

Student Green Energy Fund Proposal Application Form

Section 1: Summary Information

| Project Title: | ETS Phase II Solar Panel Installation & Golf Cart |
|-------------------------------------|---|
| | Charging Outlet Placement |
| Duration (months): | 2 |
| Total Budget (\$): | \$21,000 |
| Requested SGEF Funds (\$): | \$21,000 |
| Matching Funds (\$): | \$0 |
| Proposed Starting Date: | September 22, 2015 |
| PI Graduation Date (if applicable): | 2016 |

Section 2: Applicant Information

| | Full Name | Unit/ | Phone | Email |
|----------------|------------------|-------------|--------------|---------------------|
| | | Department | | |
| Principal | John Pilz | College of | 727-452-0603 | johnpilz@mail.usf.e |
| Investigator | | Arts & | | du |
| | | Sciences | | |
| Investigator 1 | Elias Stefanakos | College of | 813-974-4413 | estefana@usf.edu |
| | | Engineering | | |
| Investigator 2 | Roger Stern | College of | 813-817-9231 | rogerstern@mail.us |
| | | Arts & | | f.edu |
| | | Sciences | | |
| Investigator 3 | Emma Lopez | College of | 786-379-1071 | Emmalopez@mail.u |
| | | Engineering | | sf.edu |
| Investigator 4 | | | | |

Section 3: Project Description

Describe the project, including goals and objectives, methods to be used to assess the outcome of the project, and how the results of the project will be communicated to the USF community and the sustainability of the project

Project background and purpose (reasons motivating request) (Max 500 words)

Solar energy has improved greatly in recent years in its efficiency. It is the best means for SGEF of directly having investment into energy production that is clean and renewable with the most CO_2 for USF. We have the Solar Carport, owned by the College of Engineering, that has readily available space meant for the placement of such panels. It is imperative that USF's SGEF replace the panels that no longer function to provide 8,760 kWh/year into USF's power grid. The purpose of this project is to renovate the PV panels and implement the smart grid functions to the PV charge station currently existing. Considering that electric golf carts operated by administration use the carport as parking, we are planning to install 3 120V outlets also to allow clean solar energy to be the source of the electricity that the vehicles get while they are parked at this carport by USF administration anyway.

Project activities (Max 250 words)

First, we will remove the old PV panels on the west side of the CUTR/College of Engineering PV charge station (6kW). Second, the new PV panels will be installed with the three 120V outlets into the pilings near the typical parking area for the golf carts. Third, the connection between the new PV and the TECO grid will be rewired to allow for the added solar panels. Fourth, the structure will be painted to prevent unplanned structural decay.

Project results (Max 500 words)

The solar panels will provide 8,760 kWh/year of clean solar electricity to the grid, and the carport will be able to charge the electric golf carts that frequent the area anyway. The structure will be preserved with the necessary paint protection over the new steel structure that is installed.

Outcomes of the project (narrative)

USF will be able to be on track to achieving the GHG reduction goals set forth in the Climate Action Plan that the school has committed to while providing function to the golf carts that park in the area. The newly installed structure will also be able to be preserved through the paint that is going to be coating it.

Annual Cost Savings \$1,138.80/year

Return on Investment, % \$8,470, 42% ROI

Annual Energy Savings

8,760 kWh/year

Annual Green House Gas Reduction

6,040 kg CO₂

Project Sustainability (Max 200 words)

This project will sustain an existing project by replacing solar panels that have passed their expected life expectancy and no longer function. The new panels come with a warranty, energy output monitoring and their support structure will be painted to stop rusting. The structure will be painted again to maintain the project's integrity with the new solar installation that needs painting for preservation throughout the years.

Section 4: Additional Materials

Provide detail all activities and responsibilities including schedule for the project from start to finish, noting the general dates of major milestones and accomplishments.

Also provide details of expenditures for the project, including a brief statement describing the nature and necessity of the expense. Provide a schedule for the project from start to finish, noting the general dates of major milestones and accomplishments (These may be uploaded as additional files)

Detailed work plan/schedule of activities (Max 250 words)

Space impact approval has been made. As soon as there is approval of funding of the following, we need to get the chartfields information to get the project started. Antonio Lourenco is the designated project manager from USF FP&C on the space impact that has aquired the cost estimates.

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Budget breakdown and justification

Solar Energy Management -----\$12,300.00

- Exterior Painting of existing structure ----\$ 5,750.00
- FP&C Cost of Service -----\$ 1,080.00
- · TOTAL -----\$19.130.00

120 V outlet installation yet to receive price quote (expected to be under \$2000 and around \$1000).

Project Budget breakdown must follow the following format:

| Category | Request from SGEF | Applicant Contribution | Total |
|---------------------------|-------------------|---------------------------|------------|
| Personnel (include all | \$1080.00 | 0 | \$1080.00 |
| involved) | | | |
| Equipment | \$3050.00 | 0 | \$3050.00 |
| Supplies/Materials | \$8870.00 | 0 | \$8870.00 |
| Contractual | \$3,000.00 | 0 | \$3,000.00 |
| Construction | \$5000.00 | 0 | \$5000.00 |
| Signage | \$0 | 0 | \$0 |
| Other (specify) | \$0 | 0 | \$0 |
| Total Project Cost | \$21,000 | 0 | \$21,000 |