



The Clean Energy Fund Grants - Application

Please thoroughly read the call for applications prior to submitting your proposal. We will not consider incomplete applications. **In order to be reviewed by the committee, applicants must first submit their proposal to the campus area responsible for oversight in order to receive preliminary approval.** Applications receiving preliminary approval or questions regarding the application process should be e-mailed to the coordinator at cleanenergy@evergreen.edu before the deadline.

Project Title

Office of Sustainability - Organic Farm Greenhouse Bio-digester

Project Lead

Grant Gilmore

A NUMBER

PHONE

E-MAIL

Student, Staff or Faculty Group

Office of Sustainability

STUDENTS

Sophomore/Junior/Senior

FACULTY OR STAFF

Scott Morgan, Peter Robinson,
Melissa Barker

Faculty or Staff Sponsor

morgans@evergreen.edu

Campus Location

Various selected locations

Primary Affected Area

Organic Farm Greenhouse

Requested Budget

\$2,275.00 covers taxes and shipping

Academic Term

Spring/Summer 2013

Date

Submission date: May 3rd

Project completion: Summer 2013

Project Scope:

The Organic Farm bio-digester project is designed to be a temporary research vessel made to experiment with the control and management of farm waste bi-product. The intent of the bio digester is to produce methane gas, which is to be used as fuel for a small heating element located within the greenhouse. The intent of this unit is to experiment with various types of waste per volume specifications of the units design. Data recorded will allow student, faculty and staff within The Office of Sustainability, the Organic Farm, Facilities and RAD Services to experiment and witness the process of anaerobic digestion, practical application and scalability.

Timeline:

The Office of Sustainability would like to have all of the necessary components purchased by the end of the 2013 Spring Quarter. Assembly of the bio-digester will occur during the 2013 summer quarter. As soon as the unit has been assembled, waste can be added to ignite the process. Typical process times vary based on temperature. The unit could expect to start building useable gases within a 1-2 month period. Once anaerobic digestion begins its cycle, waste can be fed into the system daily to help meet the needed requirements to produce the methane gas needed to supply the heating element while keeping the bio digester active.

Metrics:

The outcome of having this temporary unit installed and operating within the greenhouse will allow The Evergreen State College to participate and better understand the potential use of anaerobic digestion outputs within a bio-digester. The data recorded will allow greater insight into waste streams and their ability to be processed into gas and fertilizer. Through calculations volume amounts consumed by such a unit can be scaled in model form to address larger waste streams. This unit can be used as a pre-cursor to the development of a larger system. This project marks the first step to answering questions about long-term use and maintenance.



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Other Participants

First and last name, Phone and E-mail

CEC Notes (for office use)

Areas affected by proposed project

Prior to a full review by the Clean Energy Committee, all grants must receive preliminary approval from the campus area to be responsible for the administration and oversight of the grant. Please refer to the call for applications for help identifying the area of best suited for oversight of your project. If you have further questions regarding areas affected by your project please contact the coordinator at cleanenergy@evergreen.edu. Be sure to allow yourself enough time to communicate with staff and faculty before the deadline. When preliminary approval is received, please have the affected area submit an e-mail of support for your proposal.

Affected Area – Non destructive campus wide studies		Approval Required	Approval Received
Faculty / Staff Sponsor	Scott Morgan	Always	YES
Associate Vice President for Academic Budget and Financial Planning			NA
Advising			NA
Athletics and Recreation			NA
Campus Land Use Committee			NA
Director of Facilities			NA
Director of Student Activities			NA
Environmental Health & Safety Officer			NA
Residential and Dining Services			NA
Science Operations Manager			YES
Tacoma			NA
Visual Arts Operations Manager			NA

Greener Categories (Please select all that apply):

	Research	Implementation	Education
Renewable Energy	YES	2013/2014 Academic Year	Environmental Science
Resource Conservation	YES	2013/2014 Academic Year	Environmental Science
Sustainability Strategies	YES	2013/2014 Academic Year	Environmental Science



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Sustainability (140 words or less)

The Office of Sustainability is continuing its focus on supporting students, faculty and staff at Evergreen who are pursuing sustainability measures and projects. This project captures several facets of sustainability by way of managing waste streams and converting waste into multiple byproducts used to provide fuel in the form of methane gas to be used for various natural gas applications and high grade liquid fertilizer which can be captured, contained and applied to various plant growing applications. The short-term vision allows this widely used practice to be implemented and documented for the first time on The Evergreen College Campus furthering the colleges commitment to the concept of "The Living laboratory".

Continuity (140 words or less)

The Office of Sustainability will work closely with the Organic Farm to ensure this project has the support it needs to document all project work. This includes build out, managing waste streams, recording data, writing progress reports and ensuring the recommended maintenance is performed. As with all projects directed through the Office of Sustainability in partnership, cloud management structures in the form of a public project wiki will be generated to help build transparency of all project documents. In addition full procedural elements will be captured to document build process, initial system ignition, feed procedures and waste management procedures and maintenance plans. The unit will be managed daily by staff, faculty and students located on the organic farm. Other departments will also have the opportunity to engage with the project to better understand where else such technology might be applied.