream, pilot plant, pre-combustion, emission speciation, emission variability and byproducts projects.

**Grant Round L (50) Grant Application LRC-L-A: “Enhancing Carbon Reactivity in Mercury Control in Lignite-Fired Systems”; Submitted by: Energy & Environmental Research Center; Project Manager: Michael Holmes; Request for: \$600,000; Total Project Costs: \$5,732,295; Project Duration: Three Years.**

Ness said that the goal of the proposed project is to demonstrate two sorbent injection technologies at four lignite-fired power plants. The project will determine mercury capture with powered activated carbon. Ness said that the three technical peer reviewers gave the proposal an average weighted score of 215.3 out of 250 points. (The weighted scores were 231 out of 250 points from reviewer 03-19, 206 out of 250 points from reviewer 03-21, and 209 out of 250 points from reviewer 03-22) All three technical peer reviewers recommended that the project be funded.

As technical advisor, Ness said that his recommendation is to fund the proposal at a level not to exceed \$600,000.

Ness said that the conflict-of-interest parties for this proposal are Basin Electric Power Cooperative, Montana-Dakota Utilities Co., Dakota Westmoreland Corporation, Otter Tail Power Company, Minnkota Power Cooperative, The Coteau Properties Company, Great River Energy, BNI Coal, and The Falkirk Mining Company.

Mike Holmes of Energy & Environmental Research Center gave a presentation in support of the proposal. Clyde Bush of Basin Electric Power Cooperative spoke briefly in support of the proposal.

**Grant Round L (50) Grant Application LRC-L-B: “Large-Scale Mercury Control Technology Testing for Lignite-Fired Utilities”; Submitted by: Energy & Environmental Research Center; Project Manager: Michael Holmes; Request for: \$172,500; Total Project Costs: \$2,150,767; Project Duration: Three Years.**

Ness said that the proposed project would demonstrate the effectiveness of oxidizing agents for reducing elemental mercury emissions for plants equipped with electrostatic precipitators and wet scrubbers.

Ness said that the three technical peer reviewers gave the proposal an average weighted score of 217 out of 250 points. (The weighted scores were 204 out of 250 points from reviewer 03-22, 206 out of 250 points from reviewer 03-23, and 241 out of 250 points from reviewer 03-24). All three technical peer reviewers recommended that the project be funded.

As technical advisor, Ness said that his recommendation is that the proposal be funded at a level not to exceed \$147,000, and subject to the following contingency: North Dakota Industrial Commission (NDIC) funds support tests at North Dakota power plants.

Ness said that the conflict-of-interest parties for this proposal are Basin Electric Power Cooperative, Montana-Dakota Utilities Co., Dakota Westmoreland Corporation, Otter Tail Power Company, Minnkota Power Cooperative, The Coteau Properties Company, Great River Energy, BNI Coal, and The Falkirk Mining Company.

Holmes gave a presentation in support of the proposal.

**Grant Round L (50) Grant Application LRC-L-C: “Evaluation of MerCAP™ for Power Plant Mercury Control”; Submitted by: Great River Energy; Project Manager: Dr. Carl Richardson; Request for: \$150,000; Total Project Costs: \$843,858; Project Duration: Six Months.**

Ness said that the proposed project will conduct a large-scale, long-term test of the MerCAP™ process (absorption of mercury into a thin film of gold supported by a rigid structure). Tests will determine mercury removal efficiency, operational lifetime, gold regeneration requirements and overall technical and cost effectiveness for a full-scale MerCAP™ process.

Ness said that the three technical peer reviewers gave the proposal an average weighted score of 201.7 out of 250 points. (The weighted scores were 202 out of 250 points from reviewer 03-25, 202 out of 250 points from reviewer 03-26 and 201 out of 250 points from reviewer 03-27) The first and third technical peer reviewer recommended that the project be funded; the second recommended that funding may be considered.

As technical advisor, Ness said that his recommendation is to fund the proposal at a level not to exceed \$150,000 and subject to the following contingency: NDIC funds support tests at North Dakota power plants.

Ness said that Great River Energy is the conflict-of-interest party for this proposal.

Mark Strohfus of Great River Energy gave a presentation in support of the proposal.

**Grant Round L (50) Grant Application LRC-L-D: “Evaluation of Pilot Wet Scrubber in Conjunction with Mercury Oxidation Catalyst Control”; Submitted by: Great River Energy; Project Manager: Gary Blythe; Request for: \$42,000; Total Project Costs: \$84,000; Project Duration: 10 Months.**

Ness said that the goal of the proposal is to evaluate the efficiency of oxidized mercury capture by a wet scrubber.

Ness said that the three technical peer reviewers gave the proposal an average weighted score of 206.3 out of 250 points. (The weighted scores were 180 out of 250 points from reviewer 03-28, 223 out of 250 points from reviewer 03-29, and 216 out of 250 points from reviewer 03-30. All three technical peer reviewers recommended that the project be funded.

As technical advisor, Ness said that his recommendation is to fund the proposal at a level not to exceed \$42,000.

Ness said that Great River Energy is the conflict-of-interest party for this proposal.

Strohfus gave a presentation in support of the proposal.

**Grant Round L (50) Grant Application LRC-L-E: “Plains CO<sub>2</sub> Reduction Partnership”; Submitted by: Energy & Environmental Research Center; Project Manager: Dr. Thomas Erickson; Request for: \$240,000; Total Project Costs: \$2,748,139; Project Duration: Two Years.**

Ness said that the goal of the proposed project is to identify cost-effective CO<sub>2</sub> sequestration systems in the Northern Great Plains region. The information will be used to prepare action plans for implementation and technology validation activities that would be initiated in a follow-on competitive solicitation.

Ness said that the three technical peer reviewers gave the proposal an average weighted score of 195.3 out of 250 points. (The average weighted scores were 212 out of 250 points from reviewer 03-31, 186 out of 250 points from reviewer 03-32, and 188 out of 250 points from reviewer 03-33.) All three technical peer reviewers recommended that the project be funded.

As technical advisor, Ness said that his recommendation is to fund the proposal at a level not to exceed \$240,000.

Ness said that the conflict-of-interest parties for this proposal are Basin Electric Power Cooperative, Great River Energy, Montana-Dakota Utilities Co., Otter Tail Power Company, and Dakota Gasification Company.

Dr. Thomas Erickson of the Energy & Environmental Research Center gave a presentation in support of the proposal.

**Grant Round L (50) Grant Application LRC-L-F: “Alternative Cover Demonstration Project”; Submitted by: Great River Energy; Project Manager: Ron Jorgenson; Request for: \$250,000; Total Project Costs: \$500,000; Project Duration: Three Years.**

Ness said that the proposed project is a field demonstration to evaluate and demonstrate the performance of alternative earth landfill cover designs for long-term storage of power plant coal combustion byproducts. The objective of the project would be to evaluate environmental performance of an engineered landfill compared to current North Dakota Department of Health requirements.

Ness said that the two technical peer reviewers each gave the proposal an average weighted score of 226 out of 250 points. Both technical peer reviewers recommended that the project be funded.

As technical advisor, Ness said that his recommendation is to fund the proposal at a level not to exceed \$250,000.

Ness said that Great River Energy is the conflict-of-interest party for this proposal.

Diane Stockdill of Great River Energy gave a presentation in support of the proposal.

**Motion for Confidential Session to Consider Grant Round L (50) Grant Application LRC-LI-G: “Implementation of Lignite Regional Energy Marketing Plan”; Submitted by: Lignite Energy Council; Project Manager: John Dwyer; Supplemental Request for \$275,000 Annually for Three Years; Total Project Cost: \$1,650,000; Project Duration: Three Years.** (This is a modification to FY02-XLVI-115, “Implementation of Regional Lignite Energy Marketing Plan”).

Dwyer asked for a motion for the LRC to proceed into confidential session for discuss confidential proposal LRC-L-G (“Implementation of Regional Lignite Energy Marketing Plan”), pursuant to ND Century Code 54-17.5-06. Richard Bergstad so moved; seconded by Doug Kane. Motion carried.

Kane led the discussion about proposal LRC-L-G. He then called for a motion to end the confidential session and open the LRC meeting. Erickson so moved; seconded by Laning. Motion carried. The LRC meeting returned to open session.

**Ballot Results**

Dwyer announced that the LRC voted as follows to recommend that the NDIC approve funding of the Grant Round L (50) requests:

LRC-L-A (“Enhancing Carbon Reactivity in Mercury Control in Lignite-fired Systems“):

**Fund: 19 votes. Do Not Fund: 0 votes.**

LRC-L-B (“Large-Scale Mercury Control Technology Testing for Lignite-fired Utilities – Oxidation Systems for Wet FGD“):

**Fund: 19 votes. Do Not Fund: 0 votes.**

LRC-L-C (“Evaluation of MerCAP™ for Power Plant Mercury Control“):

**Fund: 19 votes. Do Not Fund: 0 votes.**

LRC-L-D (“Evaluation of Pilot Wet Scrubber in Conjunction with Mercury Oxidation Catalyst Control“):

**Fund: 19 votes. Do Not Fund: 0 votes.**

LRC-L-E (“Plains CO<sub>2</sub> Reduction Partnership“):

**Fund: 18 votes. Do Not Fund: 1 vote.**

LRC-L-F (“Alternative Cover Demonstration Project“):

**Fund: 18 votes. Do Not Fund: 1 vote.**

LRC-L-G (“Implementation of Regional Lignite Energy Marketing Plan“):

**Fund: 19 votes. Do Not Fund: 0 votes.**

The LRC's recommendations for the seven Grant Round L requests will be considered by the NDIC at its meeting on December 19, 2003.

**Grant Application Deadlines for 2004; LRC's 2004 Meetings**

Dwyer said that April 1 and October 1 are the grant application deadline dates for 2004. Dwyer asked for a motion for approval of the following LRC meeting dates for 2004: May 20<sup>th</sup> and November 18<sup>th</sup>. Kane so moved; seconded by John Bluemle. Motion carried. Both meetings will be held at noon at the Doublewood Inn, Bismarck.

**Motion for Re-allocation of Funds to Research Projects Area**

Dwyer asked for a motion that the LRC recommend that the ND Industrial Commission transfer \$1,886,556 million from the demonstration projects and the joint projects areas of the Lignite Research Fund to the research projects area and to fund future grant rounds. Kane so moved; seconded by Bergstad. Motion carried.

**Federal Energy Legislation, Clear Skies Act**

Dwyer spoke briefly about federal energy legislation and the Clear Skies Act.

**Adjournment**

There being no further business, Dwyer asked for a motion to adjourn the LRC meeting. Luther Kvernen so moved; seconded by Steve Hovey. Motion carried.

Vicki Gilmore, Recording Secretary.

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