



focus on energy[®]

Partnering with Wisconsin utilities

Focus on Energy's Biogas Feasibility Study Grants for Anaerobic Pretreatment and Anaerobic Digester Facilities

Customer and Study Provider Guidelines

For more information,
Call 800.762.7077 or visit focusonenergy.com

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I. Introduction

Focus on Energy (Focus) offers feasibility study grants designed to encourage end-users to undertake renewable energy projects for anaerobic pretreatment and anaerobic digester facilities. These grants assist Wisconsin businesses, farms, and other generators of anaerobically degradable waste or wastewater sources in overcoming financial barriers to make the study and the engineering of upgrades of existing biogas generating facilities or construction of new facilities possible.

Focus will not provide funding for studies that have already been initiated or implemented. Study grants will be awarded based on the level of need, type of technology, and most importantly, the resulting estimated annual renewable energy production. A description of the grant amounts and maximums is included below, although final grant amounts are subject to approval by Focus. Please note the important rules and qualifications listed at the end of this document.

II. Grant Benefits / Guidelines

Focus promotes a systems approach to renewable energy utilization, in which measures are applied to an energy-using system in order to benefit from any available source of biogas production.

Prior to initiating or commencing a study, contact a Focus energy advisor for details on terms and eligibility. The study may begin after an acceptable application has been received by Focus and written approval of the application from Focus is received by the customer. Customers will receive the study grant payment after completion and submission of a feasibility study report that is acceptable to Focus.

A feasibility study is defined as a study that provides the customer with a project description including all major components, and estimates of project cost and energy production and use, that allow the customer to make an informed decision on whether to proceed with design and implementation of a proposed project. Energy production values will be based on valid engineering estimating methods and accepted practices. When applicable, the study should provide preliminary design concepts, including schematics, process diagrams, control strategies, etc. "Walk through" surveys that do not include engineering estimates of renewable energy production or a detailed outline of project costs with design, materials, etc. broken out, or contractor cost proposals, alone, are examples of services which are not eligible for a feasibility study grant.

The Focus feasibility study grant for ***anaerobic pretreatment*** offers customers funding to study and analyze opportunities to segregate an existing or new high strength waste source and use anaerobic pretreatment rather than just continuing to use or increasing the size of a traditional aerobic treatment plant, or discharging the high strength waste to a municipal treatment facility with payment of a waste strength surcharge. The customer could then utilize biogas from the pretreatment system as a renewable energy source. The pretreatment study is eligible for 75% reimbursement of cost, up to a maximum grant of \$15,000.

The Focus feasibility study grant for ***anaerobic digesters*** offers customers funding to study and analyze opportunities to utilize biogas from an upgraded existing or new anaerobic digester system. The anaerobic digester study is eligible for 50% reimbursement of cost, up to a maximum grant of \$15,000.

This offering targets Wisconsin municipal and industrial wastewater treatment and pretreatment facilities that are not producing biogas to the full capability or design capacity of an existing

anaerobic digester system, or are not fully utilizing an existing biogas source to produce electricity or thermal energy. These facilities can often make some relatively low-cost operational changes and/or additions to their existing treatment facility or digester system to yield substantial increases in biogas production. These study grants also target companies or facilities with opportunities to install new cost-effective anaerobic pretreatment or digester systems.

These two study grant options concentrate on the feasibility of producing or increasing production and utilization of biogas to generate electricity or thermal energy, and to capture the waste heat from electricity generation as a source of renewable thermal energy.

Reports should include the following:

- A detailed analysis of historical utility billing information over at least the previous year, or longer time period as necessary to demonstrate representative normal and peak energy use trends and to define current baseline energy use.
- A plan for implementation of the recommended biogas utilization measures, including an explanation of how and where the biogas will be used.
- An analysis of the proposed biogas project with supporting calculations for estimated annual energy production and utilization (kWh, kW, and therms).
- Design specifications and current operating parameters for major equipment components of the digester system.
- Cost estimate for purchase and installation of measures suggested for implementation, including design services.
- Calculation of the simple payback for each of the proposed measures to be implemented.
- A methodology to verify and quantify the actual magnitude of renewable energy production.

Notes about engineering analysis:

- Calculations must be complete and easy to follow. The engineering analysis section must show the engineering fundamentals behind the analysis. The information provided in each analysis must be adequate for the review engineer to confidently concur with the energy production values. Results presented in spreadsheet format must include a description of the calculations and formulas used. A generic description may be used for a series of similar spreadsheets, as long as any significant deviation from standard procedures is described.
- Variables with units must be identified.
- All assumptions critical to the energy calculations must be clearly stated and justified.
- The fuel and electricity unit costs used in calculations must match the units under which the customer is billed. If unit costs are time-of-day dependent, the calculations must include on-peak and off-peak production and utilization. Electrical energy in kWh and demand savings in kW must be calculated separately. If kW demand savings are claimed, the calculations must demonstrate the extent to which the equipment in question contributes to the peak demand. Additional savings from a reduction in the 12-month "Customer Demand" (ratchet) charges must be justified with separate calculations.
- Any buy-back rates from the utility must be clearly stated.
- Weather data used in the calculations should be the "normal" values compiled over multiple years. Weather data supplied with modeling software must be generally accessible if the source of the data is provided. Energy use should be normalized for weather in the savings calculations.

- Note: Analyses based solely on manufacturer's claims may not be accepted until independently verified.
- If the process or equipment associated with the proposed feasibility study is for an upgrade or retrofit of an existing anaerobic digester system that is expected to result in a significant increase in the biogas generating capacity and output of the existing process or system, the study report must include:
 - (1) documentation of the baseline biogas and energy output of the existing system, supported by acceptable measurement data as determined by Focus; and
 - (2) calculations, assumptions, and other data supporting the estimated increase in the biogas and energy output attributable to the proposed improvements, with respect to the baseline output of the existing system.

Deliverables

- Cover Page, including:
 1. The words "Focus on Energy – Biogas Feasibility Study."
 2. The customer's name.
 3. The name and address of the facility evaluated in the report.
 4. Type of business or system being studied (anaerobic pretreatment system or concept, anaerobic digester system, food processing plant, pulp and paper mill, municipal wastewater treatment facility, etc.).
 5. The name and contact information of the consulting firm or engineer developing the study and report.
 6. The date of the report, and "draft" or "for review," when appropriate.
- Executive Summary, including:
 1. A description of the project and its major components.
 2. The projected annual kW, kWh, and/or therms production including annual dollar benefits associated with the project.
 3. A simple payback period based on the estimated cost of the installation and estimated utility buy-back if applicable and available.
- Feasibility Study, including:
 1. The recommended energy and/or anaerobic treatment/conditioning measures.
 2. Supporting information, such as:
 - a. Recommended Equipment
 - b. Estimated installation cost
 - c. Cost of design and engineering, including project management and new system commissioning
 3. A plan for implementation of the recommended biogas measures.
 4. Presentation of the feasibility study to all appropriate customer staff, and corrections or revisions to the study report upon request from the customer and/or Focus.

III. Feasibility Study Grant Amounts

The Focus feasibility study grant for ***anaerobic pretreatment*** covers up to 75% of the cost of the study, net any other funding the applicant may receive from other sources, up to a maximum grant amount of \$15,000 per study.

The Focus feasibility study grant for ***anaerobic digesters*** covers up to 50% of the cost of the study, net any other funding the applicant may receive from other sources, up to a maximum grant amount of \$15,000 per study.

Customers must apply for the feasibility study grant prior to study initiation and the proposed study is subject to approval and revision by Focus. Feasibility studies performed in phases are subject to the \$15,000 per study (for all phases) cap. A phased study on the same system will not be eligible for an incentive until all phases of the entire study are complete.

IV. Program Steps

To be eligible for a feasibility study grant, customers must be actively working with a Focus energy advisor or trade ally. The energy advisor will assist in identifying or reviewing potential projects in the customer's facility. When a project has been identified, but cannot be properly studied and assessed with the resources available to the customer, the customer may apply for a feasibility study grant. The feasibility study grant application must be reviewed and approved by Focus.

When the feasibility study grant application is approved, the customer may then perform the study and, upon completion, submit the study report to Focus.

Focus will evaluate the study report and will respond in writing to the customer with either acceptance or rejection of the report, within 10 business days after receipt. If the report is not accepted, the notification to the customer will include an explanation of the basis for the decision with a summary of specific deficiencies to be addressed to meet the criteria for study report acceptance.

Upon acceptance of the study report by Focus, a Project Completion Notice will be sent to the customer, who will sign and return the completion notice along with the invoice from the study provider, and any other required documentation. The incentive payment will be sent to the customer within six to eight weeks from receipt of the signed completion notice and all required documents. Focus reserves the right to inspect a site to verify reported information.

V. Application and Agreement

A customer may apply for a feasibility study grant by submitting an application to Focus. This is typically done with the assistance of their Focus energy advisor. The customer must attach a copy of the feasibility study proposal, with the proposed fee for the study and report, submitted by the firm or engineer who will conduct the study (generally, an engineering firm or consultant). Focus will use this information to establish the incentive amount available for the study.

The proposal must be five pages or less and include:

- Executive summary, no longer than one page including study type (pretreatment or anaerobic digester).
- Scope of work, including dates by which work will be completed.
- Listing of deliverables.
- Estimate of the study cost, showing an estimate of labor hours required for the study, the labor rates for those involved in the study (including overhead and profit), and the job titles for personnel to be utilized.
- Estimate of the potential energy savings or renewable energy production.

If Focus awards a feasibility study grant, the applicant must accept the grant within 60 calendar days of the approval notification date, otherwise the offer is null and void. If the applicant accepts the grant, they have 120 calendar days from the date of the grant acceptance to complete the study and submit the final report with a copy of invoices, unless an extension is requested and approved.

VI. Program Rules and Qualifications

- Feasibility study grants are available for significant retrofits or upgrades of existing anaerobic pretreatment and digester systems and for the evaluation of new pretreatment and digester systems. A feasibility study grant will cover up to 75 percent (for pretreatment systems) or 50% (for digester systems) of the invoiced cost of the study, net any other funding the applicant may receive from other sources, subject to a grant maximum of \$15,000. The grant must be applied for prior to commencement of the study, and is subject to approval and revision by Focus.
- You must agree to quality assurance site visits which may be made by Focus representatives to confirm facts and findings made in the study and to verify assumptions used in the engineering calculation process.
- Focus reserves the right to publicize your participation in the program, unless you specifically request otherwise by submitting a request in writing.
- You must be a customer of a participating electric or natural gas provider (see the Focus web site www.focusonenergy.com for a list of participating utilities).
- Incentive offers may be changed, revised, or discontinued at any time by Focus.

Disclaimer: The above statements are provided as overall guidelines and are not intended to cover all circumstances that may arise. Contact Focus on Energy at 800.762.7077 with any questions.