

ENERGY EFFICIENCY PARTNERSHIP PROGRAM BEST PRACTICE AWARDS APPLICATION FORM

Submission Deadline: March 7, 2012, 6:00 p.m., no exceptions

Eleventh Annual CA Higher Education Sustainability Conference - hosted by UC Davis

This form is only for nominations in the **Sustainability Innovations** category

I. Contact Information

1. Campus: Cal Poly State University, San Luis Obispo
2. Department: Facility Services
3. Contact name/title: Dennis Elliot, Assistant Director of Energy, Utilities, and Sustainability
4. Telephone: (805) 756-2090
5. E-mail: delliot@calpoly.edu

II. Project Information (a student group may submit a single nomination for up to three discrete projects)

1. Project name(s): Sustainability Mentor Program
2. Project location(s): Campuswide
3. Implementation period(s): Throughout 2011 and continuing
4. Brief narrative description of project goals and strategies (300 – 400 words)

The Sustainability Mentor Program, founded in 2011, designated a contact person within each of ten departments in the Admin and Finance division. Sustainability Mentors act as their department's sustainability coordinator, disseminating educational outreach information, and leading the implementation of initiatives within their workplace to foster awareness and behavioral change. The Sustainability Mentors, meeting monthly, worked closely with the campus Energy Manager and Green Campus Program interns to perform energy audits, retrofits, and process improvements with the goal achieving Green Campus Certification of their workplaces (see attached checklist).

The Green Campus Certification program, modeled after the LEED Certification system, focuses on six categories:

- Administrative Policy
- Energy Conservation
- Water Conservation

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- Recycling and Waste Reduction
- Purchasing
- Alternative Transportation

There are a total of 55 points available, of which 18 are mandatory prerequisites and 37 are voluntary. In addition, departments may earn innovation credits for coming up with their own unique sustainability initiatives that are not in the program. There are differing levels of certification:

- Certified 30 points
- Silver 35 points
- Gold 40 points (including a minimum of one innovation point)
- Platinum 45 points (including a minimum of two innovation points)

Departments implemented lighting retrofits, low flow plumbing fixtures, high efficiency hand driers, recycling programs, computer workstation power management software, server virtualization, energy star appliances, 100% recycled printer paper, default 2-sided printing and copying, and many more initiatives. Measures that are considered to be building maintenance are performed by Facility Services at no charge. Discretionary measures are paid for by the department.

The program also spurred a major initiative in the Contracts and Procurement department to promote campus wide adoption of sustainable procurement practices. Efforts were made to promote the use of products that are refillable, reusable, recyclable, or made from rapidly renewable or recycled materials. In partnership with Office Max, a Sustainable Shopping Cart was created on Cal Poly's Office Max ordering website to promote these choices and make them easier to order.

As of the end of February, 2012, every department within Admin and Finance has achieved Platinum Certification. In Summer of 2011, the Academic Senate and President Armstrong signed a resolution endorsing the Green Campus Certification program, and recommended all academic departments to designate a Sustainability Mentor and pursue certification. In the first pilots, the Ag Business and Landscape Architecture departments are beginning the process.

5. **Project budget(s):** No funds were allocated specifically for this project. Measures such as lighting upgrades are performed as regular building maintenance as time and funds allow.

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Workstation power management software was funded by utility partnership program incentives. Many other measures constitute behavioral change or a change in process that results in a net operational cost savings to the department.

6. Describe your project's funding model: Funded out of normal department operating budgets. Energy projects are funded out of utility reserves, and utility incentives are returned to these reserves.
7. What are the estimated or measured sustainability impacts (e.g., tons of greenhouse gas avoided or destroyed, acres of open space preserved, quantities of renewable energy generated, etc.)

For the ten departments within Admin and Finance (approximately 400 staff), Certification resulted in the following savings:

- Energy Savings from lighting and other retrofits: 53,000 kWh/year
- Energy Savings from workstation power management: 80,000 kWh/year
- Greenhouse gas reductions from energy: 51,000 lbs CO₂/year
- Reduction in paper usage: 233,000 sheets/year (466 reams)

Energy savings were calculated based on reduced wattage and/or operating hours of lighting, computers, and other office equipment and appliances. Energy savings of workstation power management was based on the Utility approved quantity of 200 kWh/yr for each machine with management software installed. Reduction in paper usage was based on 1) calculations from previous paper use rates and conversion to two sided printing, 2) estimation by department administrative staff who oversaw the conversion of internal processes to electronic/paperless methods, and 3) review of paper procurement records.

Please describe your calculation methods and assumptions

8. Estimated annual cost savings

Annual electricity savings: \$17,800/year (at @0.10/kWh)

Annual savings from paper reductions and printing costs: \$3,200/yr (at \$0.014 per sheet)

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Please state assumptions used for these calculations

9. Relevancy to the Best Practice Program – Please provide a detailed narrative of the project(s), highlighting those project features that qualify it as a best practice of potential interest to other campuses.

Cal Poly Facility Services is responsible to manage the University's energy and utility programs, and develops and implements energy/water conservation projects and other sustainability initiatives to meet CSU Executive Order mandates. Cal Poly has performed well in regards to Btu/sf for many years. During summer demand response programs, Facility Services reached out to contact persons in every building and department on campus to request voluntary conservation efforts during curtailments, in addition to executing automated load shedding strategies with the campus Energy Management System.

At the beginning of one summer demand response season, a test was performed of the campus notification system, without activation of the automated load shed program for HVAC equipment. Facility Services was very surprised to learn that the voluntary conservation efforts of building occupants were capable of reducing the campus' demand by an amount *equivalent* to that of the automated load shed program which shut down cooling and ventilation in numerous campus buildings. It was clear that something was to be had by focusing on educational outreach and behavior modification. Similar lessons were learned in dorm energy competitions which resulted in reductions of up to 35% from behavior alone.

As part of a Professional Development training series administered by AFD, groups of staff were required to propose a cost savings or process improvement project at the end of their training series. One group came up with the idea of the Sustainability Mentor program to promote sustainable behavior in the workplace. This idea was taken by the campus energy manager and married to the Green Campus program to create student involvement and learning. Since there are 16 chapters of the Green Campus Program in California, and great interest in sustainability by faculty, staff, and students alike, similar initiatives could be replicated on many other campuses.

10. Collaborative design and implementation – Describe the way in which this project incorporated stakeholders from multiple disciplines into the project's design and implementation. Describe how this collaboration produced sustainable solutions and improved the project's performance.

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This project was all about collaboration. By pairing enthusiastic student interns with staff and faculty, permanent cultural changes have been accomplished. The Green Campus Certified Program was developed with input and feedback from members of Facility Services, Facilities Planning, Green Campus interns, the Sustainability Advisory Committee, and the Academic Senate Sustainability Committee.

Implementation required cooperation and collaboration between Sustainability Mentors, Green Campus interns, the campus energy manager, and campus department heads.

11. If applicable, describe how you collaborated with members of your local or regional (off-campus) community in implementing your project. *N/A*

III. Additional information

Please provide up to three additional files (total) to assist the selection committee in understanding and evaluating the project.

IV. Speaker bio

Please submit a brief speaker bio or bios (max. 80 words; limit two speakers per project).

Dennis Elliot is the Assistant Director of Energy, Utilities, and Sustainability at Cal Poly SLO. Dennis holds a Bachelor's Degree in Mechanical Engineering, is a registered professional engineer, and a certified energy manager. Dennis has worked at Cal Poly for 29 years in a variety of energy related positions. Dennis manages the campus' energy and utilities, leads efforts to incorporate sustainability into operations, planning, construction, and academics, lectures part time in the ME Department, and oversees the Green Campus Program.

Speakers will present at the Sustainability Conference if their project is selected for a best Practice Award. Speaker bios will appear in the conference program.

At least one of the speakers listed here must be a student, staff, or faculty member. Co-presenters from non-campus entities (e.g. architecture firms, consultants, etc.) are permitted.

V. Nomination submittal

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Send completed Nominations to Andy Coghlan, Sustainability Specialist at the University of California Office of the President. All submittals must be received by 6:00 p.m. on March 7, no exceptions.