



Needs

- **UW** needs to reduce carbon footprint
- **Alternative Energy Industry** needs a workforce that is prepared for the field.
- **Students** need to prepare for jobs in high-growth sectors in an increasingly competitive environment

Solution

- **Build** – create non-profit student-run small-scale biodiesel production facility at UW.
- **Educate** – teach students the skills to be successful at an alternative energy company
- **Reach out** – work with area schools to inform and promote alternative energy ideas on campus and at area high schools
- **Cooperate** – build strong ties with stakeholders including UW organizations and local alternative energy companies
- **Innovate** – research solutions to lower cost and increase yield for Biodiesel production
- **Sustain** – develop a production model whereby UW users pay for cost-competitive biodiesel

Year One Implementation Plan

- Step 1.** Recruit 10 Dedicated Students by Mid-November.
- Step 2.** Design and specify a small-scale biodiesel plant by mid-January
- Step 3.** Build plant and begin plant operations by the end of March.
- Step 4.** Attain BQ-9000 industry Standards for biodiesel fuel quality by the end of May.
- Step 5.** Finish client negotiations and begin distribution for \$3.50 per gallon by mid-June
- Step 6.** Use revenue to continue plant operations and fund internal research and development.

Goals

- 1. By Year 5:** proven, self-sustaining model that has been replicated in other colleges in Washington state
- 2. By Year 3:** self-sustaining model operating at UW including summer internship opportunities for high schools and a research arm.
- 3. Year 1:** Begin producing and distributing quality-tested biodiesel.
- 4. Overall:** prepare students for jobs in alternative energy through hands-on experience and raise awareness about alternative energy

Progress & Traction

- Awarded \$3,000 in prototype funding through the Environmental Innovation Challenge.
- 8 dedicated undergraduates working in and outside of the lab.
- Guaranteed 3000 gallons of feedstock per year by Housing and Food Services.
- Made first batch of biodiesel!

Team & Partners

BC Management Team: Kristen Gooshaw (Chemical Engineering, Bioresources Science and Engineering and Chemistry Major) Grant Williamson (Chemical Engineering Major), Kathryn Cogert (Chemical Engineering Major), Shogo Okuda (Accounting Major)

BC Technical Team: Brandon Curtis (Bioresources Science and Engineering Major), Nick Wang (Chemical Engineering Major), Brian Parsons (Chemical Engineering Major), Rowdy Roddick (Bioresources Science and Engineering Major).

Biodiesel Cooperative Mentors, Stakeholders and Donors:

- UW Housing and Food Services (Biodiesel Provider)
- UW Environmental Health and Safety (Process Review)
- UW Biofuels and Bioproducts Lab (Mentorship)
- General Biodiesel (Mentorship)
- Pacific Biodiesel (Mentorship)
- Donors: Environmental Innovation Challenge