



INDUSTRIAL AND MUNICIPAL ANAEROBIC DIGESTER GRANT APPLICATION

OFFICE USE ONLY
PROJECT ID:

This grant application form is valid from July 1, 2010 to December 31, 2010.

SECTION 1: APPLICANT INFORMATION

Company/Municipality Legal Name		Tax Identification Number—complete only one (must be 9 digits) FEIN #: _____ - _____ - _____ OR SS #: _____ - _____ - _____	
Legal Mailing Address		City	State
			ZIP Code
Business Classification of Customer (Check ONE. Required for all businesses, including non-profits) <input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Sole Proprietor/Individual <input type="checkbox"/> LLC <input type="checkbox"/> Other: _____			Owner Name (Corporations Excluded)

SECTION 2: PAYMENT INFORMATION

Make Incentive Check Payable to: Company Business Owner's Legal Name (Only if Sole Proprietor) Market Provider

Mail check to: <input type="checkbox"/> Company Legal Address <input type="checkbox"/> Job Site Address <input type="checkbox"/> Alternate Address (complete below)			Attention to:
Alternate Pay Address		City	State
			ZIP Code

SECTION 3: SITE INFORMATION

Installation Site Address (physical location)		City	State
			ZIP Code
Project Contact Name	Project Contact Phone Number	Project Contact E-mail Address	
Electric Provider at Installation Site		Natural Gas Provider at Installation Site	

SECTION 4: DESIGNER/INSTALLER INFORMATION

Company/organization that designed and engineered the digester system		Contact Name	
Address		City	State
			ZIP Code
Phone Number	Fax Number	E-mail Address	
Name of installation contractor		Contact Name	
Address		City	State
			ZIP Code
Phone Number	Fax Number	E-mail Address	

SECTION 5: APPLICANT CERTIFICATION

I hereby certify that I have provided the information for or reviewed this proposal and the attached documentation, and that the information is reasonable and accurate.

Applicant's Signature	Date
Printed Name	Title

Keep a copy of this document for your files.

FORM SUBMITTAL: Return signed, completed form to:

Mail: Focus on Energy, Renewable Energy Incentives, 431 Charmany Drive, Madison, WI 53719

Email: Applications and invoices can be scanned and emailed to renewableapplications@focusonenergy.com

Fax: 608.237.2147 **Questions:** Call 800.762.7077

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SECTION 6: PROJECT DESCRIPTION

Briefly describe your proposed anaerobic treatment system

Type of digester (e.g. mixed, plug-flow, attached film, other)

Describe the renewable energy system you intend to install and the intended beneficial use of the biogas (attach additional sheets as needed)

Please attach a copy of the following additional information to the application:

- Feasibility study for the proposed project (including the biomethane potential and COD and/or VSS analysis for each proposed feedstock)
- Process flow diagram
- Site plan
- Manufacturers equipment descriptions
- System warranty information
- Proposed project construction timeline schedule
- Installation/Equipment bid from a dealer or installation contractor
- Detailed engineering calculations
- Utility Interconnection Agreement

Does building your project fulfill a regulatory compliance requirement? If yes then describe requirement and any deadline for compliance

Status of power purchase agreement (electrical systems only) or biogas sales agreement

Describe how you will operate and maintain the digester system when completed (O&M plan)

SECTION 7: PROJECT TIMELINE

Estimated date for hiring an installation contractor	Beginning Construction Date	Planned installation completion date
Scheduled Utility Upgrade Date	Anticipated Steady-State Production	

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SECTION 8: PROJECT COSTS

Provide a cost breakdown listing of the anaerobic digester energy system. Break out all major equipment. Liquid-solid separators, waste stream collection equipment, ponds/lagoons, buildings, legal fees, and roadwork are not considered part of the digester energy system.

System Component	Itemized Cost	System Component	Itemized Cost
pumps		engine-generator	
reception pit		engine heat exchanger system (including radiator)	
anaerobic digester tank(s)		engine-generator controls and switchgear	
digester tank mixer(s)		power transformer	
influent & effluent piping systems		waste heat exchange system	
digester controls		external biogas storage	
biogas cleanup (or gas separation) equipment		biogas recording meter	
gas flare		Other (describe)	
			TOTAL COST

Project Revenue Sources

Estimated annual revenue from electricity sales or savings (dollars/year)	Estimated annual revenue from biogas sales (dollars/year)
Estimated annual fuel savings for utilization of heat (dollars/year)	Estimated annual operation and maintenance cost (dollars/year)

Attach an installation/equipment estimate or bid from a manufacturer or installation contractor.

SECTION 9: PROJECT DETAILS

Information About the Facility

Type of production facility (e.g., cheese processing, ethanol plant, municipal wastewater treatment facility, etc.)

Number of years facility has been in operation:

Description of existing wastewater treatment facilities or how wastes are currently managed:

Average daily wastewater flow (gallons/day):

Minimum and maximum daily wastewater flows (gallons/day):

Total suspended solids concentration of feed stock (mg/l):

Volatile suspended solids (VSS) concentration of feedstock(mg/l):

Average carbonaceous biological oxygen demand (CBOD - 5 day) of wastewater (mg/l):

Average chemical oxygen demand (COD) of wastewater (mg/l):

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SECTION 9: PROJECT DETAILS (continued)

DIGESTER DESIGN ASSUMPTIONS:

Type of proposed anaerobic treatment system (single stage digestion, two stage digestion, UASB, attached film, complete mix, etc.):

General description of type of digester construction (eg: partially below grade, concrete tank, type of cover(floating, fixed or floating gas holder), etc.):

Type of mixing system for the anaerobic treatment system (mechanical , biogas recirculation, pumping, submersible , etc.):

Frequency of waste addition(e.g., once per day, twice per day, continuous, etc.):

Volume of anaerobic treatment system (gallons/cubic feet):

Dimensions of anaerobic treatment system (length, width, height, or diameter and height):

Types, location and thickness of insulation:

Type of biogas storage (sphere, floating gas holder, etc.) and volume available (cubic feet):

Anaerobic treatment process system heating requirements (therms/day):

Anaerobic treatment system heat losses (therms/day):

Hydraulic retention time (days):

Process operating temperature(degree F):

Will bio-solids from the anaerobic system meet USEPA Class A standards? (Yes or No)

Pretreatment before anaerobic treatment (none, gravity thickening, screened, DAFT, GBT, etc.):

Treatment of liquid effluent from anaerobic treatment process (aerobically treated, stored, recycled, land disposed, et.):

Treatment of waste bio-solids from treatment process (e.g. none, gravity belt thickened, belt pressed, centrifuged, etc.):

Describe method of bio-solids disposal

Estimated frequency of digester cleaning :

Daily volume of feedstock fed to anaerobic treatment system:

Average chemical oxygen demand (COD) or volatile suspended solids content of feedstock per gallon fed to treatment system (pounds/gallon):

Efficiency of treatment system at destroying COD or VSS(percent reduction):

Estimated biogas produced per pound of COD or VSS destroyed (cubic feet / lb COD or VSS destroyed):

Estimated methane content of biogas (percent):

Estimated BTU content of biogas (BTU/cubic foot):

Estimated annual biogas production (cubic feet / year):

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SECTION 9: PROJECT DETAILS (continued)

BIOGAS UTILIZATION:

Generation of electricity:

Type of generator (e.g. internal combustion engine or micro turbine):

Manufacturer and model number of generator:

Generator power output rating (kW):

Thermal to electric conversion efficiency of generator (percent):

Estimated capacity factor of generator system:

Will the generation system have stand-alone capability without the utility grid? Yes or No:

Type of biogas conditioning or treatment (e.g. none, condensate trap, siloxane removal, etc.):

Type of utility contract (e.g. sell all/buy all, surplus sale or net metering):

Type of electric power at site(single – phase or three – phase):

Engine-generator waste heat utilization:

Engine heat rate for cooling jacket (BTU/Hr)

Engine heat rate for exhaust stack (BTU/Hr)

How will the heat be utilized? (e.g. digester heating, water heating, building heat, etc.):

Heat exchanger efficiency (per cent):

Will all generated electric be utilized on-site: Yes or No

Will generated electric be continuous or utilized to reduce on-peak electric demand?

Boiler biogas utilization

Boiler efficiency

Type of boiler

Is boiler single fuel or dual fuel?

Rated input – Rated output

How will the generated heat be interfaced with the existing system heating system?

Biogas Sales

If biogas is sold, describe the methods of processing, transport and end use

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SECTION 10: FINANCIAL NEED

Describe why Focus on Energy funding is needed for this project. Provide details of why your proposed project cannot proceed with the financial resources available to you

Financial Information (include A or B below):

A. If this project requires financing in the form of a loan, please attach a letter from your lender that they will provide financing for this project.

Estimated date to obtain financing	Source of financing
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B. If this project does not require a loan, please attach a letter from your financial institution (bank, credit union, etc.) that indicates sufficient funds are available to complete this project.

Have you applied for or been awarded other grants for this project (government, utility, etc.)? If yes, please identify the grant, source of grant, the grant award amount and anticipated award schedule

SECTION 11: ELECTRICITY, BIOGAS FOR SALES AND/OR THERMAL ENERGY PRODUCTION

Estimated electricity production (kilowatt-hours/year)	Estimated biogas production for sales (therms/year)	Estimated utilized thermal energy (therms/year)
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What is the system capacity factor (for electric generation)? The capacity factor is the ratio of the total generation to the theoretical maximum generation (or installed capacity) if operated continuously, at the generator's maximum rating, for all hours in a period of time (e.g. year).

Capacity factor = (annual energy generated, kWh) / (generator rating, kW) x 8,760 hours

Parasitic Energy

Parasitic energy is the energy required to operate the system and includes the energy consumed by loads, such as pumps, fans, motors, etc., that are necessary to operate the digester energy system. Since the grant awards are based on net energy produced (gross energy produced – parasitic energy), there must be an accounting of significant parasitic energy. Complete the following table for any electric devices that must be used to operate the digester energy system:

Device	Device Power (kW or therms)	Estimated Annual Operation Hours	Parasitic Energy (kWh/yr or therm/yr)
TOTAL			

Show detailed engineering calculations of the electricity produced, biogas for sales and/or thermal energy utilized on additional attached sheets.

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