

STATE OF MINNESOTA  
DEPARTMENT OF ENERGY, PLANNING AND DEVELOPMENT  
ENERGY DIVISION (MINNESOTA ENERGY AGENCY)

In the Matter of the Proposed Adoption  
of Rules of the Department of Energy,  
Planning and Development (Minnesota  
Energy Agency) Governing Construction  
Loans Under the District Heating  
Bonding Act 6 MCAR SS 2.4021-2.4034

STATEMENT OF  
NEED AND  
REASONABLENESS

INTRODUCTION

In the 1981 session, the Minnesota Legislature enacted the District Heating Bonding Act, Laws of 1981 Chapter 334, hereinafter "Act", for the purpose of fostering the establishment and improvement of district heating systems. The Department of Energy, Planning and Development (Minnesota Energy Agency), hereinafter "Department", has developed these rules under the authority of Section 1, Subdivision 11 of the Act for the purpose of administering a program of loans to municipalities for district heating construction.

The objective of the District Heating Construction Loan Program is to encourage the development and expansion of economically viable district heating systems which have the potential to save energy and/or displace scarce fuels such as petroleum and natural gas.

This Statement of Need and Reasonableness will illustrate the manner in which the Department will administer the construction loan program under the Act.

Temporary rules for construction loans were duly promulgated and became effective on March 26, 1982. They are published in the State Register of February 22, 1982 (6 S.R. 1465) with modifications in April 12, 1982 (6 S.R. 1716). The temporary rules were extended in the Sept. 20, 1982 State Register (7 S.R. 344).

## RULES

The format used in preparing this Statement of Need and Reasonableness is as follows: each rule is stated and underlined; it is then followed by an explanation of the intent of the proposed rule and the need for the proposed rule.

### 6 MCAR S 2.4021 Definitions.

A. Scope. For the purposes of 6 MCAR SS 2.4021-2.4034, the terms defined in B.-L. have the meanings given them.

This rule contains definitions of those terms that we used often in the rules which might not be understood by the reader and also terms which we used in a shorthand manner in the rules.

B. Act. "Act" means Minnesota Statutes, section 116J.36.

This section provides a shorthand method of referring to the legislation under which these rules are promulgated.

C. Assistant commissioner of energy. "Assistant commissioner of energy" means the Assistant Commissioner of the Energy Division of the Department of Energy, Planning and Development.

This section provides a shorthand method of referring to the official who is responsible for the District Heating Advisory Task Force.

D. Commissioner. "Commissioner" means the Commissioner of the Department of Energy, Planning and Development.

This section provides a shorthand method of referring to the official who is responsible for reviewing applications.

E. Debt service cost. "Debt service cost" means the sum of all costs amortizing lease indebtedness, bond indebtedness, urban development action grant indebtedness, and any state

indebtedness that is attributed to the project on an annual basis.

This section is needed to show what yearly indebtedness costs will be used in calculating the debt service coverage.

F. Debt service coverage. "Debt service coverage" means the gross revenues of the project minus the operating expenses, plus the debt service cost. The debt service coverage is expressed as a percentage of the debt service cost.

This section shows how the debt service coverage is to be calculated, for the purpose of evaluating applications.

G. Department. "Department" means the Department of Energy, Planning and Development.

This section provides a shorthand method of referring to the branch of state government responsible for administering the act.

H. Financial consultant. "Financial consultant" means a reputable person or firm experienced in working with complex revenue-supported financial plans and qualified to assess the financial condition and operation of the project.

This section is needed to stipulate the qualifications of the preparer of the complete economic analysis of the project.

I. Gross revenues. "Gross revenues" means all revenues, fees, user charges, rents, franchise fees, special assessments, and other income and receipts derived from the ownership or operation of the project, the proceeds of any insurance that insures against the loss of gross revenues, any investment income from money or securities derived from the state loan

under the act, and any other income and receipts attributable to the ownership or operation of the project from whatever source derived, calculated on an annual basis.

This section is needed to show what yearly revenues will be considered in calculating the debt service coverage, and it gives several non-exclusive examples.

J. Operating expenses. "Operating expenses" means all expenses directly and properly attributable to the operation of the project on an annual basis. Examples are: expenses for operation, maintenance, repairs, ordinary replacement, ordinary acquisition of equipment, fuel and heat, labor and fringe benefits, lease rental payments, insurance premiums, administration, legal services, engineering services, payments of all indebtedness, and any other current expenses or obligations required to be paid by the municipality or owner of the project, all to the extent properly and directly attributable to the operation of the project. Operating expenses do not include any costs of expenses for new construction or any allowance for depreciation.

This section is needed to show what yearly expenses for operation would be used in calculating the debt service coverage. Several non-exclusive examples of such expenses are given. Since there may be confusion over capital and depreciation expenses, these are specifically excluded.

K. Project. "Project" means a district heating construction project as described by the business plan.

This section provides a shorthand method of referring to the undertaking to develop district heating which the construction loan will be part of.

L. Take-or-pay contract. "Take-or-pay contract" means a contract between a district heating system and a thermal load customer whereby the customer agrees to take a predesignated amount of thermal energy over a certain time period or to pay a sum equivalent to the value of the predesignated amount of thermal energy, even if less is taken.

This section is needed to show what will be considered a take-or-pay contract for the purposes of evaluating applications.

6 MCAR S 2.4022 Purpose.

The purpose of rules 6 MCAR SS 2.4021-2.4034 is to allow district heating projects that have already completed comprehensive engineering, economic, and design studies to make prompt and proper application for construction loans. Rules 6 MCAR SS 2.4021-2.4034 set forth the procedures that municipalities must follow to apply for loans and establish the criteria by which the applications are reviewed.

This rule is necessary to inform prospective applicants that the rules contain application procedures and evaluation criteria. It also informs them that preliminary studies must be done before an application can be made.

6 MCAR S 2.4023 Scope of rules.

Rules 6 MCAR SS 2.4021-2.4034 apply to the department and to any municipality applying for construction loans under the act.

This rule is necessary to inform prospective applicants of the parties who will be governed by these rules.

6 MCAR S 2.4024 Contents of application.

The application for construction loans shall contain the following information:

This rule informs prospective applicants what items must be included in the application.

A. name, address and telephone number of the responsible official of the municipality;

This section is needed so that the department will have a contact person for each application.

B. a comprehensive business plan for the project, as described in 6 MCAR S 2.4025;

This section is necessary to inform applicants that a certain amount of planning must be done before an application can be made and to delineate what steps are needed.

C. a resolution in support of the project from the governing body of the municipality, as described in 6 MCAR S 2.4029;

Since loans are to be made to municipalities, it is necessary that such municipalities officially pledge their support to the project.

D. identification of all licenses, permits, zoning regulations, and any other requirements of federal, state, or local governments with which the project would be expected to comply, and the present status of each;

Compliance with governmental regulation can have a significant effect on the timing and even the viability of a district heating project. It is reasonable to expect the commissioner to be appraised of the status of such compliance.

E. a list of key personnel and their qualifications as they relate to the project;

The participation of qualified people is of vital importance to the success of district heating development. It is reasonable for the commissioner to require information on who will be working on a project and what their qualifications are.

F. an estimate of the type and amount of fuel saved per year from the full operation of the district heating system compared to the type and amount of fuel to be used by the system; and

Two of the stated purposes of the act are to increase energy efficiency and to reduce the need for imported energy supplies. It is reasonable to require energy information to determine if a project fulfills these purposes.

G. a copy of the environmental assessment worksheet or environmental impact statement prepared for the project. If neither is required, then the applicant shall submit a statement as to the environmental effects of the project.

The act gives priority to environmentally benign projects, so it is necessary to require environmental information. In most cases, district heating projects will have minimal environmental effects. It is expected that few, if any, will require an Environmental Impact Statement (EIS). In all cases, environmental information is submitted to the commissioner. This becomes part of the application and is therefore considered in the evaluation.

6 MCAR S 2.4025 Comprehensive business plan.

The comprehensive business plan required by 6 MCAR S 2.4024 B. must include all of the following information:

A. a complete engineering design of the project, as described in 6 MCAR S 2.4026;

A project must be thoroughly engineered before construction is considered.

B. a market study of customers of the district heating system defined by the business plan who represent 90 percent or more of the proposed thermal load, as described in 6 MCAR S 2.4027;

A thorough market study is essential to a good business plan. The development of a district heating system will revolve around the market study. Since district heating systems usually involve densely populated downtown areas, it is reasonable to require a study representing a full 90 percent of the thermal load.

C. a preliminary plan that shows how the system could be expanded to serve other parts of the community;

Once a successful district heating system is established, it is usually economically attractive to expand the system to other parts of the community. It is reasonable to expect a project to take account of such possible future expansion in the early planning stages.

D. a complete economic analysis, as described in 6 MCAR S 2.4028, that includes cash flow, income, and balance sheets for a 20-year planning period, and a financing and development plan for the district heating system prepared by a financial consultant;

A comprehensive economic analysis is vitally important to any business plan. It is reasonable to require a 20-year planning period, because the terms of the loans will be at least that long. Since loans will be for less than the total cost of a project, it is important that the commissioner know how the entire project is to be financed in order to review it.

E. a certification by the municipality that a bid package for the construction of the project has been completed and is available to the department if requested;

A comprehensive bid package is an important first step for construction and can ultimately have an effect on system quality and reliability. It may be necessary for the commissioner to examine the bid package in order to properly evaluate a proposal.

F. a copy of the standard contract entered into with customers of the project with a list of customers already under contract, listing the thermal load of each customer presently under contract and comparing the total of the thermal load already contracted with the total load of the project; and

The terms of the customer contract can have a significant effect on the viability of a system. Well drafted contracts can help mitigate the adverse effects of low demand from unseasonable weather or economic conditions. It is reasonable to expect a legal commitment from customers at this point, if construction is to proceed.

G. a copy of the contract for the furnishing of the heat source or fuel for the project.

The contract terms for heat or fuel that a district heating system must comply with can have a major effect on operating costs and therefore viability.

6 MCAR S 2.4026 Engineering design.

The complete engineering design of the project required by 6 MCAR S 2.4025 A. must include at least the following information.

A. an analysis of the proposed piping layout that addresses the areas of optimum service to the total designated area, reliability of service, system temperatures and pressure requirements, thermal and hydraulic operability for normal and emergency conditions, optimum piping configuration to provide service, and flexibility for future expansion;

In order to properly evaluate applications, it is reasonable and necessary for the commissioner to require the completion of a comprehensive engineering design of the district heating project. A municipality must do significant preliminary work to arrive at a point where an intelligent decision to construct a district heating system can be made.

The piping layout of a project will have a significant effect on the capital costs, reliability, operating costs and the overall feasibility of a project. It is reasonable that the commissioner require applicants to furnish detailed information in this area.

B. an analysis of the proposed piping design that addresses the areas of reliability of service, ease of construction, ease of maintenance, installation methods, and specifications and standards; and

Likewise, piping design is important in regard to the capital costs, reliability and operating costs of a project. It is reasonable for the commissioner to require detailed information on piping design also.

C. an analysis of the heat source design that defines the proposed roles of the following heat sources in the development and the future operation of the system: base load heating plant,

peaking plants, large boiler plants in existing buildings, mobile boilers, accumulators, and future heat sources such as solid waste, solar, and industrial waste heat.

Additionally, the design of the heat source to be used in a district heating project is an important part of the engineering study. The development of a district heating system will usually proceed in stages and different heat sources will play different roles in each stage. It is reasonable for the commissioner to require an analysis of how each heat source will fit into the overall development.

6 MCAR S 2.4027 Market study.

The market study required by 6 MCAR S 2.4025 B. must show detailed information on present fuel consumption or heating demand and the present heating system in each building.

A thorough market study should contain such detailed information.

6 MCAR S 2.4028 Economic analysis.

The economic analysis required by 6 MCAR S 2.4025 D. must include a cost estimate and expenditure schedule for all transmission and distribution piping; heat source conversion, purchase, or rental; operating and maintenance costs, excluding fuel costs; and building heating conversion costs.

In order to complete a comprehensive economic analysis both an estimate of each items costs and a schedule of when expenses are expected to occur, are needed.

6 MCAR S 2.4029 Resolution in support of project.

The resolution required by 6 MCAR S 2.4024 C. must include the pledges the municipality proposes to make to guarantee

repayment of the construction loan and evidence of the municipality's financial capability to sponsor the project.

Under the act, the commissioner must determine eligibility for loans and under what terms loans will be given. Each municipality's financial capability and repayment guarantees are needed to make such determinations.

6 MCAR S 2.4030 Application procedures.

A. Submitting. Applications for construction loans under the act and 6 MCAR SS 2.4921-2.4034 must be submitted to the commissioner.

B. Effective date. The period for accepting applications begins on the date 6 MCAR SS. 2.4021-2.4034 become effective.

C. Copies. Ten complete copies of the application must be submitted to the commissioner.

This rule is needed to inform applicants to whom applications are to be submitted, when they will first be accepted and how many copies need be submitted.

6 MCAR S 2.4031 District heating advisory task force

A. Membership. Under Minnesota Statutes, section 15.014, the assistant commissioner of energy shall appoint a district heating advisory task force consisting of at least four members in addition to the assistant commissioner of energy who shall act as chairperson.

To provide for the fairest and most comprehensive evaluation of applications, an advisory group of district heating experts under the assistant commissioner of energy should be assembled.

Task force members must be knowledgeable in the area of district heating, but cannot be directly or indirectly involved in any district heating project under consideration by the commissioner.

It is reasonable to require that advisory group members be knowledgeable in this field and that they have no conflict of interest.

The assistant commissioner of energy may from time to time add or delete task force members, subject only to the limitations in A.

The assistant commissioner of energy is the most qualified to determine who will be able to provide the best advice at a particular time and may add or delete members subject to his own judgement.

B. Task force duties. The task force shall review each application for a loan under the act, and shall advise and assist the commissioner in carrying out the requirements of the act and 6 MCAR SS 2.4021-2.4034. The commissioner shall retain final responsibility for all statutory and rule requirements.

This section is needed to advise applicants that while the commissioner has final responsibility for evaluation, he will be receiving advice and assistance from experts in the district heating field.

6 MCAR S 2.4032 Feasibility assessment.

The commissioner shall review each application as received according to the following feasibility assessment parameters:

This rule identifies the official who is responsible for examining and rating applications and lists the standards by which they will be evaluated.

Requiring each application to be reviewed as received eliminates the confusion of late additions or deletions. It

also puts all applicants on an equal footing, because extraneous considerations which are not part of the application will not be considered.

A. the eligibility and priorities criteria of Minnesota Statutes, section 116J.36, subdivisions 3 and 4;

This section informs the prospective applicant that the act specifies certain standards by which application will be judged.

B. the debt service coverage represented by the business plan;

The debt service coverage is a good representation of a project's financial feasibility and indirectly the project's planning, design, and engineering. It is reasonable to evaluate an application on the planned debt service coverage.

C. the debt service coverage from revenues currently under contract;

This requirement will give a good indication of customer support for a project and will be needed by the commissioner to fully evaluate an application.

D. the total cost of the project;

Total cost, when compared to the scope of a project is an indicator of how well the project was planned, designed and engineered.

E. the ratio of the state loan under the act to the total cost of the project;

Those projects that are able to arrange much of their financing prior to their application for the state loan will likely be on a sounder financial basis.

F. the terms of the contracts with customers; and

Contract provisions that would protect the revenues of the project, such as take-or-pay, will be considered favorably.

G. the total number of customers for the project.

A large number of customers generally indicate more stable revenues, in that if one or two customers withdraw the effect is minimal.

6 MCAR S 2.4033 Evaluation of application.

Upon reviewing each application, the commissioner shall award points to applicants based upon the following criteria:

Using a point system reduces the chance of being arbitrary.

A. four points to applicants that have a debt service coverage of at least 130 based upon the revenues currently under contract;

The most points should be awarded to those projects that have a committed high ratio of revenues over expenditures.

B. four points to applicants that have take-or-pay contracts for at least the term of the state loan under the act; two points, if the contracts are for a term less than the term of the state loan under the act;

Points should be awarded to the degree that project revenues are protected by the take-or-pay contracts.

C. two points to applicants whose total project cost is less than \$5,000,000 or whose state loan under the act would be less than 50 percent of the project's total cost;

Those projects that are of low capital cost or who have arranged financing prior to their application would have points awarded.

D. two points to applicants that have 50 or more customers identified in the marketing study of their business plans, if these customers comprise at least 50 percent of the project's thermal load.

Because of the potential for more stable revenues of projects with large numbers of customers, more points should be awarded. The thermal load requirement protects in the situation where there are many small customers and a few very large customers.

6 MCAR S 2.4034 Recommendation.

A. Tallying points. The commissioner shall tally the points awarded to each applicant under 6 MCAR S 2.4033 and shall make recommendations based upon the standards set forth in B. and C.

This section informs applicants that the commissioner is responsible for calculating points and making recommendations.

B. Eight or more points. For applicants who have been awarded a total of eight or more points, the commissioner shall recommend that the revenues of the project be pledged for repayment of the state loan under the act. In addition, the state loan may take a position subordinate to other financing.

Those projects which have the qualifications that warrant the award if at least eight points, will likely be on a sound financial basis. The revenues of the project should be sufficient to assure repayment of the state loan. If the state loan could be made subordinate to other financing, then more favorable rates might be obtained, further enhancing the financial stability.

C. Seven or fewer points. For applicants who have been awarded a total of seven or fewer points, the commissioner shall recommend that the applicant pledge additional funds adequate to ensure the repayment of the state loan under the act. If additional funds are not available or the applicant chooses not to pledge them, then the applicant may pledge to levy an ad valorem tax of a similar amount.

Those projects whose qualifications warrant seven or less points are likely to be on a less secure financial basis. In order to assure the repayment of the state loan, the pledge of additional funds or taxes will be required.

Date 7th day February 1983

DEPARTMENT OF ENERGY, PLANNING AND DEVELOPMENT

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