**SSC Step One Application**

**PROJECT CONTACTS**

**Faculty/Staff Member Contact Information**

**Name: Department: Institute for Genomic Biology (Collin Reeser)**

**Phone: 217-300-9015**

**Email: creeser2@illinoisa.edu**

**Participant Names: Mark Taylor, Kevin Donovan, Tim Mies, Collin Reeser**

**Participant Emails:** **mstaylor@illinois.edu****,** **kevin.p.donovan@gmail.com****,** **tmies@illinois.edu****,** **creeser2@illinois.edu**

**PROJECT INFORMATION**

**Project Name: Element House at the Energy Farm**

**Project Topic Areas (Choose one): Energy**

**Project Summary:**

The Element House is a solar powered house that was designed and built by a collaborative team of architecture, engineering, and industrial design students to compete in the US Dept. of Energy’s 2007 Solar Decathlon competition, held in Washington DC on the National Mall. Following the competition, Element House was reassembled at the Chicago Center for Green Technology where several thousand visitors toured the house when it was featured during a Green Tech conference in 2007.

In the summer of 2013 funding from the Chancellors Office, Mechanical Science and Engineering, and the Energy Farm was secured to pay for the transportation and installation of the house back on campus at the Energy Farm. That initial funding provided for the design and construction work in progress for a permanent foundation for the house, as well as permanent electrical, sanitary and water connections. In order to bring the house up to code additional funding is needed rewire the house, rebuild the solar array, install monitoring equipment to allow for remote class interaction of house performance, and update the HVAC systems. Upon completion the element house will be a great asset to the University with its state of the art high efficiency systems with monitoring technology.

**Student Involvement:**

Student involvement is crucial to the completion of this project as well as ongoing student projects. During the fall of 2013 architecture students in Arch 576 (Innovative Solar Powered Homes) started the process of designing the foundation system, developing a landscape plan, removing outdated or dysfunctional equipment, and designing a new structural frame for the solar array. During the semester the same team of students had the opportunity to meet with representatives of F&S and outside consultants to participate in pre-contract negotiations related to the engineering requirements of the permanent location. This was a rare and valuable opportunity for architecture students to have before they graduate and seek employment.

Element House at the Energy Farm will provide many more opportunities for student groups and classes to complete hands on projects related to design, construction, efficient residential energy systems and monitoring. Upon completion The Element House will be a model of sustainable living.

**Timeframe:**

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| --- | --- |
|  |  |
| **Task** | **Timeframe (# of weeks to completion)** | **Estimated Completion Date** |
| Contractor work | 3 | 8/1/2014 |
| Solar installation  | 4 | 8/1/2014 |
|   |   |   |
| Monitoring Installation by Solar Decathlon Team | 16 | 12/1/2014 |
| Final report | 2 | 12/1/2014 |

**Anticipated Budget: $43,100**

**Submit though online form at** [**http://ssc.union.illinois.edu/application.aspx**](http://ssc.union.illinois.edu/application.aspx)**, by January 28, 2014.**