

MN

RECOMMISSIONING



STUDY PREAPPROVAL APPLICATION

Customer Information

Company name _____ Date submitted _____

Billing address _____ City _____ State _____ Zip _____

Building address (if different) _____ City _____ State _____ Zip _____

Contact person (print) _____ Phone _____ Fax _____

Contact signature _____ E-mail* _____ Building Sq. Ft. _____

**By providing your e-mail address, you are granting Xcel Energy permission to send further e-mails regarding our programs and services.*

Xcel Energy premise number: (Elec) (Natural gas)

Estimated completion date _____

Engineering Firm Information

Engineering Firm performing study (consulting firm) _____

Engineering Firm address _____ City _____ State _____ Zip _____

Principal Investigator performing study _____

If not professional engineer, please provide qualifications below and attach relevant experience:

Qualifications _____

Phone _____ Fax _____ E-mail* _____

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Xcel Energy Funding

Xcel Energy will provide a study rebate for studies to help customers identify and implement energy-saving opportunities. Xcel Energy will rebate up to 50 percent of the cost of the Study, not to exceed \$15,000. In order to receive a rebate, the study must be preapproved and a study rebate form must be submitted no later than three (3) months after study completion. To obtain Xcel Energy rebate approval for a study, a customer and the selected Engineering Firm should complete this form and attach a proposal addressed to the customer. (Please refer to "Proposal Requirements" section.)

Note: The Xcel Energy Funding Authorization section of the application must be signed prior to initiation of a Study to qualify for Xcel Energy study rebate. The Study is limited to the evaluation of a potential energy impact recommissioning project(s). The customer may expand the study scope to include other project-related work.

Energy Use Potential

Xcel Energy realizes that one of the principle outcomes of the Study will be an estimate of the energy use and savings obtained from a proposed project. However, Xcel Energy requires some preliminary information about the energy use potential prior to approval of the Study to be able to assess the value of the Study itself.

Existing peak electric/natural gas demand of equipment or process being studied _____ kW _____ MCF

Existing annual electricity/natural gas consumption of equipment or process being studied _____ kWh _____ MCF

Estimated Energy Impact Potential of the Proposed Project Scope

Electric Peak Demand _____ % Increase/Decrease Electricity Consumption _____ % Increase/Decrease

Natural Gas Peak Demand _____ % Increase/Decrease Natural Gas Consumption _____ % Increase/Decrease

Approximate payback of proposed project _____ years. This is an estimate only, please provide if available.

Proposal Requirements

The proposal should provide a brief description of energy impact measures that will be investigated. Please attach a building description and a brief 1-2 page proposal to customer that addresses the following items:

- What system(s) does the customer have now? • What are the feasible alternatives and/or study tasks?
- What are the customers concerns or issues?

Customer's Declaration

The information in this application is accurate and complete. I have read, understood and agree to the "Terms and Responsibilities" section of this application.

I, (Customer name) _____, agree to pay the full cost of the Study, after Xcel Energy has approved the final report, and is fully responsible for supervising and directing the Engineering Firm in the performance of the Study. We understand that if Xcel Energy does not approve the final report submitted by the engineering firm, that Xcel Energy will not provide the customer a study rebate.

Signature _____ Title _____ Date _____

Engineering Firm's Declaration

(Engineering Firm's name) _____ will produce a study according to the Study Workscope section of the application or as revised according to the attached amendments and has read, understood, and agreed to the "Terms and Responsibilities" section of this application. We also do not expect customer payment until Xcel Energy has approved the final report submitted by us. The cost for performing the Study will not exceed \$ _____

Signature _____ Title _____ Date _____

Name (please print) _____ Phone _____ Fax _____

E-Mail* _____

**By providing your e-mail address, you are granting Xcel Energy permission to send further e-mails regarding our programs and services.*

Xcel Energy Account Manager

Xcel Energy account manager (signature) _____ Date _____

Phone _____

Xcel Energy Study Rebate Authorization

Xcel Energy agrees to fund this project up to \$ _____. The customer is responsible for paying the balance of the Study cost.

Authorized by (product portfolio manager) _____ Date _____

Authorized by (technical consultant) _____ Date _____

Upon Study Completion

Once the Study is complete, the engineering firm should forward a draft of the Study to: **Xcel Energy, Marketing Approval, P.O. Box 1438, Minneapolis, MN 55401-1438**. Upon approval of the Study (meeting the "Terms and Responsibilities"), the engineering firm should send a final copy of the Study to the customer, along with the invoice, and to the Xcel Energy account manager. Once the study has been presented to the customer, the customer should fill out the study rebate form and submit to the above address within three (3) months.

Terms and Responsibilities

1. Study rebates available to Xcel Energy business customers in Minnesota.
2. Individuals with demonstrable experience, appropriate to the type of Study being performed must be responsible for conducting the Study. This person must be a Registered Professional Engineer (P.E.). Xcel Energy, at its discretion, may approve a non-P.E. to perform a study after reviewing their qualifications.
3. The Engineering firm performing this Study must do so with impartiality towards equipment suppliers, distributors, and all equipment or product brand names.

4. The Study must be performed according to the Study Workscope Section of this application.
5. Xcel Energy makes no warranties regarding the Study. All such warranties are between the Engineering Firm and the Customer. Rebate qualifications do not imply any representation or warranty of the Study by Xcel Energy.
6. Xcel Energy's decision relating to customer eligibility for the Study or other issues will be final and binding for all parties.
7. The Customer shall be responsible for directing the work of the consultant or the contractor; at no time shall the consultant or contractor be considered an agent, employee, or a contractor of Xcel Energy.
8. The Xcel Energy Funding Authorization section of this application must be signed prior to initiation of the Study.
9. The Study must be completed within three (3) months of the Xcel Energy Funding Authorization Date.
10. Xcel Energy reserves the right to conduct inspections of installation and/or make a reasonable number of follow-up visits to Customers' facility to verify savings estimates and/or measure implementation.
11. Xcel Energy reserves the right to accept or reject any application, Study, or portion thereof.

Study Workscope: Business Case Justification

Requirements: The purpose of the Study is to provide a customer with the necessary business case justification to implement the energy-saving opportunity.

A. Executive summary

The report will include a summary sheet briefly describing the purpose of the Study, existing conditions, and options considered.

B. Introduction

In addition, the report will contain an introduction section consisting of customer information and an Xcel Energy (Company) disclaimer.

C. Study summary

A Professional Engineer will fill out the summary spreadsheet (i.e. material and/or format provided by Company) of capital costs, incentives, energy reduction/increase in kilowatts, and reduction/increase in natural gas MCF, reduction/increase in district cooling energy use, reduction/increase in other fuels/utilities.

D. Project description

The following will be provided for retrofit opportunities:

- Description of existing equipment, including sketches, drawings, flow diagrams, photos as necessary to explain and describe the project; and
- Explanation of how the proposed project will modify the plant process or building.

The following will be provided for equipment upgrade situations:

- Description of the proposed energy alternative(s) and the comparable "standard" or "normal" alternative;
- Description of plant upgrade and how the different energy alternatives will affect operation and function;
- Description, sketches, drawings or flow diagrams as necessary to explain and describe the energy use relative to the "standard" alternatives.

E. Energy estimate

The following energy-use calculations and calculated estimates will be provided with regard to the project scope of work:

- A calculated estimate of annual electric energy use in kWh, monthly maximum demand in kW and/or natural gas MCF. This calculation will include an indication of when, during the day and year, the demand and energy consumption will occur.
- A calculated estimate of annual electricity/natural gas reductions/increases in use and cost, based on the rate Schedule most appropriate for the customer. Request rate information from the customer's Company account manager.
- Indication of how estimate data was derived (e.g., theoretical calculations, field measurements, manufacturer's data, etc.)
- An estimate of project life in years.

F. Measurement of energy

The Study will include a plan to verify the electric energy use (e.g., after the project is implemented how will the building owner or plant manager know that the project is using/reducing the energy estimated). Costs associated with verification must be identified.

G. Non-energy project impacts

- The Study will estimate other quantifiable benefits and costs to implement the potential energy project, such as impact on production or building function levels, operating and maintenance costs, and plant reliability. Positive and negative impacts will be considered.
- The Study also will provide an indication of project impacts that may be difficult to quantify, such as safety and environmental considerations and product quality.

H. Project costs/vendor quotations

Estimated and/or vendor quotations of the incremental project costs will be provided. This will involve a category breakdown of the major pieces of equipment to be installed, removed or replaced, subdivided into internal customer labor, external contractor labor, additional engineering, and equipment component costs. Also, any incremental operating and maintenance costs compared to the existing process or equipment operation should be identified.

I. Financial analysis

The Study will include a financial analysis according to criteria established by the customer (i.e. payback requirements, return on investment requirements). Xcel Energy's Summary Sheet, to be filled out with all studies, will calculate simple paybacks and applicable recommissioning rebates. This analysis takes into consideration all energy and non-energy project costs and benefits including applicable Company prescriptive rebate amounts. If the Customer has no preference, then Simple Payback should be used. The Engineering firm is responsible for calculating prescriptive rebate estimates.

J. Implementation

The Study is designed to provide Business Case justification and sufficient information to proceed with implementation.

K. If applicable, assess cost savings from improved building power factor ratchet charges and Company's Saver's Switch program and Electric Rate Savings program, including Time of Day and Peak-Controlled Tiers I and II.

Study Workscope: Program Requirements

The Study prepared by the engineering firm must contain the following when appropriate, in addition to A-K details.

Recommissioning studies are focused on low cost and/or short payback opportunities that optimize the operation of existing HVAC systems. Air test and balancing is not considered part of this program, although it may be a recommendation. Qualifying customers must indicate a willingness to support the recommissioning program using on-site staff, and must be willing to commit funding to support up-front diagnostic study costs, perform repairs, and modify control system strategies.

- Consider all existing buildings and their control systems including central heating/cooling strategies, and site maintenance activities/schedules.
- Develop a recommissioning plan that:
 - Provides a brief description of the mechanical systems, their operation/control strategies, and site maintenance activities/schedules.
 - Identifies and describes the role of the building operations staff during the diagnostic investigative phase.
 - Describes and documents recommended energy and cost saving strategies and energy savings (kW, kWh, MMBTU) based on standard engineering calculations and site measurement data.
 - The plan can include provisions to provide measurement and verification of energy savings through a combination of engineering calculations using spot check data and on-line monitoring and trending using the existing building energy management system and/or data loggers.
 - Document a plan for building operator awareness training aimed at sustaining optimum system operation by performing continuous system monitoring, assessment, and maintenance (e.g., maintenance activities and schedules, training).
 - Identifies any potential prescriptive or Custom Efficiency rebate opportunities that might facilitate system optimization.
 - Xcel Energy will not provide Study rebates for recommissioning an Energy Management System that has received an Xcel Energy rebate within the last five years.

Incentives

Additional incentives for implementing identified conservation measures will be determined by Xcel Energy upon completion of the study. The incentive amounts are based on Xcel Energy prescriptive, Custom Efficiency, and/or Recommissioning rebate programs.



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