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U.S. Department of Energy
FEDERAL ASSISTANCE REPORTING CHECKLIST AND INSTRUCTIONS

1. Identification Number: DE-EE0006551

2. Program/Project Title: Solar CalPoly

3. Recipient: Chris Early, Project Officer for 2015 Solar Decathlon

4. Reporting Requirements:	Frequency	Addressees
A. MANAGEMENT REPORTING		
☐ Research Performance Progress Report (RPPR) (RD&D Projects)	__	https://www.fedconnect.net/fedconnect/default.aspx
☐ Progress Report (Non-RD&D Projects)	__	https://www.fedconnect.net/fedconnect/default.aspxhttps://www.fedconnect.net/fedconnect/default.aspx
☐ Special Status Report	__	
B. SCIENTIFIC/TECHNICAL REPORTING (Reports/Products must be submitted with appropriate DOE F 241 forms available at https://www.osti.gov/elink/index.jsp)		
Report/Product — Form		
☒ Final Scientific/Technical Report — DOE F 241.3	__	http://www.osti.gov/elink-2413
☐ Conference papers/proceedings — DOE F 241.3	__	http://www.osti.gov/elink-2413
☐ Software/Manual — DOE F 241.4	__	http://www.osti.gov/estsc/241-4pre.jsp
☐ Other (see special instructions) — DOE F 241.3	__	http://www.osti.gov/elink-2413
C. FINANCIAL REPORTING		https://www.fedconnect.net/fedconnect/default.aspx
☒ SF-425 Federal Financial Report	__	
D. CLOSEOUT REPORTING		
☐ Patent Certification	__	https://www.fedconnect.net/fedconnect/default.aspx
☐ SF-428 & 428B Final Property Report	__	https://www.fedconnect.net/fedconnect/default.aspx
☐ Other (see special instructions)	__	https://www.fedconnect.net/fedconnect/default.aspx
E. OTHER REPORTING		https://www.fedconnect.net/fedconnect/default.aspx (or
☐ Annual Indirect Cost Proposal	__	Cognizant Federal Agency)
☐ Audit of For-Profit Recipients	__	https://www.fedconnect.net/fedconnect/default.aspx & send to CFO at : DOE-Audit-Submission@hq.doe.gov
☐ SF-428 Tangible Personal Property Report Forms Family	__	https://www.fedconnect.net/fedconnect/default.aspx
☐ Other(see special instructions)	__	https://www.fedconnect.net/fedconnect/default.aspx

FREQUENCY CODES AND DUE DATES:

A - Within 5 calendar days after events or as specified.
Y - Yearly; 90 days after the end of the reporting period.
Q - Quarterly; within 30 days after end of the reporting period.
O - Other; See instructions for further details.
F - Final; 90 calendar days after expiration or termination of the award.
Y180 - Yearly; 180 days after the end of the recipient's fiscal year
S - Semiannually; within 30 days after end of reporting period.

1. Special Instructions:

FINAL TECHNICAL REPORT

Submitted to:
Department of Energy
Chris Early, Project Officer for the 2015 Solar Decathlon

Project #DE-EE0006551
"Solar CalPoly"

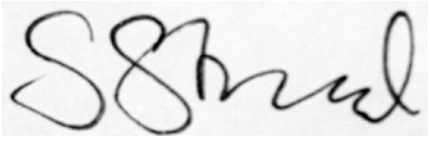
Submitted by:
Professor Sandy Stannard, PI
Email: stannard@calpoly.edu
Tel: 805-756-2076

Date: 15 June 2016

DUNS Number: 029326246

Recipient Organization:
Department of Energy
Attn: Chris Early, Project Officer for the 2015 Solar Decathlon
Golden Field Office
U.S. Department of Energy
15013 Denver West Parkway
Golden CO 80401
Tel. 202-586-0514
Email: chris.early@ee.doe.gov

Final Technical Report



Sandy Stannard, PI

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Discussion of fundraising activities— final project budget and lessons learned—what went well, what didn't, and what you would do differently?

The target budget of INhouse was about $650,000 for all materials and student expenses of the Solar Decathlon competition. In order to reach our goal, Cal Poly students and faculty worked with the College of Architecture and Environmental Design's External Relations office to actively fundraise for INhouse. Students connected with Cal Poly alumni through phone calls, postal mail, email, and live presentations to reach as many alumni in the state of California as possible. Before construction begun, students and faculty met on a weekly basis to determine what brands of materials for the home to use and who would be responsible for reaching out to the company to seek a donation. Our College of Architecture and Environmental Design's administration was essential in helping us fundraise. For some time, the college was hoping to depend on about half of our fundraising expenses to be covered through the sale of INhouse. However, plans to sell the home fell through during the design development phase; the college turned to the sale of a different asset in to help us meet our goal. If we were to do this project again, completing the design concept and securing a future location of our home sooner would have enhanced our fundraising activities.

Results of media-outreach activities—include statistics

The team was successful at targeting the local news (radio, internet, paper), donor companies, and energy websites for interviews and coverage of the home. Through social media, the team was able to share its story to an engaged audience. The following lists our social media followers: Facebook: 404 Instagram: 412 Twitter: 120

Results of on-site exhibition activities—estimates of the number of visitors to the house (justify estimates); assessment of visitor experiences (include qualitative data); and

lessons learned—what went well, what didn't, and what you would do differently

According to the Department of Energy, we had 11,200 visitors to our home. A volunteer tracked this count each day. Based on questions and comments from the visitors that came through the home, we did a good job displaying both commonly used technologies that are easy to implement as well as introducing visitors to new innovative solutions that homes in a California climate face. For our tours we invited alumni and team members to come and help give tours. It was great that so many alumni volunteered as many students had course commitments on Thursdays and Fridays (making them unavailable to give tours). In the future, it would have been good to have students commit to the Thursdays and Fridays ahead of time and work this out with their professors because it was definitely challenging to have enough tour guide volunteers.

Evaluation of the team's website—number of hits, unique visits, and any other user statistics; lessons learned—what went well, what didn't, and what you would do differently

From March 1st, 2014 through January 6th, 2016, calpolysolardecathlon.org received the following statistics: users: 6,901 sessions: 9,132 pageviews: 17,186 pages/session 1.88 average session duration: 1:16 bounce rate: 74.46% new sessions: 75.57%

When deciding on which type of website to use, the communications team discussed the pros and cons of using a custom-coded website and a template website. In the end, we chose a custom-coded site because we believed that it would allow us maximum customization to convey our message through an intuitive, interactive, and integrated manner. The overall simple and colorful layout was appealing and unique to other websites. Because the website was custom coded, it was difficult for team members to add or change content to the website's existing structure. Because the website utilized an infinite scroll format, all of the pages were contained in one single url calpoylsolardecathlon.org, which made it impossible to create a real blog hosted on our website. Because of the limitations of the self-coded format, we received feedback that there was too much text and too little graphics.

If we were to do this project again, we would have had a single team member throughout the competition period dedicated to website design, coding, maintenance, and blogging.

Team perspective on the effectiveness of the organizers' communications efforts with both the teams and the public

The team feels that communication through the yahoo group was effective. It was very challenging to find files sometimes, especially one that you had to refer back to months after they were posted. It would be great if there would be a better way of accessing files and the opportunity to search for files easily. When searching the yahoo group, often all messages and comments related to the subject would appear and it would be

hard to find the file itself. Other communication went well and the monthly conference calls were appreciated and helpful. We felt that information about the competition itself was easy to find on the website and clear for those who wanted to learn more about the competition.

Description of future plans for the house, including a statement indicating whether the participating institution(s) would be interested in partnering with NREL to use the house for follow-up collaborative research and outreach projects.

After Solar Decathlon 2015, INhouse returned to Cal Poly's campus, where its performance will be monitored. The home is currently in storage on campus as we are in negotiations with the university to find the location where INhouse will be installed. We are interested in follow up partnering with NREL in the future.

Short description of each team officer's future plans for employment, continued study, or other endeavors; NREL requests this information for possible inclusion in publications and presentations describing how the Solar Decathlon serves as an effective workforce development and university research project

Co-Project Manager - currently studying in an off campus program in San Francisco, graduating June 2017
Co-Project Manager - graduating with Bachelor of Architecture, June 2018
Arch student - currently studying in an off campus program in San Francisco, graduating June 2017
ME student - currently studying abroad in France, graduating June 2017
CE student - graduating with Bachelor of Science in Civil Engineering, June 2016
March student - Masters of Science in Architecture candidate, expected completion 2016
5th year arch student - working in architecture at DLR Group in Portland, Oregon
ME student - graduating with Bachelor of Science in Mechanical Engineering, June 2016
ME student - associate project manager of renewables & environment at SunPower in Richmond, California
ME student - design engineer at SunPower in Washington D.C.
EE student - electrical design engineer at exp Global Inc. in Chula Vista, Califronia
ME student - graduating with Bachelor of Science in Mechanical Engineering, expected June 2016
EE student -Electrical Engineering Intern at Keysight in Santa Clara, California until the start of Graduate School

Suggested competition improvements

We had brought this up briefly with Joe Simon and Richard King that it may be interesting to “decentralize” the competition – the homes would be site built and the juries would move around. This way the homes would be designed and built for the climate they are operating in. Of course there are logistical challenges with this, but it would be interesting to explore.

Any other information you feel would be helpful to the organizers or future teams.

For our team, the faculty leaders were key along with a group of dedicated leaders. There were students that came and went throughout the two year journey, but having key faculty and a handful of key student leaders kept the team moving forward. Additionally, it helped to integrate the competition into classes so that students did not have to volunteer all of their time and could get credit for architecture studio or senior projects in other majors.

One other though would be to establish your communication team early and keep it consistent. At the beginning the co-project managers and a few other team leaders did most of the work and one student coded the original website. This student did not stay involved with the team because her class ended and it was challenging for us to find someone who could take over the work. Most of the updating fell to the leaders of other teams and it meant that it was often not at the top of the list. Having a dedicated team to communications would be very helpful to have a consistent approach.