



Student Green Energy Fund Proposal Application Form

Section 1: Summary Information

Project Title:	Tree Planting in commemoration of Arbor Day
Duration (months):	6 months
Total Budget (\$):	\$83,307.15
Requested SGEF Funds (\$):	\$83,307.15
Matching Funds (\$):	\$0
Proposed Starting Date:	November 3, 2015
PI Graduation Date (if applicable):	June 2016

Section 2: Applicant Information

	Full Name	Unit/ Department	Phone	Email
Principal Investigator	John Pilz	College of Arts and Sciences	(727)452-0603	johnpilz@mail.usf.edu
Investigator 1	Shuang Hao	Landscape Designer / Facilities Planning & Construction	(813)974-0646	shuanghao@usf.edu

Investigator 2	Bryan VanSant	Physical plant/ Building and maintenance operation manager	(813)-974-7394	bvansant@usf.edu3
Investigator 3	Tewodros Mengistu	student	(727)434-5834	tewodrosmengistu1@gmail.com
Investigator 4	Chi-kai Hung	College of Business	(813) 300-0216	Chikai@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) (Max 500 words)

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 260 lbs 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, in collaboration with Patel CGS.

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

- Project activities (Max 250 words)

With funding from SGEF, this project will provide 73 trees to the USF Tampa Campus, as indicated in the attached drawings. The necessary irrigation will have to be installed for the first year regulated watering that must occur to ensure the trees survive planting. From there, it is planned that this project will be a part of the dedication for Arbor Day in late April. The goal is that the trees will have been planted by then.

- 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 is 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 the 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. 73 trees can absorb 66,503 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 18,980 lbs of O2 per 73 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. An educational sign should be inserted by (or on) one of the trees, as the plan is to do a commemoration on the coming Arbor Day during the Spring semester. In working with Patel CGS, the hope is that the students and visitors to the university will get a very rewarding educational experience through this project dedicated to the public good.

- Annual Cost Savings -> Unquantifiable
- Return on Investment, % -> Unquantifiable

- Annual Energy Savings -> Unquantifiable
- Annual Green House Gas Reduction -> 66,503 lbs. of CO₂ saved PER YEAR

Source for calculation metrics: <http://www.treesearch.fs.fed.us/pubs/22954>

- Project Sustainability (Max 200 words)

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 (Max 250 words)

The project is expected to start with the filing of space impact form with PATS and SGEF Project Manager followed by the official bidding process to obtain bids that provide the best in terms of performance and cost. Once vendor is secured, the project will commence with any required permitting to be secured. Then the planting should commence, with the culmination reached upon recognition during the event at USF for Arbor Day.

- Budget breakdown and justification

With the cost of the whole project, it comes to \$75,568.90 and we need to add the 6% FP&C cost of \$4,534.13 to make \$80,103.03

Adding a 4% contingency, we get \$3,204.12 to add in to make \$83,307.15 total.

Send any questions you may have to johnpilz@mail.usf.edu

Project Budget breakdown must follow the following format:

Category	Request from SGEF	Applicant Contribution	Total
Personnel (include all involved)	\$7,300.00		
Equipment	5,000.00		
Supplies/Materials	\$45,000.15		
Contractual	\$20,000.00		
Construction	\$5,000		
Signage	\$1,007		
Other (specify)			
Total Project Cost	\$83,307.15		\$\$83,307.15