



DEVELOPMENT ASSOCIATION

RUSS STAIGER
President

March 9, 1988

Mr. John W. Dwyer, President
North Dakota Lignite Research Council
PO Box 2277
Bismarck, ND 58502

State Industrial Commission
Governor's Office
State Capitol Building
Attention: Ms. Karlene Fine
Bismarck, ND 58505

Dear Ms. Fine,

Enclosed is the grant application which I discussed with you briefly on the phone on March 8. This grant application is requesting \$15,000 in assistance to support the conference on "Opportunities in the Synfuels Industry." This application and the conference are being sponsored jointly by the Bismarck Development Association, the University of North Dakota Energy & Mineral Research Center, U.S. Senator Kent Conrad and the Bismarck Chamber of Commerce. This grant application is being submitted to the ND Lignite Research Council pursuant to Article 43-03 of the North Dakota Century Code related to contracts for lignite development and land reclamation research and hydro electricity impact studies. I have also enclosed the necessary application fee of \$100 made payable to the State of North Dakota.

The sponsors of this request and the conference recognize that there may be some disparity between this application and the timing of review and approval of grant requests, however, if there is any way that a council can consider this funding request at this time, it would be sincerely appreciated.

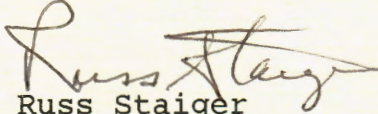
The potential positive economic impact which this conference can have on the ND lignite industry, is extensive. It will promote the further use of lignite as an energy source and perhaps, more importantly, the use of the by-products from lignite to develop other products. This, in turn, will create jobs, new wealth and new tax base for the state of North Dakota.

John, this is not just an idea. The conference dates are set, commitments of speakers have been made and invitations to attend are being sent to over 18,000 persons worldwide. We intend to show both the research capabilities available as well as the advantages to the

industrial sector to utilize our energy and by-product resources.

If you should have any questions regarding this request, please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read "Russ Staiger". The signature is written in dark ink and is positioned above the printed name and title.

Russ Staiger
President

REQUEST FOR FUNDING ASSISTANCE
THE AUGUST 28-31, 1988
CONFERENCE ON
"OPPORTUNITIES IN THE SYNFUELS INDUSTRY"

Submitted by:

Bismarck Development Association
University of ND Energy & Mineral Research Center
U.S. Senator Kent Conrad
Bismarck Chamber of Commerce

by Russell Staiger, President
Bismarck Development Association

March 9, 1988

Request: \$15,000

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SUMMARY

The purpose of the first annual "Opportunities In the Synfuels Industry" conference is to generate new economic growth in North Dakota and other areas of the nation which have been or are major energy producers. The economy of North Dakota, like other energy producing areas, have been largely dependent upon the energy resources and the various by-products that have resulted from the development of those resources. This conference will make possible a major public forum which will be attended by those persons involved in serious research related to North Dakota's energy resource development and the resulting by-product utilization.

The conference will be attended by those persons involved in research and also by those persons involved in the industrial application of the successful research. This conference will provide the opportunity to educate both the researcher and the industrialist as to the extensive level of research which has already been completed nationally and internationally. It will also demonstrate the potential commercial use of the extensive energy by-products available as a consequence of energy development in North Dakota. Through the sharing of this research, a new environment will be created which will encourage new economic development in the energy producing areas of North Dakota and the United States. This new economic growth will be most welcome to these areas. In many of the energy producing areas, agriculture has been relied upon as another major industry. With the decline of both the energy and agricultural sectors, many thousands of jobs have been lost. New economic growth through the utilization of research of by-products in the energy industry, will create jobs which will employ both the unemployed energy workers as well as those

unemployed by the downturn in agriculture.

Of particular note is the Great Plains Coal Gasification Plant. This \$2.1 billion dollar facility is the only commercial coal to synthetic natural gas (SNG) conversion facility in North America. The plant, which is currently owned by the U.S. Department of Energy, is producing in excess of \$15,000,000 worth of SNG per month. Of even greater interest is the fact that the Plant's long list of by-products have the potential of producing a revenue stream even greater than the primary product, SNG.

To date there has been only a very limited use of these by-products. The reason for the lack of use is largely the lack of awareness among the research and industrial communities in the U.S. and overseas. By holding this serious technical conference on an annual basis, we plan on educating individuals and the corporate entities they represent, as to the extensive energy resources, research and by-products which exist in North Dakota and in other similar energy producing areas of the U.S..

Through this educational process, we hope to encourage the utilization of the research and by-products. Because of the physical nature of many of the by-products which contain high levels of water, it would be necessary that they be developed or utilized near their source. This would mean the construction of the necessary processing facilities in those energy producing areas and near the facilities producing them.

This \$15,000 grant will make it possible to start an annual conference bringing hundreds of people each year for all over the world to focus on North Dakota's lignite resources. The potential return over time, is certain to be many times more than this initial investment through new industry, new jobs and taxable income for North Dakota.

Objective

Scope: The conference will allow leading research and industrial experts to present a variety of papers on the utilization of energy resources and by-products. The attending audience is expected to represent nationally and internationally recognized companies and government officials concerned about similar research problems and the possible utilization of North Dakota's energy resources and by-products.

Objectives:

1. Focus national and international attention on North Dakota's energy resources and the related research which has taken place to better utilize those resources and resulting by-products.
2. Identify companies (domestic and foreign) which may have an interest in North Dakota by-products and open a line of communication with appropriate officials in those companies.
3. Encourage the use of the available research and by-products to produce specific products in North Dakota.
4. Establish the conference as a serious annual technical conference which will attract an increasing attendance each year.
5. Promote Bismarck and the Univ. of ND Energy & Mineral Research Center as an internationally recognized center of energy resource and by-product research.
6. Stimulate new economic growth by utilizing available research and by-products.
7. Further diversify North Dakota's economy through the development of a petro-chemical industry.
8. Focus attention on the by-product development opportunities present at the Great Plains Coal Gasification Project near Beulah, ND which will result in new, across the fence industrial development.
9. Encourage the transfer of research technology developed in North Dakota to other energy producing areas to encourage similar new economic growth.
10. Create new, high skilled employment, in North Dakota and other energy producing areas of the U.S..

BACKGROUND

For several years, the Bismarck Development Association has watched the trials and tribulations of the Great Plains Coal Gasification Plant with great interest. In observing the various events which are affecting the operation of the Great Plains Coal Gasification Plant, it became increasingly evident that the potential economic future which this facility offers the state of North Dakota is almost beyond description. It also became quite obvious that a limited number of people fully understood the magnitude of this potential economic impact. Although the primary product of the plant is of major significance, it also became apparent that the potential economic growth out of the utilization of the endless array of by-products was, perhaps, even more significant.

Approximately eighteen months ago, the Board of Directors of the Bismarck Development Association began discussing how it might promote the utilization of those by-products. Out of those discussions came the idea of holding an international energy by-products conference. The perhaps of this conference would be to focus worldwide attention on North Dakota's tremendous lignite resources and the endless array of energy by-products which are available. By bringing these resources into the spotlight, it would help identify potential users of the by-products and also those industrial concerns that have the potential for further developing those by-products. Through this process, it is intended that we will create new jobs, new economic growth and new tax base for the State of North Dakota.

In May of 1987, the Board of Directors of BDA met with U.S. Senator Kent Conrad. During the course of that meeting, the BDA presented the idea of holding this international energy conference. Senator Conrad was

immediately enthused with the idea and the economic prospects that it offered. At approximately the same time, the BDA approached the UND Energy & Mineral Research Center to determine their possible interest in participating in such a project. Their enthusiasm was immediate. They have put their full effort into helping make this conference a reality. They, perhaps better than most people, realize the tremendous energy base and by-products resources which North Dakota has to offer. At the same time that the BDA approached the UND Energy & Mineral Research Center, they also met with the staff of ANG. Through the combined efforts of the BDA, Senator Kent Conrad's office, the Energy & Mineral Research Center and ANG. The structure of the energy conference has been gradually pulled together. Currently, the formal agenda is being finalized. A budget has been developed, funding sources are being identified and the project is moving forward. The conference itself, is scheduled August 28 - 31. Following this page you will find the preliminary agenda. As you will note, the agenda includes an impressive array of experts in the energy by-products field whose papers will focus attention on development possibilities for North Dakota lignite and it's by-products.

At this point, the initial notification of the conference has been mailed to over 18,000 individuals and corporations worldwide. The end of March we intend to mail the finalized agenda. This agenda, in addition to the impressive list of experts, will include persons such as U.S. Senator Bennett Johnston who is the Chairperson of the Senate Energy and Natural Resources Committee, U.S. Senator James McClure, ranking minority member of the same committee, Mr. Alan Wampler, Secretary of the Department of Energy, General Richard Lawson, President of the National Coal Association and a number of other similar dignitaries. This will truly be a world class event.

Detailed Project Description

The proposed agenda for the first annual "Opportunities in the Synfuels Industry" conference scheduled for August 29, 30 and 31, 1988 will include the following presenters and papers.

Opportunities In The Synfuels Industry

Session 1* - Bio-Remediation

Co-chairpersons - M. Bromel. (GPGP)
C. Turner (Dept. of C.E., UND)

"In Situ Microbial Removal of Chlorinated Hydrocarbons," Perry
McCarty, Stanford University, California.

"Research Needs in Groundwater Pollution Abatement - Microbiological
Methods," John T. Wilson, R.S. Kerr

"Microbial Capabilities for Pollution Remediation," Bruce Rittman,
University of Illinois, Urbana, Illinois.

"Combined Reuse and Biological Treatment of Industrial Wastewater in
Cooling Towers," Mary C. Bromel, Great Plains, Beulah, North
Dakota.

"Characterization and Use of a Cooling Tower as a Biological Waste
Treatment System," Chuck Turner, Department of Civil
Engineering, University of North Dakota, Grand Forks, North
Dakota.

"Land Disposal Utilizing Adapted Cooling Tower Biota," author TBD,
Great Plains, Beulah, North Dakota.

"Bioaccumulation of Metals from the Organic Process Stream," author
TBD, Great Plains, Beulah, North Dakota.

"Source of Naturally-Occurring Surfactants in Cooling Towers," J.
Luer, Great Plains, Beulah, North Dakota.

Session 2 - Solid Waste Characterization and Reuse

Co-chairpersons - B. Grosz (Basin)
F. Beaver (EMRC)

"Fundamental Characterization of Ash from GPGP and the Antelope
Station", G.J. McCarthy, North Dakota State University, Fargo,
North Dakota.

"Opportunities for Reuse of Ash from GPGP and Antelope Station," O.
Manz, University of North Dakota Energy and Mineral Research
Grand Forks, North Dakota.

"Metals Extractions," D.J. Hassett, University of North Dakota Energy and Mineral Research Center, Grand Forks, North Dakota.

"High Tech Applications for Coal Conversion Solids Wastes," Dean Golden, Electric Power Research Institute, Palo Alto, California.

* Some of the suggested papers in this session will need to be culled or the session expanded.

Session 3 - Environmentally-Acceptable Control of Emissions and Waste Streams

Co-Chairpersons - G. Weinreich (GPGP)
B. Schott (Basin)

"Sulfur Compliance through Redox Chemistry," James Evans, Gas Research Institute, Chicago, Illinois.

"Lab-Scale Assessment of Redox Chemistry," G. Page, Radian, Austin, Texas.

"Pilot-Scale Assessment of Redox Chemistry," F. Kuhn and S. Baker, Great Plains, Beulah, North Dakota.

"Flue Gas Desulfurization," C. Drummond, PETC

"Opportunities for Co-Disposal of Hazardous Liquids and Cementitious Solid Wastes," G. Groenewold, University of North Dakota Energy and Mineral Research Center, Grand Forks, North Dakota.

Session 4 - Enhanced Utilization of Coal in a Synthetic Fuels Plant

Co-chairpersons - M. Mujadin (GPGP)
M. Jones (EMRC)

"Comparison of CFBC and Coal Gasification as Options to Utilize Fines at GPGP," author TBD, Stearns-Roger, Denver, Colorado.

"Briquetting of Coal Fines," W>B> Hauserman, University of North Dakota Energy and Mineral Research Center, Grand Forks, North Dakota.

"Slurry Formation and Texaco Gasification of Lignite Coal Fines," Warren Schlinger, Texaco, and Warrack Willson, University of North Dakota Energy and Mineral Research Center, Grand Forks, North Dakota.

"Overview of Underground Coal Gasification Issues and Opportunities," G. Groenewold, University of North Dakota Energy and Mineral Research Center, Grand Forks, North Dakota.

GOALS

The principal goal of this International Energy By-Products Conference is to promote new economic growth in the State of North Dakota through the utilization of our extensive lignite resources and the related by-products. Through this economic growth, we will create jobs, new wealth and new tax base.

This is a long term goal. Anyone familiar with economic development knows that there is no quick fix to the economic problems which face any city or state. North Dakota has struggled with a difficult economy over the past ten years. The depressed agriculture economy and the equally depressed energy economy has taken a serious toll in North Dakota. The only answer is to provide for new growth, utilizing existing resources. By exposing the resources to the world, we will hopefully attract industrial concerns capable of utilizing these resources to produce products to be used by the nation and the world. It is important to note that this is not just a one time event. We intend to make this an annual conference which means that at least once a year, people from around the world will have an opportunity to focus on North Dakota's vast lignite resources and the potential they represent.

METHOD

All of the presenters of the various papers will be contacted by Dr. Groenewold, Director of the Energy and Mineral Research Center and his staff. The contacts for the keynote speakers at the luncheons and dinners will be made by Dr. Groenewold, U.S. Senator Kent Conrad and other appropriate persons.

The total effort to organize this first conference is being shared by the following group of people and organizations:

Mr. Russell Staiger, President
Bismarck Development Association

Mr. Paul Rechlin, Director
Lewis & Clark 1805 Regional Council

Dr. Gerald Groenewold, Director
University of ND Energy & Mineral Research Center
and his staff.

Mr. Fred Wittmann, Director
Department of Conferences and Institutes
UND Division of Continuing Education

Ms. Anne Russell, Executive Director
Bismarck Area Chamber of Commerce

Mr. Tom Haan
ANG Coal Gasification Co.

Mr. Mylo Candee, Special Assistant to
U.S. Senator Kent Conrad

Mr. Glen Pomeroy, Assistant Attorney General
Office of Governor George Sinner

Mr. Terry Harzinski, Executive Director
Bismarck-Mandan Convention & Visitors Bureau

The above group of people has met approximately six times as either a complete group, in smaller groups or on one occasion, a larger group including representatives from rural communities in the area around the Great Plains Coal Gasification Plant. Since they would be directly im-

pacted by any changes in the use of lignite coal as an energy source, we are attempting to involve them in the planning process.

This larger meeting also involved some of the major corporations involved in the energy industry including companies such as the North American Coal Co, Montana Dakota Utilities, Basin Electric Power Cooperative, Burlington Northern Railroad and American Natural Gas Coal Gasification Company. We also invited representatives from petroleum and lignite associations.

The actual implementation of the project will be carried out by the following key organizations:

1. Lewis & Clark 1804 Regional Council for Development.
2. Bismarck Development Association.
3. Bismarck Area Chamber of Commerce
4. University of ND Energy and Mineral Resource Research Center.
5. University of ND Division of Continuing Education.
6. Bismarck-Mandan Convention & Visitors Bureau.

The first three organizations will carry responsibility of coordinating all of the activities necessary to organize the conference as an ongoing event. The Bismarck Development Association will serve as the central clearing house.

The Energy and Mineral Research Center has the responsibility for arranging the conference agenda participants. Because of their extensive internationally recognized expertise in energy and mineral research, they have the capacity to attract persons with similar expertise to present technical papers. The collection of recognized experts presenting papers in both research and practical application will in turn attract conference attendance from around the world. Those attending will be from those industry sectors searching for new techniques to utilize energy related products.

The University of ND Division of Continuing Education in turn will be responsible for actually handling the details of the conference including mailing of conference agenda's, accept registration and making all arrangements necessary to make the conference flow smoothly. Other responsibilities of the Dept. of Conferences and Institutes include - arranging for housing, meals, tours and other related activities - bidding - helping select facility and develop marketing plan - brochure design of production and mailing - maintaining mailing lists - financial management including budgeting, accept income - pay bills - contracting all speakers and making related arrangements - liason with Conference facility - accept pre-registrations - responsible for on-sight arrangements - Conference evaluation and post-program financial tie-ups. The Dept. of Conferences and Institutes is in the business of professionally managing major conferences of this sort.

Between these six organizations and their respective staffs, there is more than adequate capability to make this a successful ongoing event. In planning this first conference, we have set a very conservative goal of 200 attendees. Our mailing list which is managed by the Dept. of Conferences and Institutes, has over 8,000 names on it. These are names of individuals from both the public and private sectors around the world. With 200 attendees, the conference will operate very successfully, leaving a operating pool of funds for future conferences. These funds will be placed in a fund dedicated to supporting future conferences. This fund will be managed by the Bismarck Development Association and it's Board of Directors. The use of the funds will be dedicated to the funding of an Annual Energy By-Products Conference.

The non-federal share of the cost of the first conference will be

underwritten by a number of major corporations who directly or indirectly are affected by the energy industry. The solid funding commitments will be secured prior to the submission of the full application for an EDA National Technical Assistance grant. Some of these conference underwriters will possibly include corporations such as the Burlington Northern Railroad, Montana Dakota Utilities, Basin Electric Power Cooperative and North American Coal. It is expected there will be between six to eight major corporations underwriting the non-federal share.

PROJECT WORK PLAN/SCHEDULE

Initial Planning Meetings	May,87 - Oct., 87
Develop Preliminary Conference Agenda	Oct., 87
Develop Revised Conference Agenda	Nov., 87
Develop Proposed Conference Budget	Dec., 87
Prepare & Submit Proposal for EDA Natl. Tech. Assistance	Jan., 88
Develop Final Conference Agenda	Feb., 88
Secure Non-Federal Fund Guarantees	Feb., 88
Prepare full EDA application for Natl. Tech. Assistance	Feb., 88
Secure EDA Natl. Tech. Assistance Grant Approval	March, 88
Initial Mailing of Conference Notice & invitation to attend	Feb., 88
Initial Mailing of Invitations to Display at Conference	March, 88
Second Mailing of Conference Notice	March, 88
Final Notice of Conference Agenda	May, 88
Conference	August 28-31, 88
Post Conference Wrap-Up	Sept., 88