

Otter Tail

POWER COMPANY

June 30, 1992

215 S CASCADE ST
PO BOX 496
FERGUS FALLS MN 56538-0496
218-739-8200

North Dakota Industrial Commission

State Capitol

Bismarck, ND, 58505

Dear Sirs:

Enclosed is the application of Otter Tail Power Company for a grant from the North Dakota Lignite Research Fund. By this application, Otter Tail Power hereby commits itself to complete the project as described in this application should the Industrial Commission of North Dakota make the grant requested by the application.

The applicant certifies that it has read and understands the statutes and administrative rules governing grants from the Lignite Research Fund and agrees to all conditions and terms set forth therein. The applicant also certifies that all information contained in the application is true to the best of the applicant's knowledge, and acknowledges the right of the North Dakota Industrial Commission to modify or terminate and subsequent agreements with applicant if the Commission becomes aware of any material misrepresentation contained in this application.

Sincerely,



Ward Uggerud

Vice-President, Operations

APPLICATION TITLE PAGE

APPLICANT: Otter Tail Power Company

ADDRESS: 215 South Cascade St., Box 496

CITY, ST, ZIP: Fergus Falls, MN 56538-0496

TITLE OF PROJECT: Scoping Study to Determine the Costs of an Environmental Externality
Study

AMOUNT OF REQUEST: 50% (up to \$15,000) of project cost (up to \$30,000)

DATE OF APPLICATION: July 1, 1992

PRINCIPAL INVESTIGATOR: A consulting firm to be determined

CONTRACT MANAGER: Bryan D. Morlock, P.E.

Otter Tail Power Company

215 South Cascade St.

PO Box 496

Fergus Falls, MN 56538-0496

218-739-8269

Bryan D. Morlock

ABSTRACT

The objective of this project is to hire a consultant to complete a scoping study. The scoping study would identify existing studies and documentation on environmental impacts in Minnesota, review this material for completeness, and identify a plan for completing a full environmental externality damage study, including cost estimates. The project should be able to be complete within six months. The total cost is expected to be \$25,000 - \$30,000.

The Minnesota Public Utility Commission is developing rules that would require utilities to pay additional costs above avoided costs to qualifying facilities as defined in the Public Utilities Regulatory Policies Act (PURPA). These additional payments are being based on averaging information from a range of generic studies that have been completed by various individuals and organizations, none of which are specifically applicable to Minnesota.

These participating utilities to this scoping study include Minnkota Power Cooperative, United Power Association, Cooperative Power, Minnesota Power, and Otter Tail Power. All of these utilities own or receive power from lignite fired generation located in North Dakota. These qualifying facilities will provide energy that will offset energy produced by North Dakota facilities. In addition, Minnkota Power and Otter Tail Power serve customers in North Dakota. These customers will be paying the environmental externality costs through increased fuel costs.

The information obtained from the study would be used to determine if a full environmental externality damage study is needed, in order to provide more accurate data for use in applying environmental externality values.

PROJECT SUMMARY

The MN Public Utilities Commission (PUC) is in the process of developing values for environmental externalities. An environmental externality is any environmental impact that occurs beyond the requirements of existing regulatory limits. Even though existing generation facilities meet all applicable rules and regulations, some emissions still occur. The objective of the PUC work is to develop values for these emissions and their impacts. The basis for these estimates is the PACE University report. This document reports the results of findings of any individuals that have published information on this subject. No attempt has been made to assess the quality of the information. In fact, the PACE University report states "some of the studies reviewed were inadequately documented or substantively deficient. THE VALUATION FIGURES CITED DO NOT PURPORT TO BE DEFINITIVE COSTING ESTIMATES."

Even though they recognize the deficiencies in the report, the PUC staff is planning to use these costing estimates as the basis for many of the cost figures. The staff is attempting to develop detailed environmental externality costs for coal fired generation from data that indicates the costs may be as low as .04 cents per kilowatthour or as high as 25.81 cents per kilowatthour. The staff still proposes to use average values based on these widely different values rather than conduct reasearch applicable to Minnesota.

The specific items being addressed as environmental externalities so far include emissions such as sulfur dioxide, carbon dioxide, nitrogen oxides, lead, mercury, particulates, carbon monoxide, and hydrocarbons. The staff is also anticipating the possible inclusion of many more impacts such as additional emissions, land, and water usage.

Efforts by utilities in other states struggling with the environmental externality issue have recently attempted to develop specific data applicable to the state in which the utility exists, rather than applying generic data. Otter Tail Power recently hired National Economic Research Associates, Inc. to review the Minnesota situation and provide guidance. One of the suggestions provided was to complete a scoping study to identify and review existing literature on environmental impacts in Minnesota, and to provide an estimate of the cost to complete a full study to develop environmental externality damage values. The estimated cost of the scoping study would be \$25,000 - \$30,000.

The values proposed so far by the MN PUC staff are quite high. Illustrations of the impacts to Otter Tail Power detail the potential costs. Based on the Otter Tail Power units (primarily lignite fired), Otter Tail would have to pay wind generators almost 7 cents/kWh ABOVE avoided costs. The payments to just the existing qualifying facilities providing energy to Otter Tail Power would result in an additional cost of over \$1.3 million per year to the Company's customers. Under PURPA, a utility must interconnect with and purchase the capacity and energy from any certified qualifying facility, regardless of capacity and energy needs. The open ended PURPA requirements, combined with environmental externality payments that are higher than avoided costs, provide a situation where unlimited development of qualifying facilities could occur at great expense to utility customers and the North Dakota lignite industry.

The scoping study would hire a consultant to:

1. identify and review existing environmental studies and documentation pertinent to Minnesota,

2. develop a plan and procedure for accomplishing a complete environmental study applicable to the state of Minnesota that would provide a basis for valid environmental externality values, and
3. provide a cost estimate for completing the environmental study.

The five utilities involved, Minnkota Power Cooperative, United Power Association, Cooperative Power, Minnesota Power, and Otter Tail Power would use the information from the scoping study to determine whether to proceed with the full environmental study, and to obtain other utility partners with Minnesota concerns to participate in the study if it is pursued.

PROJECT DESCRIPTION

Scoping Study to Determine the Costs of an Environmental Externality Study

This project is to hire a consultant, with experience in environmental externalities, to:

1. identify existing studies and documentation developed by state agencies, universities, and others on environmental impacts in the State of Minnesota pertaining to the generation of electricity. This would include the availability of air quality data, population densities, and existing damage studies.
2. review identified material for validity in methods, accuracy in documentation, and content of material for suitability of use in completing a full study of environmental externalities specific to Minnesota.
3. identify additional work that would be necessary to complement the existing material in completing a full environmental externality damage study.
4. develop a plan for completion of a full environmental externality damage study, including costs, methodologies, major project milestones, project schedule, and expected results.

There are no specific environmental or economic impacts of the scoping project by itself, but the potential for proceeding with a full environmental externality damage study would have an economic impact. This impact would involve the electricity rates paid by North Dakota

ratepayers (as well as Minnesota ratepayers), and the future levels of electricity generation from facilities consuming North Dakota lignite. Based on work done in other states, it is anticipated the completion of the full damage study would result in lower environmental externality values than would occur using the PACE University report data.

This project is needed to help develop a plan and cost estimate for a complete environmental externality damage study. Environmental externality theory and implementation is extremely complex, and the utilities do not have staff on hand that can provide the required expertise in this area. The knowledge and experience of individuals that have been involved in this process elsewhere in the country is essential to addressing environmental externalities in a proper manner. Entities involved on the other side of this issue include renewable energy industries and environmentalists that have hired nationally known individuals to present their point of view.

BACKGROUND

Each of the five utilities has completed some minor work in investigating environmental externalities by obtaining existing documentation from various experts and from testimony provided in other states. However, none of the utilities have personnel with sufficient training or knowledge in this area to accomplish the scoping study.

In May of this year, Otter Tail Power hired National Economic Research Associates, Inc. (NERA) to review the legislation and activities in the State of Minnesota regarding environmental

externalities. NERA provided Otter Tail Power with a background to activities and results in other states, and identified a number of alternatives available to utilities. One of the suggestions provided by NERA was to conduct a scoping study to provide the necessary information in order to make a decision on conducting a complete environmental externality damage study specific to Minnesota. The full study, if completed, would provide cost information that could be used to develop well defined environmental externality values instead of using the generic information included in the PACE University report.

QUALIFICATIONS

The principal investigator has not yet been determined. However, National Economic Research Associates, Inc. would be one of the potential investigators. The utilities desire to use a consulting firm that has had experience in providing documentation and testimony regarding environmental externalities in other states. Such activities have occurred and are still occurring in such states as California, Illinois, Nevada, Massachusetts, and New York.

VALUE TO NORTH DAKOTA

The results from the scoping study would be used by the five utilities to make a decision on whether or not to proceed with a full environmental externality damage study. The scoping study would provide the utilities with the necessary information to make their own decision, as

well as provide information that would be useful in obtaining additional utility partners in Minnesota to participate in the damage study.

The impacts to North Dakota come from two areas. First, Minnkota Power and Otter Tail Power both serve electric customers within the State of North Dakota. The payment of environmental externality values to qualifying facilities will increase fuel costs to the utilities, which are passed on to ratepayers through higher electricity bills. Based on the proposed values and methodology to date, the cost to Otter Tail Power customers from existing qualifying facilities would be more than \$1.3 million per year.

Second, all five of the utilities own or lease lignite fired generation located in North Dakota. The use of environmental externality values as proposed by the PUC staff will increase payments to qualifying facilities well above avoided costs, and the costs to build and operate such units. Since the Public Utilities Regulatory Policy Act requires utilities to purchase all capacity and energy from certified facilities, the utility has no control over the amount of facilities that would be built. These facilities could be powered by renewable resources, or can be cogeneration facilities fueled with natural gas or even coal located in Minnesota. The development of large numbers of qualifying facilities would reduce generating levels of the North Dakota units, reducing the use of lignite in North Dakota. Reduced lignite usage would result in lower tax revenues to the state, as well increase the potential for job losses in coal mining.

MANAGEMENT AND TIMETABLE

Otter Tail Power would serve as the entity managing the contract with the consultant. It is anticipated the project would be completed in less than six (6) months. Successful completion of the work by the consultant would be based on the report provided to the utilities, and whether all of the items detailed in the project summary are included in the report. Payment to the consultant would not occur until the report has been accepted as complete.

A proposed timetable would the project would be:

- Month 1 Select consultant through bidding process and review of qualifications.
 Complete agreement with consultant on work to be performed.

- Month 2-4 Consultant identifies and researches existing documentation, develops a
 damage study plan and cost estimate, and writes the report.

- Month 5 Utilities review report for completeness, and close out project upon final
 report acceptance.

The utilities would propose the project would likely commence in August 1992. Progress reports from the consultant would be required at least on a monthly basis and would be forwarded to the Industrial Commission.

BUDGET

Based on verbal discussions with consultants, the estimated cost of the scoping study project is anticipated to be \$25,000 - \$30,000. All of this cost would be consultant fees. Any other out of pocket expenses would be minimal and would be borne by the utilities. The application is for a grant of 50% of the cost, up to a maximum of \$15,000.

The utilities are requesting this funding because of the potential for impact on the North Dakota lignite industry and electrical customers. The utilities are already experiencing costs in other areas due to the investigation of environmental externalities and participation in the Minnesota process. Otter Tail Power has already incurred expenses through the hiring of the consultant for earlier work.

A decision has not been made on whether the utilities would proceed with the scoping study project if funding is denied. There is a possibility that at least some of the utilities would proceed with the project, even without funding.

MATCHING FUNDS

The five utilities, Minnesota Power, Cooperative Power, Minnkota Power Cooperative, United Power Association, and Otter Tail Power propose to equally share the 50% of the project cost which would not be covered by the grant application, as well as additional miscellaneous out of pocket costs that may occur.

TAX LIABILITY AFFIDAVIT

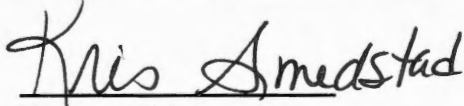
I, Charles Brunko, being first duly sworn on oath hereby certify that Otter Tail Power does not have any outstanding (past due) tax liabilities to the State of North Dakota, or any other political subdivision within the State of North Dakota.

Dated this 30th Day of June, 1992.



Charles Brunko
Director, Accounting

Subscribed and sworn to before
me this 30th day of June, 1992.


Notary Public

