



HENDRIX COLLEGE Campus Sustainability Fund Committee

Claire Fleming, Chair

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Project Application

The Hendrix College Campus Sustainability Fund Committee is charged with allocating funding to sustainable and environmental projects proposed by members of the Hendrix community that benefit the campus. Applications are required to abide by CSFC policies and procedures found on Hendrix.edu/CSFC. There is no minimum or maximum funding amount for projects nor an expected duration or scope. The applicant and his or her project team commit to working with the CSFC in order to ensure that the project is completed as well as providing at least one status update about ongoing projects each semester.

All projects are reviewed on a rolling basis during the academic year and are due two weeks before a given CSFC meeting. Project Applications associated with Odyssey Funding Requests are due on Odyssey deadlines. This document (in .doc format) must be submitted in a single e-mail along with any attachments with “CSFC Project Application” and your name as the subject and document file to CSFC@Hendrix.edu.

Part 1: Executive Summary

Project Title: **Front Street Eco House Solar Panel Installation**

Application Date: **March 2, 2020**

Total Funding Requested:

Primary Applicant Name: **Claire Fleming**

Complete All That Apply:

Student-Class and Major(s): **class of 2020 Innovation & Entrepreneurship**

Faculty-Department and Position:

Staff-Department and Position:

Alumni-Class and Major(s):

Community Member-Relationship to the College:

Hendrix ID: **563085**

Campus Mailbox (or address): **3351**

E-Mail: **flemingcc@hendrix.edu**

Phone: **231.330.8399**

Electronic Signature: Claire E. Fleming

Project Advisor (faculty or staff member, required for student applicants): **Dean Wiltgen**

Part 2: Abstract

Installation of solar panels at a new Eco House location on Front Street to revitalize the Hendrix Eco Community and take tangible action towards increasing sustainable energy sourcing. Solar Panels will serve as a sustainability education and promotion tool to create a model community of sustainability-committed individuals. Resident students living under the solar panels will easily observe energy efficiency metrics, enjoy cost savings that result from sustainable energy sourcing, and have a visible and resource-rich community to support collaborative sustainability effort.

Part 3: Project Plan

1. Project Description

Rationale:

We propose the installation of solar panels as the simultaneous progression of two visions: 1) to forward facilities, student, and staff interest to integrate tangible traction towards sustainable energy sourcing at Hendrix and 2) to provide a manageable and uniting object of environmental responsibility to directly mold and inspire a new Eco House community at Hendrix.

Amongst staff and students, moral towards eco-engagement on the Hendrix College campus is at an all-time low, even amidst an overall increased awareness for environmental sustainability. Since the Hendrix Eco House was torn down in 2015, Hendrix students have retained their interest in Environmental Sustainability through academic and political advocacy outlets but have struggled to implement organized sustainability efforts on the Hendrix Campus. Meanwhile, the Campus Sustainability Fund is accumulating funds that the student body lacks awareness and availability to access.

With the support of Facilities and the Dean’s office, a new Eco House community is scheduled to open at two apartments on Front Street in the fall semester of 2020. The location of this house was chosen primarily upon the basis of solar accessibility and easy energy usage comparison between practically identical units. The roof and accessible surrounding lawn space of the location has been assessed by Koontz electric and is approved to have sufficient sun exposure, space for energy storage battery, and infrastructure that easily allows for energy meter tracking by individual apartment.

The first and foremost intention of this project is to provide forward traction for sustainable energy provision on the Hendrix Campus, but the secondary intention of providing a tangible base for a new Hendrix Eco House Community has the potential to revitalize the actions of environmental stewardship at Hendrix.

Goals:

To forward the vision of integrating traction towards sustainable energy sourcing at Hendrix, this project provides many tangible metrics that will allow this installation to act as a case-specific test to provide justification for further solar expansion on the Hendrix campus. The installation of these specific panels provides a unique opportunity for facilities, students and administration alike to learn about the integration of solar for energy consumption.

Koontz electric provides an easy option for tracking energy metrics that will be accessible both within the apartment and on the Hendrix website. Students will be able to track

<p>their energy use relative over time and in comparison, to apartments with identical utilities. For the college, this data will be useful to provide measured comparisons between traditional energy-sourced apartments and the solar energy-sourced ones. The benchmark for this goal is to translate these measurements directly into cost savings for the college and potentially for the students themselves.</p>
<p>Ultimately data gathered through this project will be accessible to administration, Eco House and CSFC for future sustainable energy-related decision making.</p>
<p>Secondarily, completely outfitting two apartments with solar panels will provide a shared point of pride and purpose to a brand-new establishment of the Hendrix Eco House community. For most students, living with utilities completely provided by sustainable sources is foreign and intimidating. This installation provides an opportunity for students to gain comfort and confidence in talking about their energy consumption and unique lifestyle, both on the Hendrix campus and beyond. Similarly, Facilities at Hendrix has expressed that this installation would allow their team to gain familiarity in the maintenance and integration of solar energy on campus.</p>
<p>The visible and active provision of solar energy will allow students to see CSFC funds at work and provide a unique sense of identity to a community that has not quite gotten its feet off the ground. The opportunity to install these solar panels in-line with the Eco House revitalization time frame is a unique chance to maximize the benefits of novelty for environmental sustainability promotion at Hendrix. The installation has the potential to be used for Facilities, ECC, Eco House, CSFC, Marketing, and New Student Admissions promotional content.</p>
<p>The secondary goal of the solar panel installation is to provide a central grounding point for a concentrated community of sustainability activists on the Hendrix Campus.</p>
<p>Implementation:</p>
<p>Facilities, the Dean of Students, and Chair of CSFC have contemplated many solar installation service options and have made considerations due to maintenance availability and costs of both installation to work with Koontz Electric to install the solar panels before the fall of 2020. Panels may be installed as soon as the spring semester of 2020 based upon funding approval and resident permission. Koontz has estimated an installation time of less than a week.</p>
<p>To manage energy usage, a group of up to six Eco House members will be selected and required to maintain communication with the CSFC. Students will be financially incentivized to live more densely (three students to an apartment) in the Eco-House and required to do one project a semester, that will likely include grant applications to the CSFC.</p>

2. Partners

<p>The primary stakeholders include Sharron Russell and Nate Cowell of Facilities Management at Hendrix; Dean Wiltgen at the Dean’s office; Claire Fleming, student and CSFC chair, Koontz Electric, and have gathered support from Hali Wilder and the ECC. Student interest has been expressed towards living in the new Hendrix Eco House which will provide a new set of additional partners.</p>

Have you applied for	Yes	No
Odyssey Credit		X
Odyssey Funding		X
Internship/Course Credit		X
Other Funding (list sources)		X

3. Outcomes

Total Funding Requested (\$)	\$30,000
Students Affected (#)	Six students in Eco House during 30 year lifespan of solar panels: 180
List expenses needed to maintain the project (e.g. labor costs):	Cleaning and Maintenance: \$180-\$300 per semester (may be eliminated via student or facilities training)
Estimate the number of years before the project will have to be replaced (lifespan):	30

4. Vision

This solar panel installation paves by example what financial and social benefits sustainable energy can provide for Hendrix college. Students will be able to engage and see an example of sustainable energy that will provide a practical education beyond the classroom.

5. Timeline and Milestones

Installation will occur as soon as timing is cleared with housing (potentially in spring semester 2020) and at the latest will occur by the start of fall semester 2020. Residents will be required to present present energy use data on the Hendrix website and maintain records of energy use which will be accessible to Facilities at Hendrix during all periods of occupancy.

6. Project Lifespan

Eco House will be required to pay attention to the metric portion of the installation, including managing data on the Hendrix website and informing facilities and CSFC of issues related to the panels. The elected leader of the Eco House will be responsible for directing courses of action related to issues, hiring contractors to conduct maintenance will be an option that lies in open correspondence with the CSFC. Further arrangements between Eco House and CSFC will be made in a meeting at the end of the spring 2020 semester when Eco House students are selected.

7. Reporting

The successful installation of the panels with the provision of electricity to the two apartments will be reported to CSFC by Dean Wiltgen and Eco House representatives.

8. Budget

Rough Budget given by Koontz Electricity:

\$31,200 for a 12KW System sized to offset total annual usage of two apartments (\$2.60/watt)

\$17,900 for a 6KW System sized to offset total annual usage of one apartment (2.98/watt)

Koontz Electric would donate overhead and profit, \$4,300/\$2,500

A for profit owner could take 21% tax credit.

\$26,900/12KW

\$15,400/6KW

With those estimates, we request a total of \$30,000 to fund solar panels for both apartments and leave room for unexpected expenses. All unutilized expenses will be returned to CSFC within the fiscal year and maintenance funding will be separately requested.