



Sustainable Action Fund Grant Program

LARGE GRANT - CONCEPTUAL APPLICATION

For applicants requesting \$5,000-\$300,000. Application instructions can be found in the Large Grant Application Toolkit located on our website www.edu/sustain/oroarams/saf/apply/Applications are due by May 26th, 2017.

Submit applications by delivering a hard copy AND emailing a scanned version (including signatures) to the SAF Grant Program Coordinator Johnathan Riopelle at Viking Commons Room 24. Email: John.Riopelle@wwu.edu

1. **PROJECT TITLE:** WWU Energy Efficiency Tool Lending Library

2. TEAM INFORMATION

Name	Department/School Students also provide major/minor	Position Faculty/staff/student. Students provide expected quarter/year of graduation	Phone Number	Email	W#
Project Advisor:	Joel Swisher	Director of Institute for Energy Studies	360-650-4424	Joel.Swisher@wwu.edu	
Project Advisor	Charlie Barnhart	Professor	360-650-4423	Charles.Barnhart@wwu.edu	
Project Co-Lead:	Aden Nevier	Graduate Student	206-948-0622	nevlera@wwu.edu	01017884
Project Co-Lead:	Patrick Shive	Undergraduate Student	360-969-1956	shivep@wwu.edu	01186340

3. PROJECT DETAILS

a. Describe your proposed project.

We are proposing the creation of a new energy tool lending library that would function as either an extension to current campus lending systems, such as ATUS, or as a separate service for students to take advantage of. This project would extend the tool lending library of the Smart Buildings Center in Seattle and would add new items to cater to the needs of students on campus. We would be providing a free place for students to borrow tools that would allow them to understand and take control of their energy usage. The space needed wouldn't be very large, around 250-300 sq. ft. There are a couple possible locations, from rearranging graduate TA spaces, the facilities management plant, or the warehouse by BT, all of which we would like to research further to see what fits best.

b. Describe the purpose of your proposal.

The purpose of this center is to educate and assist students and the public in adopting efficient and sustainable technologies. Bellingham has a large renting population of which students comprise a substantial proportion, by helping them find and use better technology and practices we can save people money on their utility bills and make Bellingham more environmentally sustainable at the same time. Education and communication are some of the biggest barriers to positive efficient change and this project hopes to attack the problem directly by connecting experts with the people most in need of assistance. Students with a passion in energy, or even just a curiosity, can find key instruments like watt meters, data loggers, infrared cameras, and other tools which allow them to properly

assess their own energy impact, control their environment, and build skills with sophisticated work equipment. This gives professors and campus staff a place to teach and train students, and at the same time provides them with equipment to use in the classroom as well as work that they previously would not have had.

c. Provide a rough budget estimate. An estimated range is acceptable here. Provide the source documentation of how you came up with this estimate.

The budget for upfront and operating costs will be upwards of \$10,000 depending on the list of tools matching project criteria, including the costs to staff the library for at least a year for about \$4,500-\$5,000, and a promotional budget of around \$1,000. We are looking for equipment that is practical in an actual housing situation, understandable / trainable for students, and inexpensive enough to be procured. We found this estimate by working alongside the professionals at the Smart Buildings Center and referencing the list of tools and prices they have on stock. By consulting with local professionals in the Western Facilities and Maintenance Department as well as city professionals from the Bellingham Building Performance Center we have been able to identify a short list of starting tools a library like this might provide within acceptable budget constraints.

d. How does your proposal align with the Sustainable Action Fund Grant Program mission?

The goal of the Energy Efficiency Tool Library is to allow students to access resources to evaluate their residential energy efficiency and usage. Many of Western's students reside in local rental housing, and with proper know-how and resources, can make a large dent in their utility bills. Many of Bellingham's housing is older, or inefficient in general, and via a couple of inexpensive energy saving measures, students can take control of their utility bills and see savings of 35% or more. By taking advantage of the tool lending library, students can not only save themselves money, but also make a positive impact in regards to local energy efficiency goals, as well as leading a more sustainable life. Both students and staff can benefit from utilizing the tools, professors from a wide range of departments such as Environmental Studies/Science, Economics, Engineering, and Energy, can all make use of the tools to supplement their courses and provide a hands-on learning experience for students. There are about 150 students perusing an energy related major or minor, and that number doubles when you include energy concentrations from other colleges. Of the large pool of students enrolled in energy courses or other related classes, and we can foresee a large percentage, around 15%, of the student base making use of the tool lending library's services.

e. Does your project tie into any broader campus sustainability goals or initiatives? If yes, please describe how.

With the creation of the Institute for Energy Studies, this center helps give the new wave of energy students and faculty at Western a place to work and explore innovative ideas. At Western, there are over 100 students in the Energy Policy and Management Major, Energy Science self-design Major, Energy Concentration in Electrical Engineering, and Energy Policy/Science minors. In addition to this Western has seven dedicated Energy teaching faculty. The Economics department, with the Idea Institute and the Business and Sustainability major, Huxley, the Engineering department, and the History department all have interactions with energy classes, faculty and students. Western has committed to carbon neutrality by 2035 and is in the final stages of creating its Sustainable Action Plan on campus, this project gets students educated, involved and on the path to meeting the commitments Western has outlined. By reducing utilities bills and by giving students hands on experience with professional tools we make Western a much more attractive choice for prospective students that otherwise might look elsewhere for schooling.

4. CASESTUDIES

Project home institution, title, and start date	Purpose of project, size and scope of project, players and stakeholders involved, how the project is progressing now & results.
<i>Building Performance Center</i>	Owned and operated by the Opportunity Council and provides expert assistance for low-income home weatherization assistance. Since 1997 they have successfully helped residents improve home operation with quality work while maximizing energy efficiency. Every year western students tour the facility for energy classes and get a brief experience of how their coursework impacts the larger community of Bellingham.
<i>Northwest Energy Efficiency Council, Smart Buildings Center</i>	The project is a "multifunctional energy efficiency headquarters" serving Seattle residents and businesses. It is approximately 5,000sqft. And houses a tool lending library, data visualization spaces/exhibits, and two large conference rooms for classroom lectures, trainings, demos, events, presentations and other activates. The center officially started operation in November of 2015. The center lends around 20 different tools each week to organizations or experts in the King County area and tracks their inventory with an online loan management system.
(ATUS)	Potential for a shared lending system on WWU Campus.

5. PROJECT TEAM, PARTNERS AND STAKEHOLDERS

Name	Relevant experience or knowledge for this project. Also detail the roles and responsibilities of each project partner.
<i>Project Advisor:</i>	Joel Swisher: 40 years in the clean energy field, director of WWU Institute for Energy Studies, former managing director of Rocky Mountain Institute
<i>Project Co-Lead:</i>	Aden Nevier: Graduate student interested in bringing the concept to campus to better equip students who want to tackle their personal energy challenge.
<i>Project Co-Lead:</i>	Patrick Shive: As a medium between the City, WWU and students 1 will help coordinate communication, provide data for decisions, and assist in outreach for the project.

b. List the stakeholders and project owners that your project will need to work with if your team is approved to write a final application.

Stakeholder/Project Owner	Describe how each listed stakeholder/project owner will be impacted by or involved in this project. Will their permission be required for your project to move forward?
<i>The Office of Sustainability</i>	Permission will be required, and assistance will be too needed integrate this into their larger programs and educational efforts (funding).
<i>The Institute for Energy Studies</i>	Energy students can help manage the library, and assist non-energy fluent students. Faculty can assist students to provide additional educational resources, both inside and outside the classroom.
<i>Facilities/Maintenance WWU</i>	Assistance with training students and others to use the tools, as well as possibly housing some equipment. Permission required.
<i>ATUS</i>	Additional student focused borrowing system on campus, we hope to integrate our system with their exiting one. Permission required.



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Applicant Team/Advisor Partnership Agreement

An Applicant Team / Advisor partnership is a relationship of substance between the project applicant(s) and a faculty or staff advisor involving shared responsibilities and mentoring in undertaking the project funded by the SAF Grant Program. To ensure that the project runs smoothly and achieves its objectives, the SAF Committee requires project applicants and the faculty/staff advisor to demonstrate their commitment to the project by acknowledging the principles of good partnership practice set out below and identifying the nature and role of the partners.

Principles of Good Partnership Practice

1. Project partners must have read the Rules of Operation for the SAF Program (found on this webpage: <https://sustain.wvu.edu/saf/> under the tab, "guiding documents"), reviewed the Large Grant Application Toolkit, and understand what their role in the project will be before signing the partnership statement.
2. The project lead must consult with the partners regularly and keep them fully informed of the progress of the project.
3. Substantial changes to the project should be agreed upon by the partners before being submitted to the SAF Committee. Where no such agreement can be reached, the applicant must indicate this when submitting changes for approval.
4. The partners authorize the project lead to sign the proposal application and represent them in all dealings concerning the project's development, review, and implementation.
5. Project partners must have read the project proposal before signing the completed application.
6. All partners must receive copies of any report submitted to the SAF Committee.
7. All project partners agree to be present during the team's presentation to the SAF Committee in case input is needed or requested.
8. If the grant is awarded, partners shall take part in the development, implementation and review of the project under clearly identified roles and responsibilities.

We will comply with the principles of good partnership practice during the development, implementation, and review of this project.

Project Lead Name

Project Lead Signature Date

Team Member Name

Team Member Signature Date

Team Member Name

Team Member Signature Date

Team Member Name

Team Member Signature Date

Faculty /Staff Advisor Name

Faculty/Staff Advisor Signature Date

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Once your conceptual project proposal is complete, you must print and submit a final copy with hand-written signatures.

PROJECT TITLE:

Project Lead Name (print): _____

Project Lead's Signature: _____ Date: _____

By signing this document you agree that all information is true to the best of your knowledge. You also agree that this information may be shared with the public and members of the Sustainable Action Fund Committee.

Staff/Faculty Advisor's Name (print): _____

Staff/Faculty Advisor's Signature: _____ Date: _____

By signing this document you agree that all information is true to the best of your knowledge.

Comments:

After completing the final draft of your Conceptual Application proposal, please set an appointment with the Sustainable Action Fund Grant Program Coordinator to have your proposal reviewed and signed.

Sustainable Action Fund Grant Program Coordinator, Johnathan Riopelle

Viking Commons, Room 24

Available by appointment

Email: [John.Riopelle\(5\)@wwu.edu](mailto:John.Riopelle(5)@wwu.edu)

Phone: (360)650-4501

Signature: _____ Date: _____

This signature does NOT indicate that you have received funding, but it does verify that you have fulfilled all the requirements and have successfully submitted a completed Project Proposal by the deadline.

Comments: