Clean Energy Grant Application

EVERGREEN

THE EVERGREEN STATE COLLEGE

Please read the grant application guidelines prior to submitting your proposal. We will not consider incomplete applications. Completed applications should be e-mailed to the coordinator at cleanenergy@evergreen.edu before the deadline. For questions regarding the application process, contact the coordinator.

Project Title	Stihl Li-ion Lawn Equipment Upgrade	
Project Lead	Name:	Jayme White & Scott Stavely
	E-mail:	
	Phone number:	
Student, Staff, Faculty, or Student Group: *(staff and faculty please name department)*	RAD Facilties	
Students only	Class standing:	Senior
	Faculty or Staff sponsor:	Mark Lacina
Campus Location	Lower Campus	
Date	4/24/2012	

Abstract	The replacement of the current gas powered equipment used by the Facilities Department with lithium ion battery powered equipment would significantly decrease the carbon footprint on campus. In addition to this emissions reduction, there would be a reduction in noise pollution and the cost and dependence on gasoline that accompanies the use of gas powered equipment. With the presence of multiple back up batteries, lithium ion powered equipment can adequately replace most gas powered grounds equipment.

CEC Vote: (for office use only)

Proposed Motion	

Moved:		**Second:**		
Yes:	**No:**	**Abstain:**	**Absent:**	**Recusal:**

Please respond to the following sections below. We ask that you present your proposal to the Clean Energy Committee to answer further questions about your project. If your project is funded we require you to publicize your work, and provide the committee with documentation, and a final report.
• If you require more space, please submit any additional documentation with your application.

Areas affected by proposed project: The committee reserves the right to have grant proposal reviewed by an authorized representative from affected areas prior to full review. Please refer to the grant guidelines to see if your project requires authorizations. Contact cleanenergy@evergreen.edu if you have any questions. Be sure to give yourself enough time to communicate with staff and faculty before the deadline. When you receive authorization, type the name of the representative below. Authorization will be verified.

Affected Area		Approval Required	Approval Received
Faculty / Staff Sponsor	Mark Lacina	Always	☐
Director of Facilities		☑	☐
Environmental Health & Safety Officer		☐	☐
Campus Land Use Committee		☐	☐
Academic Budget Dean		☐	☐
Student Activities Advisor		☐	☐
Science Operations Manager / Organic Farm Manager		☐	☐
Residential and Dining Services		☑	☐

Timeline
• Provide an estimated timeline listing the length of time from start to finish and detailing the length of time that each component will take.

1. Design	Complete	**4. Research / Construction**	Summer
2. Approval	Complete	**5. Present / Report**	1 week
3. Procurement	2 weeks	**6. Follow-up**	Next year

Detailed Project Description

Please include:

- Project goals
- Definition of sustainability and the relationship of the project to this definition
- Longevity and/or permanence of the project results on campus
- Location, including any concerns that may arise from the chosen site
- Previous experience directing projects of this nature
- If applicable, comparisons to similar projects at other campuses

Description	The goal of this project is to decrease emissions, noise pollution and gasoline dependence on lower campus. Additional benefits will include a decrease in the financial cost of gasoline use, repair and labor. Maintenance is also easier on lithium ion battery powered tools, which will reduce labor time and the need to have equipment maintained elsewhere. Sustainability is the idea that humans can continue to survive on this planet without harming the local or global ecosystem or humanity itself. Due to far less regulation of garden equipment engines, they emit high levels of carbon monoxide, volatile organic compounds and nitrogen oxides into the air, accounting for about 5% of the national air pollution, so, by replacing these with battery powered equipment, this project will reduce these emissions as well as the dependence on fossil fuels. This is the first step in the process of fully replacing gasoline garden equipment with battery powered alternatives on lower campus and is a long term solution to the use of high emission equipment. This equipment will be used throughout lower campus by the RAD Facilities staff. As the sustainability assistant, I have participated in the procurement of equipment for equipment for the Comparative Solar Hot Water System and the Compost Heat Exchange Project. I have also had management experience in the Service Industry, which has provided me with a multitude of skills that may be relevant.

Campus Connections (Please select all that apply):

	Research	Implementation	Education
Renewable Energy	☐	☐	☐
Resource Conservation	☐	☑	☐
Sustainability Strategies	☑	☑	☑

Impact on Campus Sustainability Goals:
Energy, Environmental, Social and Economic Impact

• How does your project align with the Climate Action Plan or the goal of zero waste and carbon neutrality by 2020?

• How is your project consistent with the mission of the Clean Energy Committee?

Impact on Campus Sustainability	This project will move lower campus closer to the 2020 carbon neutrality goal by greatly reducing its carbon footprint and dependence on fossil fuels. This project brings lower campus closer to a fossil free environment, thus conserving resources. Additionally, lithium ion batteries can be charged over 500 times maintaining over 80% of their charging capacity. Once the batteries have reached the end of their lives they can be recycled and over 95% of their materials can be recovered and reused.

Outreach and Education:

The Clean Energy Committee strives to fund projects that will be highly visible and have a positive impact in the lives of the Evergreen students responsible for the clean energy initiative. Approved proposals will be required to publicize their project in press releases and/or presentations, including mention of sponsorship by the Clean Energy Committee. It is also expected that you will present your work at the Synergy Conference, the Science Carnival, or another public presentation approved by the committee. With that focus, please address the following:

- visibility of the project to students and the greater evergreen community
- role that students will play in the project
- opportunities for involvement in classroom curriculum
- media outreach opportunities
- any additional information on methods the project will use to educate and engage students and the public about clean energy technologies and resource conservation.

Outreach and Education	These tools will be used throughout the residential area of lower campus as well as in the "F" parking lot. The decrease in noise will be especially noticeable by residents. The students will benefit from this project through this noise reduction as well as the reduction in fumes that come from gasoline powered equipment. We also intend to monitor the usage of these tools and determine how much gasoline is saved and what emissions reduction was achieved. This data will then be included on the RAD Sustainability Website. A poster reflecting this will be placed outside the MOD shop and within the HCC.

Budget and Fundraising

Please include:

• A detailed budget for the full project costs, including initial costs and life-cycle operation and maintenance costs.

• Detail both the specific budget items and the total funding amount being requested, and include support documentation.

• If the Clean Energy Committee does not fund the full requested amount, will the project be able to move forward?

• List any grants or other sources of funding that have been obtained or applied for. If these funds are limited to a certain component of the project, please specify

• NOTE: Preference will be given to those projects that seek additional funding from other sources. This priority is given to encourage cost sharing and to allow the funds available to support a greater number of sustainability projects on campus.

Budget	2 Battery Belts w/ Bag - $268.52 4 AL 300 Fast Chargers - $284.24 1 BGA 85 Stihl Blower - $236.96 1 MSA 160-C-BQ-12SNW Chain Saw - $276.46 1 HSA 65 Hedge Trimmer - $236.96 1FSA 85 Stihl Trimmer - $236.96 8 AP 160 batteries- $1.642.88 Battery belt and bags x 2 - $343.90 8.70% Tax - $276.93 Total - $3,459.91

Cost Summary Including Tax

Goods and Services	In house.
Equipment	3,459.91
Labor and Maintenance	In house.
TOTAL PROJECT COST ESTIMATE	3,459.91