



# FARM 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 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](mailto:renewableapplications@focusonenergy.com)

**Fax:** 608.237.2147 **Questions:** Call 800.762.7077

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## SECTION 6: PROJECT DESCRIPTION

Briefly describe your farm operation including the number of years you have been farming

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

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Describe the renewable energy system you intend to install (attach additional sheets as needed)

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

- Feasibility study for the proposed project ( including the biomethane potential and COD 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

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

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

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## 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. Breakout all major equipment. Liquid-solid separators, manure 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		manure waste heat exchange system	
digester controls		external biogas storage	
biogas cleanup (or gas separation) equipment		biogas recording meter	
gas flare		Other (describe)	
			<b>TOTAL COST</b>

### 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 Farm Operation

Dairy Farm Operations	Other Livestock Operations
What is the breed (e.g. Holstein, Guernsey, etc.)?	Type (hog-farrow to finish, turkey-brooder, etc.)
What is the average milking herd size?	What is the average total herd size?
Will milkhouse sanitation and parlor rinse down water be fed into the digester or treated separately?	What is the average live weight at processing?
What is the average number of milking cows feeding the digester with manure?	What is the average number of adult livestock feeding the digester with manure (specify age class)?
What is the average number of dry cows feeding the digester with manure?	What is the average number of juvenile livestock feeding the digester with manure (specify age class)?
What is the average number of replacement heifers or feeder cattle feeding the digester with manure?	Other: (specify age class)
What type of bedding is used?	What type of bedding is used?

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**SECTION 9: PROJECT DETAILS continued**

**Information About the Feedstock Entering Digester**

**Type of Feedstock**

What is the manure type (solid, liquid, or effluent off screw press)?		Other: (If a composite of multiple waste, list specific wastes in composite- i.e. whey, paunch waste, DAF from meat processing, etc.)	
What is the total manure volume in gallons/day?		What is the total feedstock volume(s) gallons/day?	
What is the total solids concentration (%)?		What is the total solids concentration (%)?	
What is the volatile and fixed solids concentration (%)?		What is the volatile solids (VS) and fixed solids (FS) concentration?	
What is the chemical Oxygen Demand (COD) of manure (lb/gallon)?		What is the COD of feedstock (lb/gallon)	
What is the estimated COD destruction rate of manure (%)?		What is the estimated COD destruction rate of feedstock (%)?	
What is the estimated biogas produced per pound of COD destroyed (ft <sup>3</sup> /pound)?		What is the estimated biogas produced per pound of COD or VS destroyed?	

**Biogas Utilization**

**Generation of electricity:**

Is the system being designed to maximize peak electrical production?

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Will biogas be saved, stored, and utilized specifically for on-peak electrical generation?

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Type of engine-generator set (e.g. internal combustion engine or micro turbine, name of the manufacturer, model, power output rating (kW) for biogas and output voltage)

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What is the heat rate of engine generator (kWh/lower heating value of biogas in Btu)?

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Will the generation system have stand-alone capability without the utility grid? (please circle)    YES    NO

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How will the biogas be conditioned or treated? (e.g. none, condensate trap, dryer, biological or chemical hydrogen sulfide removal, etc.)

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

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

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**Engine-generator waste heat utilization:**

Will a manure to manure waste heat exchanger be utilized?

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Engine heat rate for cooling jacket (Btu/hr)

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Engine heat rate for exhaust stack (Btu/hr)

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

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If a boiler is used, provide the boiler manufacturer, model and heat rate (Btu/hr)

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If biogas is sold to a third party, 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 HP)	Estimated Annual Operation Hours	Parasitic Energy, kWh (Device Power, kW) x (Operational Hours, h)
<b>TOTAL</b>			

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

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