



Room 2106 - 6133 University Blvd

Eco-Initiatives Form: Above \$500

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| Name: [REDACTED] |
| Date Submitted: November 13, 2015 |
| Contact Email or Phone: [REDACTED] |
| Club or Group Affiliation(s): UBC Enactus Club, Green Pursuit Project |
| Amount Requested: \$1000 |
| TREASURER USE ONLY: |
| Approved Modified Denied |
| Submitted as of: |
| Notes: |

1. Please fill in the fields below to give us an overview of your project:

- Name of Project:

Green Pursuit

- Objective or Purpose:

Green Pursuit is a project within the UBC Enactus club that aims to reduce the UBC community's carbon footprint through collaboration with a team of biochemical engineers to develop usable biodiesel from used cooking oil. The cooking oil will be collected from UBC Food Services and we plan to sell the biodiesel produced to the UBC Building Operations at a price lower than the market price.

The purpose of our project is to promote sustainability around campus by turning a kitchen waste product into environmental friendly biodiesel for the UBC fleet. This upcycling process will also help UBC to become more sustainable in its waste management and fuel consumption process.

- Brief Description:

Our main priority at the moment is to acquire a new biodiesel skid to replace the current machine and automate the production process. In order to sell biodiesel as vehicle fuel, the quality of our biodiesel needs to meet the standard for ASTM (American Society for Testing Materials) certification. Our current machine produces biodiesel with inconsistent quality, therefore, we need to replace it with a new machine that can produce biodiesel with consistent quality in order to acquire ASTM certification. The model that we plan to purchase, BioPro 190 EX (INCOSEP), is projected to produce 120 litres per month.

- Project Date(s):

An approximate timeline of our project is listed below:

| Project Task | Time Frame | Completion Date |
|--|-------------------|------------------------------|
| Ship and site the biodiesel skid at UBC | 6 weeks | Dec 14 th , 2015 |
| Install the biodiesel skid and conduct test-runs | 1 week | Dec 21 st , 2015 |
| Obtain letter of agreement from UBC Food Services to gain access to used cooking oil | 2 weeks | Jan 4 th , 2016 |
| Receive ASTM Certification on biodiesel | 2 weeks | Jan 13 th , 2016 |
| Obtain letter of agreement from UBC Building Operations to purchase biodiesel | 2 weeks | Feb 8 th , 2016 |
| Begin biodiesel production | - | - |
| Transport biodiesel to UBC Building Operations | 1 week | March 1 st , 2016 |

- Expected Attendance:

Not applicable for our project.

2. Outline how your project pertains to the environment and/or contributes to sustainability at UBC (approximately 200 words).

Our project aims to improve the environment mainly through the reduction of carbon dioxide emission from vehicles. A study done by the US Department of Energy shows that the use of biodiesel could reduce carbon emissions by an average of 78.5% and up to 87% if cooking oil is the feedstock compared to diesel (“Benefits of Biodiesel,” National Biodiesel Board, <http://www.biodiesel.org/>).

Moreover, our project promotes sustainability at UBC by taking used cooking oil, which is a kitchen waste product that would have ended up in the landfill, and transforming it into biodiesel that can be used to fuel the UBC Building Operations vehicles. This upcycling process reduces waste and greenhouse emissions, which contributes to the creation of a better UBC environment. Additionally, the required chemical reactant, methanol, is acquired through the on-campus solvent recycling program “UBC Chemical Exchange”. This will allow us to achieve long-term project sustainability at UBC.

Also, we are looking into a collaboration with the senior engineers at Metro Vancouver to use glycerin, which is the by-product of biodiesel production, as an alternative source for energy production. This potential collaboration can foster community involvement and further promote sustainability by transforming the by-product of our project into a valuable input material for another project.

3. How will you document the successes and challenges of your project? In what ways do you foresee this documentation aiding future environmental and sustainability initiatives (approximately 200 words)?

We will document the successes and difficulties of our project through internal project reports and periodic verbal updates with other departments of the UBC Enactus Club. These internal reports, as well as other documents such as list of contacts, meeting minutes, past funding application, and project timeline, will be stored in Google Drive for the next year’s Green Pursuit team, allowing them to make further improvements to this project. Our documentation method will serve as

¹Mondays 2-3 PM, Tuesdays 1-2 PM, and Wednesdays 4-5 PM

²Tuesdays 5-6 PM in Room 2102 of the AMS Student Nest

a valuable guideline for future Green Pursuit teams as well as other SEC Eco-Initiatives. Also, we plan to contact the university newspaper Ubysey for potential periodic reports on our project, which will provide the opportunity for other SEC Eco-Initiatives to learn through our experience.

In March and April, Enactus Canada will also host its Regional and National Exposition. During these two expositions, we will have the opportunity to share and present our project journey to Enactus Clubs from universities all over Canada. While these expositions are exclusive for Enactus members, other SEC Eco-Initiatives can host events of similar nature and improve communication with each other to encourage of the exchange of ideas.

4. For most funding requests of this amount, SEC would like to see other sources contributing to the financing of your project. Are you pursuing any other sources of funding? If so, what are those sources, how much are you expecting to receive from them, and what will those funds be put toward? (We can help you identify other sources of funding.)

Currently we have applied and received \$2500 funding from the 3M Canada Grant. We have also requested for \$10,000 from AMS SPF (Sustainable Project Fund), which is still pending at the moment.

The 3M Canada Grant will be covering additional costs such as the transportation costs and installation costs. The AMS SPF will contribute to the majority of machine cost, costs for additional components (pressurized water add on kit), and legislation fees such as acquiring ASTM certification for our biodiesel.

5. What aspect(s) of your project will SEC funding be used for? Be as specific as possible with the allocation of funds.

All funding from SEC will contribute to the purchase of [BioPro 190 EX \(INCOSEP\)](#) biodiesel skid, which is estimated to cost \$9995.

Signed (Your Name):



SEC Treasurer

Name:

Signature:

SEC Chair

Name:

Signature:

How to Submit the Funding Application

Completed forms can be emailed to sec.ubc@gmail.com (preferred) or dropped off at our office, Room 2106 of in the AMS Student Nest, during office hours¹. You are also welcome (but not required) to attend our weekly meetings² to present your project idea to our group, though we would appreciate an email informing us of this intent at least 48 hours ahead of time. The executive team and other active members of SEC would be happy to help you formulate your project as well as assist with its development and applications for funding.

If your funding application is approved, the Student Environment Centre will reimburse you for the specified purchases and expenses. You will then be referred to our Treasurer, whom you must provide with receipts and/or proof-of-purchases. Reimbursement usually takes about 5 business days. In the event that a student is unable to make the necessary purchase(s) to start their project, arrangements for advance funding can be made.

A Note about Eco-Initiatives Grants

Eco-Initiatives Grants can be used to fund a wide variety of projects: any projects related to the environment or sustainability, and involving members of the UBC student body, will be considered. However, funding requests for projects undertaken as part of coursework at UBC, or individual volunteer projects, must illustrate a connection to the wider student body. Should you have any questions regarding the Eco-Initiatives Funding, please contact feel free to get in touch with us using any of the aforementioned methods.

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