

# **Enhance, Preserve and Protect Project**

## **Research & Development, Environmental And Transmission Planning Services**

**January 1, 2013 – December 31, 2015**

**Non-Confidential Information**

**Prepared by  
The Lignite Energy Council  
1016 E. Owens Avenue  
P.O. Box 2277  
Bismarck, North Dakota 58502**

# **Enhance, Preserve and Protect Project Research & Development, Environmental and Transmission Planning Services Grant**

## **ABSTRACT**

The Enhance, Preserve and Protect (EPP) Project builds on the present commitment and cooperation among government agencies, elected leadership and the lignite industry to ensure the long-term viability of the North Dakota lignite industry. The project is the result of an extensive analysis by leaders of the lignite industry focused on the state of the industry in North Dakota, as well as the coal industry nationwide. The analysis concluded that over the course of the last four years, federal legislative and regulatory policy moved in a direction which jeopardized the future development of North Dakota's vast lignite resources, and created great uncertainty regarding the viability of existing lignite generation plants. The EPP Project will focus on preserving the existing lignite industry while at the same time providing continued technical support to current Lignite Vision 21 Program (LV21P) participants as they explore ways to build new lignite energy conversion facilities.

## **Project Objectives**

The primary objective of the EPP Project is to preserve and protect the existing lignite fleet in North Dakota. The Project will also enhance the future of the state's lignite resource by supporting existing partners in the development of new lignite-based power plants and other facilities. Finally, the Project will explore new avenues to develop value-added opportunities for lignite and combustion waste products like carbon dioxide.

To achieve the EPP Project objectives the EPP Project team will develop and implement research & development, environmental, legal and transmission strategies. These strategies will include addressing technology challenges for existing plants to achieve compliance with new regulations and to discover new and innovative ways to use lignite and its byproducts in order to ensure the future of lignite for years to come. Additionally, the EPP Project team will enhance the partnership with the state by working with state agencies and officials to understand the legal and economic implications of legislative and regulatory initiatives on the lignite industry, one of North Dakota's largest industries. The Project team will also monitor the progress of existing LV21P projects and eliminate any potential duplication of efforts among the LV21P participants, thereby maximizing value for the State of North Dakota.

Key personnel involved in the management of the Enhance, Preserve and Protect Project are John Dwyer, LEC president & CEO and EPP Project policy advisor, Mike Jones, technical representative to the NDIC and project manager, and Sandi Tabor, director of the North Dakota Transmission Authority (EPP Project team), along with consultants that have research & development, environmental, legal and transmission technical expertise. The EPP Project is seeking \$4,772,250 from the North Dakota Industrial Commission (NDIC) over a period of 36-months (January 1, 2013 – December 31, 2015).

## **BACKGROUND**

### **A. State Policy**

In 1991, the North Dakota Legislative Assembly enacted legislation creating the Lignite Research, Development and Marketing Program and declaring that:

“...it is an essential governmental function and public purpose to assist with the development and wise use of North Dakota’s vast lignite resources by supporting a lignite research, development, and marketing program that promotes economic, efficient, and clean uses of lignite and products derived from lignite in order to maintain and enhance development of North Dakota lignite and its products; preserve and create jobs involved in the production and utilization of North Dakota lignite; ensure economic stability, growth, and opportunity in the lignite industry; and maintain a stable and competitive tax base for our state’s lignite industry for the general welfare of North Dakota.....” (NDCC § 54-17.05-01)

In the past the North Dakota Legislative Assembly appropriated funding from the Lignite Research Fund for the purpose of contracting for services that focus on the preservation of existing jobs and production as well as the growth of the lignite industry. The NDIC, with policy advice and funding recommendations from the Lignite Research Council, has administered this program. As guidance to the NDIC for the use of the nonmatching funding, the Legislature stated that:

“...Moneys appropriated pursuant to this section may ... be used for the purpose of contracting for nonmatching studies and activities in support of the Lignite Vision 21 Project; for litigation that may be necessary to protect and promote the continued development of lignite resources; for nonmatching externality studies and activities in externality proceedings; or other marketing or environmental activities that assist with marketing of lignite-based electricity and lignite-based byproducts...” (Chapter 14, Section 11, 2011 ND Session Laws)

### **B. Industry Economic Impact, Challenges, and Opportunities**

Over the years lignite producers in North Dakota have maintained a fairly steady annual production level at approximately 30 million tons. North Dakota ranks as one of the top twelve coal producing states in the country. In 2011 the lignite industry employed approximately 4,000 people and created an additional 12,500 indirect jobs. It is projected that in 2012 it will employ 4,100 people and create an additional 13,500 indirect jobs. The industry generated over \$3 billion in annual business activity, as well as, over \$92 million in annual state tax revenues.<sup>1</sup> These figures are projected to be \$3.5 billion in business activity and \$101 million in state taxes in 2012.

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<sup>1</sup> Coon, Randal C., Dean A. Bangsund, and Nancy M. Hodur, “North Dakota Lignite Energy Industry’s Contribution to the State Economy for 2011 and Projected for 2012,” AAE 12003. Dept. of Agribusiness and Applied Economics, North Dakota State University, Fargo. March, 2012.

After strong growth in the 70s and 80s, the market for electricity produced by North Dakota lignite reached a plateau several years ago. The start-up of the combined heat and power Spiritwood facility near Jamestown in the first quarter of 2014 will mark the first new lignite-based energy conversion facility in over 20 years. This is a significant milestone in light of the challenges facing the lignite industry. These challenges include increasingly more stringent federal environmental regulations; competition from other energy sources; legislative mandates from surrounding states which impact the continued use of lignite-based electric generation and concerns about the adequacy of transmission infrastructure in light of oil and gas development in western North Dakota, as well as constant monitoring of the status of export constraints on the existing transmission system.

The challenge to the State of North Dakota and the lignite industry is to design a comprehensive program to alter the present “anti-coal” campaign and replace it with a strategy that recognizes the importance of all forms of energy as a way to ensure our nation’s energy security. Lignite-based electric generation has been at the heart of North Dakota’s economy for decades, providing low-cost reliable electricity to farmers, ranchers, businesses (large and small) and consumers. If the current campaign to eliminate coal is successful, affordable electricity to fuel North Dakota’s future will be a thing of the past. To address this changing landscape the lignite industry plans to expand its regulatory/legislative program, as well as enhancing its research and development work. The purpose of the EPP Project is to once again align industry efforts with the state’s mission to “maintain and enhance development of North Dakota lignite” in order to strengthen the industry/State partnership. Through this refocused effort, the State of North Dakota will benefit from continued access to low-cost, reliable and clean energy.

## **PROJECT DESCRIPTION**

### **A. Overall Objectives**

The primary objective of the EPP Project is to protect and extend operation of the existing lignite facilities while at the same time seeking technology solutions for existing plants and new technologies for the future of the North Dakota lignite industry. To achieve the EPP Project objectives, the Lignite Energy Council (LEC), in conjunction with the lignite industry partners, will develop and implement research & development, environmental, legal and transmission strategies that will enhance, preserve and protect existing facilities and the future development of North Dakota’s lignite resources. The EPP Project team will monitor progress, avoid duplication of services and maximize value to the State by working with industry, technology developers, federal and state agencies and other interested parties in finding solutions that will allow the state to maintain existing lignite facilities and to provide for new growth in the lignite industry. Activities and tasks that will be addressed by the EPP Project include:

- Project Management;
- Research & Development Studies and Activities;
- Environmental Strategies & Activities;
- Legal Strategies and Activities; and
- Transmission Strategies & Activities.

Key personnel involved in the management of the Enhance, Preserve and Protect Project are LEC President & CEO John Dwyer, who will serve as a policy advisor to the EPP Project, Technical Representative to the Industrial Commission and Project Manager Michael Jones, and ND Transmission Authority Director Sandi Tabor, along with consultants that have legal, research & development, environmental, and transmission technical expertise. A detailed description of the management organization and qualifications of key personnel are outlined on page 11. Also see organizational chart in Appendix 3.

## **B. Statement of Work**

The EPP Project team will provide overall program management responsibility for the project. Key personnel identified above will be responsible for completing EPP Project Tasks and achieving program objectives. The timeframe for the Project is estimated at 36 months (January 1, 2013 to December 31, 2015) with an estimated budget of \$4,772,250. Tasks and timeframes for the project activities are summarized below and outlined in Appendix 2.

## **QUALIFICATIONS**

### **A. Capabilities and Experience**

The Lignite Energy Council is a trade organization comprised of 370<sup>+</sup> members including major lignite producers who produce a total of 30 million tons annually, the nation's largest commercial gasification project, and investor-owned utilities and rural electric cooperatives from a multi-state area that generate electricity from lignite serving millions of people from Canada to Texas. For over 20 years, the Lignite Energy Council has maintained a formal partnership with the NDIC to assist with administration of the Lignite Research, Development and Marketing Program and provide technical assistance to the NDIC.

Besides partnering with the NDIC on the development and implementation of the state's research and development program, the Lignite Energy Council manages a regional branding program for lignite-based electricity and an education program that trains teachers from across the region about the lignite industry. Because of the important impact that governmental policies have on the competitive position of lignite and the ability to develop new lignite projects, the Lignite Energy Council is also involved in various governmental relations activities such as legislative, Congressional, and public official forums and briefings.

The Lignite Energy Council has effectively managed similar contracts with the NDIC dating back to May 1999. Based on this experience and the above-described capabilities, the Lignite Energy Council is capable of administering the new Enhance, Preserve and Protect Project.

## **B. Key Personnel**

### ***EPP Project Policy Advisor***

John Dwyer has over 31 years of experience in the energy industry having served in various federal and state capacities. He has served as President of the Lignite Energy Council since 1981. Mr. Dwyer also serves as an advisor for coal-related activities at the federal and state levels. At the federal level, Mr. Dwyer is a member of the National Coal Council, which serves as an advisor to the United States Secretary of Energy on coal-related matters. At the state level, he serves as Chairman of the North Dakota Lignite Research Council, which serves as the advisory council for the Lignite Research, Development and Marketing Program.

### ***Expertise of the Technical Representative and Project Manager***

Michael Jones Ph.D. has over 30 years of experience with the development of technologies leading to the clean and efficient use of North Dakota lignite. Prior to coming to the Lignite Energy Council, Mr. Jones served in a number of management positions with the Energy and Environmental Research Center at the University of North Dakota. In November 2009 he was hired to serve as the Director of Research and Development for the Lignite Energy Council and as the director of the LV21P. In addition the NDIC appointed Mr. Jones to serve as the Technical Advisor to the NDIC for the North Dakota Lignite Research, Development and Marketing Program. Mr. Jones received PhD, M.S. and B.S. degrees in Physics.

### ***Expertise of the ND Director of the Transmission Authority***

Sandi Tabor has served as the Director of the North Dakota Transmission Authority for over six years. An attorney by training, Ms. Tabor currently serves as Governor Dalrymple's representative on several regional and national transmission planning initiatives. Ms. Tabor has served in management positions throughout her career including service as the Chief Deputy Attorney General prior to her work with the NDTA.

***Resumes of EPP Consultants are available upon request.***

## **VALUE TO NORTH DAKOTA**

With an existing lignite fleet representing approximately \$15 billion of capital investment in North Dakota, it is imperative that regulatory and statutory initiatives at the federal level or by states in the region be cost-effective and based on sound science. The primary objective of the EPP project is to protect and preserve the industry investment. The State stands to lose over 4,000 direct jobs and a significant portion of the 13,000 indirect positions related to providing services to the industry if as partners, the State and the lignite industry cannot find technology solutions and proactively address the development of reasonable regulations based on sound science. Also directly at risk if the existing lignite industry is not protected are state taxes of over \$90 million and over \$3 billion in business volume to the state generated annually by the lignite industry. The value to North Dakota of the EPP Project grant is the ability to enhance, preserve and protect an industry that has provided low-cost and reliable electricity to the region for many generations.

## **MANAGEMENT**

See description of project management under "Project Description, C. EPP Project Task Summaries." Also see Organizational Chart in Appendix 3.

## **TIMETABLE**

The Enhance, Preserve and Protect Project will begin on January 1, 2013 and end on December 31, 2015. Quarterly project reports will be submitted to the NDIC as mentioned in the "Project Description" section.

## **MATCHING FUNDS**

The EPP Project will use nonmatching funds from the lignite research fund consistent with the intent of the North Dakota Lignite Research, Development and Marketing Program as described in the "Background, A. State Policy" section. Previous grants for the LV21P were approved to use nonmatching funds from the lignite research fund. The total nonmatching funds requested are \$4,772,250.

## **STANDARDS OF SUCCESS**

The project proposal has included work task objectives (See Project Description, above). The EPP Project team will submit periodic reports addressing progress under each of the tasks. Documented accomplishments and progress in each of the task areas will provide a standard of success.

## **TAX LIABILITY**

I, John W. Dwyer, certify that the Lignite Energy Council is not delinquent on any tax liability owed to the State of North Dakota.

John W. Dwyer, President  
Lignite Energy Council