



January 26, 2011

Re: STARS Innovation Credit – Solar Decathlon

To Whom It May Concern,

This letter provides background on Santa Clara University's ongoing Solar Decathlon Project that is a concrete educational tool for students and an opportunity for sustainable outreach on campus. The Solar Decathlon is a biennial competition sponsored by the U.S. Department of Energy uniting twenty teams of college students to design, construct, and operate the most energy efficient, functional, and attractive solar-powered home. In an event that draws over 125,000 spectators, teams bring their entries to the National Mall in Washington, D.C. to compete in ten contests ranging from energy balance to marketability.

In both 2007 and 2009, Santa Clara University took third place in the competition. The 2007 "Ripple" House is currently serving as a test lab for energy monitoring systems as well as a number of other programs over the last two years. The major one has been a study funded by the California Energy Commission to explore development of a carbon meter, and to test cutting edge micro-inverter technologies. Students have gathered data on the performance of the house under various conditions. The team also installed a set of new solar thermal collectors, and is currently monitoring their performance. This house is a popular stop for tours on campus and has been the target of many special tours for prospective students, current students, alumni, and engineering visitors to campus. We estimate that 2-3 groups per month are hosted at the house.

The 2009 "Refract" House is being "rebuilt" and should be operational early this year. It is estimated that around 200,000 visitors came to the 2009 competition, with around 20,000 touring Refract House. As soon as the 2009 house is up and running, then it will be added to on-campus tours as well.

Recently, the team was notified that they would be receiving a grant from NREL to closely monitor the performance of both houses over a calendar year while the houses undergo simulated living activities. During this year, the appliances in the house will be used and energy production and use will be tracked. Having the two houses experiencing the same weather patterns, while having significantly different architectures and technologies, will be an exceptionally advantageous way of studying the most effective sustainable engineering methods.

Santa Clara's team developed a three-pronged focus on education, communication, and innovation to guide their project. As a means of educating the community, the 2007 Decathlon team also undertook an outreach project called Sustainability Decathlon that provided environmental mentorship to high school students. Furthermore, several times per year faculty and/or students from the projects provide lectures or seminars to local schools or civic groups (e.g., San Jose Rotary and St. Andrews School Science Symposium Day). Because this project engages students in sustainable building design, provides outreach to the local community, and communicates the importance of reduced energy usage, I fully believe that this project deserves an innovation credit.

Sincerely,

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