

State of Minnesota
Department of Energy and Economic Development

DISTRICT HEATING PERMANENT
DESIGN AND CONSTRUCTION LOAN
RULES

STATEMENT OF NEED
AND REASONABLENESS

AUTHORITY RULES

INTRODUCTION

The 1981 Minnesota Legislature enacted the District Heating Bonding Act, Laws of 1981 chapter 334, codified Minn. Stat. sect. 116J.36, for the purpose of fostering the establishment and improvement of district heating systems. (Hereafter in this statement, the phrase "the statute" refers to Minn. Stat. 116J.36 as amended.) In February, 1983, the Department of Energy and Economic Development has developed these rules under the authority of Section 1, Subdivision 11 of the District Heating Bonding Act for the purpose of administering a program of loans to municipalities for district heating design and construction, Minnesota Rules, parts 4200.2100 to 4200.4100.

Legislation creating the Minnesota Energy and Economic Development Authority was passed in 1983, Laws of 1983 Chapter 289, codified Minn. Stat. 116M, and the statute was subsequently amended transferring approval of district heating loans to the Minnesota Energy and Economic Development Authority.

The objective of the District Heating Design and Construction Loan Programs 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.

To facilitate and solidify its commitment to the further development of district heating, the authority has proposed the adaption of a permanent set of rules through which to govern the district heating loan program. The department is also proposing amendments to its rules with respect to the district heating program.

This Statement of Need and Reasonableness describes the permanent rules proposed for operation of the district heating design and construction loan program and the manner in which the authority will provide loans to municipalities.

In explicating the proposed set of rules for the loan program, this Statement of Need and Reasonableness will state and underline each proposed rule and then follow with an explanation of the need and reasonableness of each rule.

4200.4500 DEFINITIONS

Subpart 1. Applicability. The definitions in Minnesota Statutes, section 116J.36 and part 8300.0100 and the definitions in this part apply to parts 4200.4500 to 4200.5000.

To allow for clear understanding of these rules, it is necessary to define frequently used terms which might not be understood by the reader or terms which appear in a shorthand manner. It is reasonable to have words mean the same thing in these rules as they do in the statutes. It

It would be an unnecessary duplication of statutory language to repeat all the definitions here. It is also reasonable to establish these definitions prior to the actual listing of the rules to alert the reader to such terms and to allow for a quick reference point.

Subp. 2. Construction loan. "Construction loan" means a loan to fund all construction costs as defined in Minnesota Statutes, Section 116J.36 subdivision 2.

This definition is needed to inform the reader of the type of activities that a construction loan may be used for and refers them to the statute which governs construction loans. This definition is reasonable to include here since construction loans are one of two types of loans governed by these rules.

Subp. 3. Design loan. "Design loan" means a loan made to fund those activities required to be completed during the final design phase of a district heating system in order to finance and construct the system. These activities include conducting economic feasibility analyses, obtaining heat source commitments and customer contracts, structuring financing, and related project tasks.

This definition is needed to inform the reader of the type of activities that a design loan may be used for and give several non-exclusive examples. This definition is reasonable to include here since design loans are one of two types of loans governed by these rules. This

definition is similar to the definition in the department rules Minnesota Rules, part 4200.2100, subpart 5.

Subp. 4. District heating project. "District heating project" means a district heating design or construction project for a new or existing system.

This term is needed since it defines the undertaking to develop a district heating system and this undertaking is what the design and construction loans will be used for. This definition is reasonable because it clearly separates a "district heating project" from a "project," which is defined in Minnesota Rules part 8300.0100. This definition is similar to the definitions in the department's rules Minnesota Rules, parts 4200.2100, subp. 7 and 4200.3000, subp. 11.

Subp. 5. Existing system. "Existing system" means a district heating system which has a minimum of one customer and has been operational for more than one year.

This definition is needed to clarify the difference between an existing system and new system (subp. 8). The contents of the application for each type of system is different. It is reasonable to clearly define "existing system" because it is a phrase which can mean something different to each reader.

Subp. 6. 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 district heating project.

This definition is needed to stipulate the qualifications of the preparer of the complete economic analysis of the project. It is reasonable because the decisions of the authority are based in part on the financial statements. These statements must therefore be prepared by an experienced person or firm. This definition is the same as the definition in the department's rules Minnesota Rules part 4200.3000, subp. 8.

Subp. 7. 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 district heating 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 Minnesota Statutes, Section 116J.36, 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 definition is needed to show what annual revenues will be considered in calculating the debt service coverage, and several non-exclusive examples of such revenues are given. It is reasonable for a reader to know what criteria will be used to calculate the debt service coverage. This definition is similar to the definition in the department's rules Minnesota Rules part 4200.3000, subp. 9.

Subp. 8. New system. "New system" means a district heating system which has a minimum of one customer and has been operational for less than one year.

This definition is needed to clarify the difference between a new system and an existing system (subp. 9). The contents of the application for each type of system are different. It is reasonable to clearly define "new system" because it is a phrase which can mean something different to each reader.

Subp. 9. Operating expenses. "Operating expenses" means the expenses directly and properly attributable to the operation of the project on an annual basis including: 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 district heating project, all to the extent properly and directly attributable to the operation of the district heating project. Operating expenses do not include any costs of expenses for new construction or any allowance for depreciation.

This definition is needed to show what annual 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. It is reasonable for a reader to know the criteria that will be used to calculate the debt service coverage. This definition is similar to the definition in the department's rules Minnesota Rules 4200.3000 subp. 10.

4200.4700 CONTENTS OF APPLICATION FOR A NEW SYSTEM

A completed application for a loan for a new system shall contain:
This part describes the contents of each loan application. It includes a complete description of the required contents of an application. The majority of the information required is needed to identify the applicant and contact individuals, and to describe in detail the preliminary work necessary before a district heating project is eligible for a loan. The information required in the application is similar to the information contained in the department's rules Minnesota Rules 4200.2100 to 4200.4200 which were adopted during the time the department administered the program. It is reasonable for the authority to adopt similar application content requirements.

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

It is reasonable to require this information so that the department will have a contact person for each application and because the authority must have a method of identifying each applicant and contacting responsible individuals in the event a question must be asked to clarify an issue prior to approval.

B. Complete engineering design of the district heating project including:

This is needed because a project must be thoroughly engineered before the application can be properly evaluated. Also, a municipality must do significant preliminary work to arrive at the point where a decision to design and build a district heating system can be made. It is reasonable to require such work be completed prior to loan approval.

(1)an analysis of the proposed piping layout which must address 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 necessary and reasonable for the commissioner to require the completion of a comprehensive engineering design of the district heating project.

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. Because the expansion potential of a project is used by the authority to determine project priority, it is necessary for information for future expansion to be included in the application. It is reasonable to require applicants to furnish detailed information about piping layout since this information will affect the feasibility of the project, and also the project's priority as determined by the authority.

- (2) an analysis of the proposed piping design which must address 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. Information concerning piping design is needed by the commissioner in order to properly evaluate applications.

- (3) an analysis of the heat source design which must define the proposed rules 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 preliminary engineering study. The heat source will absorb a majority of project funding. The heat source's dependability is essential for a system to be successful. Therefore, complete information concerning the heat source is necessary in order to evaluate the project's feasibility.

C. A market study of customers who represent 90 percent of the proposed thermal load of the district heating system. This study must show detailed information on present fuel consumption or heating demand and the present heating system in each building.

This information is necessary and reasonable because the heating demand must be sufficient to generate enough revenue to repay the loan.

D. A preliminary expansion plan showing how the system could be expanded to serve other parts of the community.

This is needed because it is a criteria which the authority will use to assign a higher priority to a project. This criteria is stated in Minnesota Statutes, Section 116J.36 Subd. 4.

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

E. A complete economic analysis which must include a preliminary financing and development plan for the district heating system prepared by a financial consultant, and also cash flow, income, and balance sheets for the time period of the loan. This analysis must also contain 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.

This is needed because a comprehensive economic analysis with detailed cost figures is vitally important to any financial analysis. This information is needed to evaluate the reasonableness of the cost of the project; it is necessary to know the costs of the system's component parts. Cash flow information is necessary in order to verify if the loan for the district heating project can be repaid on an annual basis, while still maintaining reserve and repair accounts.

F. For construction loans, 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.

This is needed because a construction bid package is an important step for construction and can ultimately have an effect on system quality and reliability. This is a reasonable request in the application because it may be necessary for the commissioner to examine the bid package in order to properly evaluate a proposal.

G. A copy of the standard contract entered into with customers of the project and 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 district heating project.

This is needed because the terms of the customer contract can have a significant effect on the financial viability of a system. The revenues of the project are based on the heat load. Therefore, customer commitment shows the district heating project's ability to produce revenues for loan repayment. It is reasonable to expect a legal commitment from customers at this point, if construction is to proceed, and therefore it is reasonable to include the commitment as part of the application.

H. Where applicable, a copy of any contract for the furnishing of heat and fuel for the district heating project.

This is needed since the contract terms for heat or fuel that a district heating system must comply with can have a major effect on operating costs. It is reasonable for the commissioner to have this information available when evaluating the financial stability of the project. This is especially true for solid waste and fiber fuels district heating projects. Contracts for the delivery of solid waste or fiber fuels is essential to guarantee that the project will have an adequate fuel supply to operate.

I. A resolution in support of the project from the governing body of the municipality which must include the pledges the municipality proposes to make to guarantee repayment of the loan and evidence of the municipality's capability to sponsor the district heating project.

Under Minnesota Statutes, Section 116J.36, Subd. 3 the authority must determine eligibility for loans and under what terms loans will be given. Therefore, each municipality's financial capability and repayment guarantees are needed to make such determinations. It is reasonable to expect a municipality to show evidence of financial capability before a loan is made to them and is also reasonable since the resolution indicates that the governing body is aware of the commitment it has undertaken for itself and the municipality.

J. 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.

This is necessary and reasonable in order to avoid project delay or interruption due to not having completed all required governmental regulations and permit processes.

K. A list of key personnel and their qualifications as they relate to the district heating project;

This is needed because the participation of qualified people is of vital importance to the success of district heating development. If district heating project personnel are not qualified, the system may not be designed properly. State funds would be in jeopardy because of inadequate system design.

L. An estimate of the type and amount of fuel to be saved per year from the full operation of the district heating system compared to the type and amount of fuel used by the existing system.

This is needed because two of the stated purposes of Minnesota Statutes, Section 116J.36, Subd. 1 are to increase energy efficiency and to reduce the need for imported energy supplies. This criteria is used by the authority to assign a higher priority to a project. It is reasonable to require energy information to determine if a project fulfills these purposes.

- M. A copy of a completed environmental impact statement, or a negative declaration of the need for an environmental impact statement from a completed environmental assessment worksheet, or in those cases where no environmental assessment worksheet is required, a statement as to the environmental effects of the project.

Minnesota Statutes, Section 116J.36, subd. 4 gives priority to environmentally benign projects, so this information is needed by the authority to assign a higher priority to a project. 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). It is reasonable to require a negative declaration with a waiver provision. In those cases where an EIS is needed or if no environmental regulations apply, then the municipality must present environmental information to the authority because under Minnesota Statute Ch. 116E and Section 116P.04 subdivision 4 any state agency must consider impact upon the environment. In all cases, environmental information is submitted to the authority. This becomes part of the application and is therefore considered in the evaluation.

4200.4800 CONTENTS OF APPLICATION FOR AN EXISTING SYSTEM

This part describes the contents of each loan application for applicants with an existing district heating system. It includes a complete description of the required contents of an application. The majority of the information required is needed to identify the applicant and contact individuals, and to describe in detail the preliminary work necessary before a district heating project is eligible for a loan. The information required in the application is similar to the information contained in the department's rules Minnesota Rules 4200.2100 to 4200.4200 which were adopted during the time the department administered the program. It is reasonable for the authority to adopt similar application content requirements.

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

It is reasonable to require this information so that the department will have a contact person for each application and because the authority must have a method of identifying each applicant and contacting responsible individuals is the event a question must be asked to clarify an issue prior to approval.

B. Background information on the existing system including ownership; type and size of heat source; heat source capacity; back-up boilers; customers base including information on process loads.

This is needed to allow for a thorough understanding of the existing system by the authority. The information required here is needed in order to more fully understand the district heating project. Since all this information should be readily available to the applicant, this is a reasonable request.

C. Complete engineering design of the expansion project including:

This is needed because an expansion project must be thoroughly engineered before an application can be properly evaluated. Also, a municipality must do significant preliminary work to arrive at the point where an decision to expand a district heating system can be made. It is reasonable to require such work be completed prior to a loan approval.

- (1) an analysis of the proposed piping layout; system temperatures and pressure requirements; and flexibility for future expansion; and

This information is needed because 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. Because the expansion potential of a project is used by the authority to determine project priority, as stated in Minnesota Statutes, Section 116J.36, Subd. 4, it is necessary for information concerning flexibility for future expansion to be included in the application. It is reasonable to require applicants to furnish detailed information about piping layout since this information will affect the feasibility of the project, and also the project's priority as determined by the authority.

- (2) an analysis of the heat source including the capacity available and information concerning the back-up heat source.

This is needed since the heat source is a vital part of the district heating system. It is reasonable to require an analysis of the primary and back-up heat

sources to be certain of their ability to handle the proposed expansion to the system. The heat source will also absorb a majority of project funding. The heat sources dependability is essential for a system to be successful. Therefore, complete information concerning the heat source is necessary in order to evaluate the project's feasibility.

D. A discussion of proposed customer load including information on present fuel consumption or heating demand and the present heating system in each building for new customers.

This information is necessary and reasonable because the heating demand must be sufficient to generate enough revenue to repay the loan.

E. A complete discussion of how the loan is to be secured, the current outstanding debt of the applicant and the cash flow for the term of the loan. This discussion must also contain 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.

Under Minnesota Statutes, Section 116J.36, Subd. 3 the authority 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. An estimate of each item's costs and a schedule of when expenses are expected to occur are also needed to make a sound economic analysis. It is necessary that the authority know how the entire project is to be financed in order to review it. A municipality's outstanding debt must be seen in order to verify if cash flow will allow for loan repayment. Therefore, it is reasonable to ask for this information.

F. For construction loans, 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.

This is needed because a construction bid package is an important step for construction and can ultimately have an effect on system quality and reliability. This is a reasonable request in the application because it may be necessary examine the bid package in order to properly evaluate a proposal.

G. A copy of the standard contract entered into with the customers of the project and a list of customers already under contract and the total load it represents.

This is needed because the terms of the customer contract can have a significant effect on the viability of a system. The revenues of the project are based on the heatload. Therefore, customer commitment shows the district heating project's ability to produce revenues for loan repayment. It is reasonable to expect a legal commitment from customers at this point, if construction is to proceed. Furthermore, a large number of customers generally indicate more stable revenues, in that if one or two customers withdraw, the effect is minimal. Therefore, it is reasonable to include the commitment as part of the application.

H. A copy of any contract for the furnishing of heat.

This is needed because the contract terms for the furnishing of heat which a district heating system must comply with can have a major effect on operating costs. It is reasonable for the authority to have this information available when evaluating the financial stability of the district heating project.

I. A copy of any contract for the furnishing of fuel for the district heating project if this is a waste-to-energy district heating project.

This is needed because the contract terms for the furnishing of the fuel, in a waste-to-energy project, can have a major effect on operating costs. It is reasonable for the authority to have this information available when evaluating the financial stability of the district heating project.

This is especially true for solid waste and fiber fuels district heating projects. Contracts for the delivery of solid waste or fiber fuels is essential to guarantee that the project will have an adequate fuel supply to operate.

J. A resolution in support of the project from the governing body of the municipality which must include the pledges the municipality proposes to make to guarantee repayment of the loan and evidence of the municipality's capability to sponsor the district heating project.

Under the Minnesota Statutes, Section 116J.36, subd. 3 the authority must determine eligibility for loans and under what terms loans are to be given. Therefore, a municipality's financial capability and repayment guarantees are needed before making a loan. It is reasonable to expect a municipality to show evidence of financial capability before a loan is made to them and also

reasonable since the resolution indicates that the governing body is aware of the commitment it has taken on for itself and the municipality.

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

This is necessary and reasonable in order to avoid project delay or interruption due to not having completed all required governmental regulations and permit processes.

4200.4900 APPLICATION PROCEDURE

This section is needed to inform applicants about the submitting process, the dates applications will first be accepted, and the number of copies which need to be submitted. It is reasonable to include this information in one section to provide a quick point of reference for applicants.

Subpart 1. Submitting. The applicant shall submit a complete application to the authority by the first business day of a month in order for the authority to consider it in that month. If an application is received after the first business day of the month and can be reviewed by the commissioner for eligibility and financial feasibility

prior to the authority agenda deadline, the commissioner shall submit the application to the authority for consideration and the authority may consider the application at the meeting in that month.

This information is needed because the applicant needs to be informed about the monthly deadline for submitting an application. Because of the necessary time needed to review each application, this deadline is reasonable. However, if a deadline is missed, the applicant is assured that, if time is available, the late application will be reviewed. This is a reasonable assurance to an applicant that efforts are being made to assist them in the loan approval process.

Subp. 2. Acceptance of applications. Applications will be accepted beginning on the date parts 4200.4500 to 4200.5000 become effective.

This is necessary and reasonable as it lets the applicants know when they may begin submitting applications.

Subp. 3. Number of copies. Ten copies of an application shall be submitted to the commissioner.

Because of the number of people who help to evaluate an application, it is necessary for an adequate number of copies to be available. Ten is a reasonable number since this will ensure each evaluator will have his or her own

copy, besides there being one file copy available.

4200.5000 AUTHORITY EVALUATION PROCEDURE

Applications approved for processing by the commissioner and those applications rejected by the commissioner but appealed to the authority under parts 4200.2750, subpart 7 and 4200.4300 subpart 7 must be presented to the authority for approval or disapproval under the criteria contained in this part. The authority shall review each application presented to it as it is received according to the eligibility and priority criteria of Minnesota Statutes, Section 116J.36; the sophistication and reasonableness of the technical approach as detailed in the application; the experience and qualifications of the applicant as they relate to the district heating project; the district heating project organization and personnel assignment; and the estimated cost of the district heating project. If the authority approves the application, the commissioner shall forward the application to the commissioner of finance who may make loans to the municipality. If the authority disapproves the application, the commissioner shall notify the applicant in writing.

This part is needed to clarify the procedure the authority will follow with each application it receives. It is reasonable to review the criteria used in making the final evaluation. It is also reasonable to inform the applicants that it is the commissioner of finance who makes the loans on the recommendation of the authority. It is also reasonable to inform, in writing, an applicant whose application has been rejected.