



Student Green Energy Fund Proposal Application Form

Section 1: Summary Information

Project Title:	Phase II – Tree Planting in Commemoration of Arbor Day to Reduce Cooling Loads on Campus
Duration (months):	3 Months
Total Budget (\$):	\$74,800
Requested SGEF Funds (\$):	\$74,800
Matching Funds (\$):	0 (we have a large discount, unrivaled in the industry)
Proposed Starting Date:	June 2017
PI Graduation Date (if applicable):	NA

Section 2: Applicant Information

	Full Name	Unit/ Department	Phone	Email
Principal Investigator	Antonio Lourenco	Project Manager / Facilities Planning	813-974-9331	alourenc@usf.edu
Investigator 1	John Pilz	Accelerated 3+3 Bachelor's/J.D. Program	727-452-0603	johnpilz@usf.edu
Investigator 2	Robin Rives	Environmental Science & Policy/College of	727-465-4019	rrives@mail.usf.edu

		Arts & Sciences		
Investigator 3	Nadeem Freajah	Bachelor in General Studies Student / School of Geo Sciences	813-606-1444	Nfreajah@mail.usf.edu
Investigator 4	Shuang Hao	Landscape Designer / Facilities Planning	(813)974-0646	shuanghao@usf.edu
Investigator 5	Adam Burrell	Undergraduate Accounting Student/Muma College of Business	727-417-1162	aburrell@mail.usf.edu
Investigator 6	Alexis Boback	College of Arts and Sciences	813-846-9504	alexisboback@mail.usf.edu

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)

USF Tampa has the potential to dramatically increase its green factor by funding a project that is as green as it can get: the planting of trees. Given the space to grow and thrive, trees are the most sustainable source of greenhouse gas reduction.

"A tree can absorb as much as 48 pounds of carbon dioxide per year and can sequester 1 ton of carbon dioxide by the time it reaches 40 years old. Additionally, a tree can produce 260lbs of O₂ per year"

Trees provide shade, and they reduce the inconvenience of the Florida heat for those who walk under them. There are many walking areas on campus, and covering said areas with trees will greatly assist in serving multiple purposes - shade creation, heat reduction and education about SGEF. We seek to plant the trees as soon as possible, however, we seek to plan and hold an event in commemoration of Arbor Day.

Source: http://www.nrs.fs.fed.us/pubs/gtr/gtr_wo059.pdf.

- Project activities

With funding from SGEF, this project will provide 69 trees to the USF Tampa Campus. The necessary irrigation has already been installed nearby, and we will be tapping existing sources. From there, it is planned that this project will be a part of the late dedication for Arbor Day.

- Project results (Max 500 words)

Trees provide shade, and they reduce the inconvenience of the Florida heat for those who walk under them. Through providing shade, trees have the potential to dramatically reduce the heat that the students feel through the less heat retained by the ground. The cooling effect of the trees will lend a very immediate application to their planting near pedestrian walkways. This project is very visible, with the potential to serve an educational purpose regarding what SGEF is, while making the environment conducive and attractive for studying at the campus. This project has a potential to benefit the Tampa Bay community at large, not just the students at the campus.

The GHG reduction benefits of this project are immediate and long term, with the potential to reduce the carbon footprint of the USF Tampa campus. At the age of 40 years, each tree from this project has the potential to sequester 1 ton of CO₂. One mature tree (average tree planted) can absorb approximately 911 lbs. of CO₂ per year. 69 trees can absorb 62,859 lbs. of CO₂ per year. The oxygen that the trees produce is another result - each mature tree able to give 260 lbs of O₂ per year, or 17,940 lbs of O₂ per 69 trees per year.

Trees at USF can make the environment cleaner as they absorb pollutants USF students would breathe otherwise. There are more uses trees have, which is well beyond the scope of this proposal.

Source: U.S. Department of Agriculture; carbon storage and accumulation

- Outcomes of the project (narrative)

This project is expected to serve as a benefit to people walking on the campus. They will notice the difference when they walk on the pathways that would be exposed to the heat of the sun otherwise. This project will reduce CO₂ emissions and it can be counted toward the USF Climate Action Plan. There is nothing more natural, aesthetically satisfying and green than trees themselves.

- Annual Cost Savings Unquantifiable
- Return on Investment, % Unquantifiable
- Annual Energy Savings 62,859 lbs. of CO₂ per year
- Annual Green House Gas Reduction 52,377.7 kg GHG
- Project Sustainability

This project is sustainable because the plan is to grow trees that are planned to last many years. With a project as simple as planting trees, the idea is that the trees will sustain themselves through

photosynthesis. Through their photosynthetic processes, the trees are expected to absorb CO₂ and give off O₂. This process will continue for as long as the trees live, for many indefinite 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

The project is expected to start with the filing of a space impact form. Then we will commence with the bidding process when we have been given approval to move forward. After the vendor is secured, then the project will commence with any required permitting to be secured. Then the planting should commence with the installation of any irrigation that is needed. The plan is that we can commemorate this event with a post Arbor Day observance. This proposal submission is being made in anticipation of Arbor Day, to show that USF is doing something in the spirit of planting more trees.

- Budget breakdown and justification

The \$69,000 is comprised of 69 trees at \$1,000 each. The total includes irrigation, installation and transportation of the trees to the location. Students will each be allotted \$1,200 to be paid \$12 for 100 hours of work.

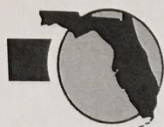
Project Budget breakdown must follow the following format:

Category	Request from SGEF	Applicant Contribution	Total
Personnel (include all involved)	\$4,800 (Adam, Nadeem, Robin, Alexis)		
Equipment			
Supplies/Materials	\$69,000		
Contractual			
Construction			
Signage	\$1,000		
Other (specify)			
Total Project Cost	\$74,800		\$74,800

Trees II

PROPOSAL

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**Sun State
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PROPOSAL SUBMITTED TO USF Tampa	PHONE	DATE 3-2-17
STREET 4202 E. Fowler Ave	JOB NAME Oak tree installation	
CITY, STATE, ZIP CODE Tampa Fl 33620	JOB LOCATIONS USF Tampa Campus	
ARCHITECT	DATE OF PLANS	JOB PHONE

We hereby submit specifications and materials for:

Install 69 @ 5" oak tree with bubbler \$1,000.00 each \$69,000.00

We Propose hereby to furnish material and labor -- complete in accordance with above specifications, for the sum of **sixty-nine thousand and 00/100 dollars \$ 69,000.00**

Payment to be made as follows:

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance.

Authorized
Signature

Carlos Alvarez

NOTE: This proposal may be withdrawn by us if not accepted within 30 days

Acceptance of Proposal---- The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Signature

Date of Acceptance