

ENERGY MANAGEMENT INITIATIVE: Annual Report: FY 13-14

Highlights

- The Energy Management Initiative's second full year of operations demonstrated continued success at reducing campus energy use.
- Total savings from all parts of the initiative reached \$2.4 million and exceeded the target by 10%, while the project remained under budget.
- The Energy Incentive Program will return almost \$1 million to campus units in incentive payments. No Operating Units were assessed overage charges, as all were under their baselines.
- The Energy Office expanded their offerings and influence, and can document savings that are almost 50% greater than last year.
- The Energy Use Policy was finalized and became effective in January 2014.
- Campus outreach continues to address behavior change and to support all of the Initiative elements.

Financial Performance:
Energy Costs; Operational Performance: Energy Savings

Source of Savings	Assumptions, Description, and Source	FY12-13 Savings (since launch)	FY13-14 Savings
Buildings included in the EIP	Includes savings from the EIP, outreach, and the Energy Office for included buildings; excludes the SEP savings; calculated relative to FY 10/11 baseline; adjusted for business-as-usual increases <i>Source: Energy Office, EIP data</i>	\$1,523,000	\$1,919,000* *Does not include increases in utility costs throughout last year
Residence Halls	Uses budget data for electricity only; calculated relative to FY 10/11 baseline adjusted for business-as-usual increases <i>Source: Office of Sustainability and Energy, budget data</i>	\$325,000	\$200,000
Steam Savings	Steam savings calculated and observed as a direct result of technical and system enhancement work completed in buildings as well as persistence of savings for projects implemented previously. Calculations based on engineering judgment, field measurements and utility meter observations. <i>Source: Energy Office and PPCS work orders and steam meter</i>	\$139,000	\$263,000 (estimate)
TOTAL		\$1,987,000	Actual savings: \$2,382,000 (Target: \$2,160,187)

Other sources of savings One way that the Energy Office achieves electricity savings (in EIP and other buildings) is through technical and system enhancement work as well as persistence of savings for projects implemented previously. For FY13-14, these calculated savings – based on engineering judgment, field measurements and utility meter observations – total \$766,000, an increase of 42% over last year. (Source: Energy Office and PPCS work orders, and building utility meters)

Budget

The total budget for second full year of the Energy Management Initiative was \$1,819,000, of which \$1,056,700 was expended, resulting in a significant surplus. The table below details the EMI budget and actuals by program.

Energy Management Initiative, Budget and Actuals

	FY11-12	FY12-13	Initial Years Total	FY13-14
Energy Office				
Budget			\$1,020,000	\$1,471,400
Actuals	\$91,234	\$960,919	\$1,052,153	\$678,500
Surplus (Deficit)			(\$32,153)	\$792,900
Energy Incentive Program				
Budget*			\$1,214,000	\$249,300
Actuals	\$411,639	\$497,986	\$909,625	\$293,200
Surplus (Deficit)			\$304,375	(\$43,900)
Outreach Program				
Budget			\$242,000	\$98,300
Actuals	\$104,858	\$93,345	\$198,203	\$85,000
Surplus (Deficit)			\$33,797	\$13,300
Energy Policy (no expenses)				
TOTALS				
Budget			\$2,476,000	\$1,819,000
Actuals			\$2,159,981	\$1,056,700
Surplus (Deficit)			\$316,019	\$762,300

* Excludes Energy Incentive Program payments

Other Achievements to Date

Energy Incentive Program: This year, the Energy Incentive Program will return almost \$1 million to campus units in incentive payments, a 14% increase over last year. In addition, no Operating Units were assessed overage charges, as all were under their baselines.

Some examples of how OUs allocated their incentive payments include:

- The College of Chemistry spent its funds on repainting buildings that needed repair and on new exit signs.
- Letters and Science (L&S) Biological Sciences is planning on using part of its payment to paint the Valley Life Sciences Building, the Life Sciences Addition, and Koshland and Barker Halls. It is planning on using the remainder of the payment on emergency egress lighting in Koshland Hall, hydration stations, safety latch retrofits for cold rooms, safety entry mats, ergonomic chairs, and better desks in numerous buildings.
- The College of Engineering (COE) allotted half of its incentives to COE building managers to have them improve their energy performance, while the other half was kept at the Dean's level to carry out projects in buildings.
- Administration and Finance (A&F) offered individual A&F staff the chance to compete for small grants for energy efficiency projects, such as replacing old appliances with newer energy efficient models.

Dashboards: The following buildings were added to the dashboard in FY 13/14:

- | | |
|----------------------|--------------------------|
| 1. Durant Hall | 9. Hertz hall |
| 2. Sutardja Dai Hall | 10. Morrison Hall |
| 3. Greek Theater | 11. Simpson Center |
| 4. South Hall | 12. Calvin Laboratory |
| 5. Underhill Parking | 13. Silver Laboratory |
| 6. Alumni House | 14. 2000 Carleton Street |
| 7. Dwinelle Annex | 15. Women's Faculty Club |
| 8. Botanical Garden | |

In addition, the below dashboard pages were the most visited in FY13/14:

- | | |
|-----------------------|----------------------------|
| 1. Overview Portfolio | 5. Anthony Hall |
| 2. Alumni House | 6. Haas School of Business |
| 3. Competitions | 7. Bancroft Library |
| 4. Housing Overview | 8. Minor Hall Addition |

Energy Outreach: The past year, the myPower outreach has continued to successfully help connect individuals to campus energy issues, as well as to provide assistance and support to campus community members, departments, and buildings striving toward energy conservation and efficiency. The myPower student team has continued to work with building occupants to perform surveys in order to help highlight both green practices already in place as well as steps that could be taken to reduce energy use. Areas surveyed the past year include Haas Clubhouse, International House, McLaughlin Hall, Bell Lab, Clark Lab, Office of Legal Affairs, and a re-survey of some of the labs who recently moved to the Energy Biosciences Building. In addition to Bright Green News publications, students have worked on a wide variety of articles that help keep the campus informed of energy and sustainability related events and issues. Finally, the list of buildings with live Pulse energy dashboards continues to expand, allowing individuals on campus to see building energy use with real time data.

Since last year, the Office of Sustainability and Energy has worked on campus energy and sustainability outreach through various avenues. In addition to hosting further staff sustainability trainings, in which UC Berkeley staff from various departments come together to exchange ideas about sustainable practices, the Office created an outreach campaign in response to the California drought to help campus members save water, and hence save energy.

Product/Service Quality: Engaged Stakeholders

One key way to assess the engagement of our stakeholders is to measure how many are using our websites and how frequently, using web analytics. Data presented is for both myPower.berkeley.edu and my.pulseenergy.com/UniCalBerkeley/dashboard.

myPower.berkeley.edu was integrated into a redesigned and revitalized sustainability.berkeley.edu website on 3/15/14. This integration allowed users interested in all aspects of campus sustainability to discover resources in one easy to find location, but complicates the short term analysis of website data. Data below is for the period of Jan 1, 2014 – March 15, giving an indication of traffic to our websites.

	myPower.berkeley.edu	Dashboards
Users	970	590
Pageviews	2,800	28,20
Pages/Visit	2	n/a
Average Visit Duration	2 minutes	13 minutes
Bounce Rate	56%	n/a
Returning visitors	29%	n/a

Energy Policy: The Energy Use Policy was approved by the EMI Steering Committee (February 2013) and the Campus Enterprise Risk Committee (April 2013), which is the campus administrative committee responsible for policies. The policy became effective January 1, 2014. The [Policy](#) has been developed to provide a local framework to support energy-efficient decisions in accordance with the EMI. The intent of the policy is to support environmental stewardship and leadership congruent with the campus's standing in education, research, and public service. The Policy outlines new energy conservation practices for heating, cooling, and ventilation in campus buildings, lighting, equipment, including computers, and construction and renovation projects.

Operational Performance: Policy Compliance: Since the Energy Policy became effective (January 1, 2014), the Energy Office has begun reviewing planned capital projects for compliance with the Policy. A partial list includes:

1. Fume hood Kroeber Hall
2. Tang Center renovation
3. Barrows classroom renovation
4. Jacobs Hall
5. Lower Sproul Plaza and the subsequent kitchen service addition
6. Morrison Hall new roof
7. Moffitt Library new roof
8. 2000 Carleton new roof

In addition, the Haas School of Business has consulted the Energy Office in an attempt to avoid installing AC systems in their buildings – an example of the success of the Policy on day-to-day operations and project planning.