

CEE Case Study

University of California San Francisco

I. Background and Perspective

A. Organization, Staffing Levels and Primary Function

The University of California San Francisco (UCSF) is predominately a graduate Health Sciences university. It is ranked as one of the top three medical schools in the country. The University has several Schools, including Dentistry, Medicine, Nursing, and Pharmacy. While each school has its own organization, they all rely on several campus-wide resources, such as Facilities Management, Materials Management, and the campus computer store, The Source.

UCSF is unique from other institutions of higher learning, as it has approximately 16,000 faculty and staff and only 3,000 students. The University has 12 sites plus dozens of smaller leaseholds in San Francisco and the northern Peninsula. The largest campus is Parnassus. Other major sites in and around the Bay Area include Laguna Honda, Laurel Heights / Mount Zion Medical Center, Buchanan Dental Center, Mission Center, Harrison Street, Hunters Point Facility, San Francisco Executive Park, and Oyster Point Facility. They occupy approximately 5 million gross square feet in owned and leased facilities. Approximately two-thirds of all UCSF space is located at Parnassus. UCSF accounts for about 25,000 jobs in the Bay Area, and contributed over \$1.2 billion to the Bay Area economy in 1994-95.

UCSF currently has a facilities proposal for a major repair and replace program for existing buildings as well as a new campus program. The new campus will be located in the Mission Bay area of San Francisco. They break ground in July 1999 on the first 2 building sites, and will eventually host approximately 20 new buildings over the next 20 years, totaling 2.65 million gsf. The total gross square feet that UCSF occupies will grow to roughly 8.3 million by 2012. The estimated cost for the facilities proposals approaches \$900 million for the existing sites, and another \$1 billion for the new site.

UCSF is considered to be the single largest energy user in San Francisco. High power demands resulted in the University building a co-generation plant at their Parnassus Campus, providing a maximum capacity of 13 MW of electricity and 90,000 lbs. of steam per hour. The plant produces over 90% of the campus load. The remainder is purchased from PG&E, during peak load periods. The plant also produces steam for campus heating and process needs as a by-product of the heat from producing electricity. In three years a new central chilled water plant will be completed in the Central Plant Facility. This plant will provide for campus air conditioning needs.

A Board of Regents comprised of Chancellors from each of the UC Branches oversees the running of the State-wide University of California. J Michael Bishop is UCSF's Chancellor. Three Departments have been identified as the primary sources of

procurement: Facilities Management (Administration); Materials Management (Finance) and Reprographics/Mail/Computer Store (Administration).

Facilities Management (FM) is responsible for training approximately 100 staff members facilities management-related purchases. FM oversees seven project managers who work with architects to specify equipment and design for renovating and building new buildings.

Contacts: Dave Bohler, Manager, Technical Engineering Support; Gail Siegel, Purchasing; Ronnie Boyd-Mack, Purchasing.

Materials Management (MM) has approximately eight staff members responsible mainly for procuring refrigerators, centrifuges, freezers, and office equipment other than computers.

Contacts: Milan Gonzalez, Manager; Davidson Bidwell, buyer.

The Source, run by Reprographics is responsible for approximately 75% of the computer purchases of Campus. They have 3 dedicated computer purchasers. They negotiate computer contracts with the major computer companies such as Apple, Dell and Compaq.

Contacts: Keith Braxton, Director Reprographics, UCSF Bookstore and Mail Services; Bruce Levin, Manager, The Source.

B. Annual Capital and O&M Budgets

Total Energy purchase for the Parnassus Campus in 1997/1998 was 67,505,907 kWh resulting in electricity bills of \$4,673,734. Natural Gas Therms at a rate of 9,115,375 Therms were purchased at a cost of \$2,500,000. Total Parnassus energy purchase for 1997/1998 were \$7,142,772. This year, they put a new generating plan online; their energy purchases decreased dramatically from 67.5 MkwH to 6MkwH. The total operating cost is \$12 million, with \$3.3 million in gas, \$1.2 million in purchased electricity, \$3.3 million in O & M costs, and \$4.5 million in debt services.

They also have taken advantage of utility deregulation. They have saved \$227,000 from a gas contract on the Parnassus campus, and by switching to ENRON, they saw a 5 % savings on their April - June campus-wide energy costs, equaling \$93,000.

The total operating budget of UCSF is \$1.13 billion. Roughly \$70 million is spent on energy campus-wide, with roughly \$20 million spent on lighting costs. Between \$5 and 10 million was spent on computer purchases in 97-98 campus-wide.

C. Highlight of the Procurement Function

Procurement has become more and more decentralized over the past 15 years. Staff we spoke with at MM and FM noted that it is difficult to encourage individual departments to make purchases through their services. Individuals tend to want to make their own decisions and are often unaware of the large discounts that the university has negotiated.

The faculty mainly functions on departmental research grants, and usually make individual decisions on how to spend funds. For example, most office equipment tends to be purchased on an individual basis, especially since the daily purchase limit is \$2,500 per day. Refrigerator purchase decisions are also made on an individual basis. The buyers at FM and MM are mostly contacted for purchases over \$2,500.

Reprographics/ The Source

The Source has a store in the campus center, where students, faculty and staff can purchase equipment at the Source's negotiated prices. Prices are usually lower than buying the equipment through other sources. If the purchase is under \$2,500, the purchaser only need to have a Purchase Order, which is signed off by their individual departments. Approximately 75 % of campus computers are bought from The Source (based on a sales volume of as much as \$10 million).

Facilities Management(FM)

FM is responsible for the maintenance and operation of all UCSF facilities and the management of campus renovation and construction projects. They oversee design, construction and building retrofits. On new construction they work with Campus Long Term Planning. They utilize the UCSF facilities guidelines that specify bidding, contract, and construction requirements. All UCSF buildings and facilities are divided among seven Building Management Teams. Each team consists of a manager, an assistant, and craft and custodial personnel. Building managers are responsible for all building facilities and systems.

They are also responsible for providing advice and project management services on minor contract construction projects. The assigned project manager develops the budget, hires the architect and design consultants, and runs the project. Deliveries of all FM services are supported by the FM Customer Service, either through a fax request, phone call or email.

Work is completed on a time and materials basis unless an estimate or fixed-price bid is requested. If the customer desires any changes after the requisition is approved, the FM Building Manager must be contacted so a change order can be initiated. Personnel on the job site are not authorized to accept orders.

Architectural Design and Engineering provides services for smaller projects, including certain Campus construction, remodeling, and rehabilitation projects. This division is responsible for providing architectural and engineering services for small to mid-size construction projects, and required agency reviews for all construction projects, among other services. The Division employs architects, engineers, and construction inspectors. Dave Bohler, our main FM contact has started a process where he has increased communication between his office (which has an energy management focus) and the design teams for various projects.

FM makes purchasing decisions on the lighting components put into all facilities. They have a dedicated buyer, Ron Boyd-Mack, for lighting equipment. He works with vendors around the country to identify the most efficient and reliable products that meet a realistic

price criteria. In meeting with Ron, he expressed that many vendors approach him to provide information on the latest technologies available for efficient lighting. He seemed to be well educated and versed on a variety of energy issues.

Materials Management:

Any product that is over \$2,500 must go through MM. Individual departments request a product, and send the purchase order to MM. MM is only required by State law to bid out any product over \$50,000, but depending on the product, they may put out for bid if they think they can get a better purchase price.

Of note, MM has in the past aggregated refrigerators when multiple orders come in, and has gotten a price reduction by doing so. They are interested in repeating this process, and, including energy efficiency as part of the purchase criteria.

MM is also responsible for negotiating campus-wide contracts. Departments may purchase any product at any price, if it is on a negotiated contract. These negotiated contracts are made throughout the year, and may happen because a buyer notices there is a lot of business from a particular store, or that there are a lot of one product type ordered. When a product bid is lost by a vendor, they are required by UCSF not to under sell the winner. If they do, the vendor will be kept from selling on campus in the future.

MM is working on a procurement website, where purchasers will be able to file POs directly over the Web. MM sees this as a way to advertise other services such as aggregate purchasing and product energy efficiency.

Department Purchasing

As mentioned, purchasing on campus is very decentralized. Even purchases over the \$2,500 limit have very little policy attached; the PO needs to go through MM, but is specified by the user. There is rarely a specific buyer within a given department, although most there seems to be individuals who are a purchasing focal point within each department. Even if some staff within the department have to go through this designated buyer, but not all staff need follow this procedure.

D. Importance of Energy Related Products to the Organization's Function

Aside from the needed office equipment, UCSF purchases a large amount of refrigerators and freezers for its research labs. There have also been a variety of energy efficiency retrofits on Campus, under Energy Manager Dave Bohler's guidance. As mentioned above, UCSF is San Francisco's single largest energy user.

E. Profile of Past Years Energy Related Purchases

Due to the decentralization of purchasing, it is difficult to account for exact stock of what is purchased each year. There are no precise numbers of what has been purchased.

The following equipment is an example of what has been purchased out of approximately 4000 documented electrical equipment purchases. These purchases only represent products that cost more than \$500. Many refrigerators cost less than this \$500 threshold,

and so the number of refrigerators actually purchased is much higher than the number listed below. Room air conditioners, printers, monitors, and fax machines would also fall into this category. Copiers on campus are generally leased, and wouldn't show up in this list as well. It is impossible to track any products that costs less than \$500.

Air Conditioners	13
Freezers/refrigerators	26
Computers	2064
Hard Drives/networks/servers	353
Monitors	163
Printers	280
Scanners	16
Copiers	10
Faxes	48

II. Findings - Procurement Process

A. Guiding Regulations

Individual purchases may not exceed \$2,500 per day. Any purchase over \$35,000 must, by State law, go through a bid process. There are no other guiding regulations.

UCSF has recently joined the Department of Energy's Rebuild America Program. They will be focusing on campus buildings and campus-wide initiatives in this voluntary, community-oriented initiative. Their commitment to the program was made by the University Chancellor, an indication of their high commitment to energy efficiency on the UCSF campus.

B. Other Internally Required Analyses/Procedures

Products are generally selected by the client. There are no limitations or guidelines for purchases, other than the budget of an individual department. Most product purchases are decided on when applying for grants and other sources to purchase equipment. The exception to this is building related products such as lighting, HVAC, etc..

Facilities Management is very concerned with energy efficiency on campus, and makes a concerted and educated effort to increase the efficiency of campus buildings, not because of guiding policy, but because they believe it makes good business sense. As an example, FM has not only done several major energy efficiency retrofits on campus, they have also started to work with architects early on in the design process to facilitate energy efficiency design. The Public Affairs department is also concerned in presenting an environmental image, and has been involved in a variety of efforts relating to environmental awareness, which are outlined below.

FM keeps rebate money from campus projects for internal, energy conservation studies and programs. In some cases, Dave Bohler will dedicate the funds to the project they come from, to ensure energy efficiency.

C. Final Criteria/Bases for Product Selection

The lowest cost available for the product specified seems to be the prevalent criteria for product selection. However, both MM and FM have a strong interest in energy efficiency purchasing.

As an example, MM is interested in incorporating energy efficiency into all related negotiated contracts. In particular, they are interested in getting a negotiated contract with Sears or The House of Louie, both vendors where the majority of refrigerator purchases are made. If a product is purchased through either of these vendors, the vendor could provide an energy efficient product by default. MM will at least require the vendor to carry energy efficient products for emergency purchases.

D. Planning Cycle/Timing of Decisions

A wide array of contracts exists with different vendors. When purchases are made through one of the three Departments, the timing decisions usually depend on each Department's funding cycle. Therefore purchases are made all year, as funding is constantly coming into the Departments. Contracts with vendors are negotiated on a case by case basis. As mentioned, there is no specific planning cycle for negotiated contracts.

E. Standard Inputs/Information Sources

The primary source of information for FM is through vendors; either vendors will contact them about new products, or they will contact vendors for information about needed products. They have standardized on some products such as motors, and air handlers.

Information regarding purchasing can be obtained from buyers in MM or FM, or on the UCSF web site. MM plans to incorporate more information on energy efficiency on its website in the future. FM depends on web-based information, and on information from vendors. Personnel also attend various conferences both on and off campus.

The UCSF Public Affairs Department and Facilities Management recently sponsored a conference called Environmental Ethics for a New Millennium, targeting UCSF employees who procure equipment. The morning session focused on paper products while the afternoon session focused on energy using products. The conference was attended by over 150 staff. Over 85 staff attended the afternoon session.

A panel of experts, including Jennifer Dolan from Energy Star Purchasing, Noah Horowitz from NRDC and Cyane Dandridge from Strategic Energy Innovations, presented options for energy efficiency purchasing. Ms. Dandridge also presented her findings relating to the work being done with UCSF under this report, and asked that presenters give feedback on energy efficiency purchasing and the Energy Star Toolkit, through a survey which was passed out during the conference.

UCSF also hosts annual Earth Day fairs. This year they will be having vendors with energy efficient products represented at the fair.

UCSF has had requests to access more Energy Star tool kits. This shows not only the interest garnered by the conference, and the value the Tool Kit is to staff, but also that staff is spreading information to peers. A survey, sent to all the conference attendees, showed that 100 % of the attendees felt they had learned at least somewhat about how to do environmentally-conscious purchasing (77 % felt they had learned a great deal).

Most of the attendees commented that they found the Energy Star Toolkit an excessive use of paper. One individual noted “ I would recommend that one set with discs be provided for each department represented rather than loading each individual with voluminous handouts.” Other interesting comments were:

- Explanations of current efforts being made were valuable
- Many would like to have this type of event annually
- Break out groups and committees who could work on educating non-attendees.
- One employee noted that they are going to start a “green tips” section in her newsletter utilizing information from the seminar and from the Toolkit.
- Educational display tables in the lobbies of various buildings would reach a greater audience.

F. Personnel Involved

See attached Organizational Chart. Dave Bohler, from Facilities Management has been in the energy field since 1974. Before coming to work at UCSF, he was the energy manager at the Presidio of San Francisco.

G. Sign-off Responsibility and Thresholds – Flow Diagram

Materials Management and Direct Purchases

Purchase Amount (\$)	Process	Approve/Sign Off
\$500 or less (changes to \$1,500 in July 1999)	Purchase not recorded in Material Management database	None
\$2,500 or less	Direct purchase. May by-pass purchasing.	None
\$2,500 to \$35,000	Product must go through purchasing , but can be specified by purchaser. No need for a bid.	By Purchasing, but generally a product is approved if the department has the budget.
Over \$35,000	Product must go through purchasing, but can be specified by purchaser. By State law, there has to be a three bid process.	By Purchasing, but generally a product is approved if the department has the budget.

Facilities Management

Purchase Amount (\$)	Process	Approve/Sign Off
All contracts	Either sole source or bid process	Chancellor
Under \$50,000	Sole source or competition	FM will make a determination if it is fair or reasonable to sole source. Chancellor
Over \$50,000	Formal bid process	Chancellor
Over \$250,000	Formal bid process	UCSF Planning Office (to fit with campus master plan) and Chancellor
Any amount, State dollars used (i.e. bond for deferred maintenance)	Follow State processes	Must go through UC Office of the president (not legislature) and UCSF Chancellor

There is no process for requesting energy audits from UCSF departments; most departments don't pay for energy, so they don't see the opportunities. There have been cases of departments who pay for energy bills requesting audits through FM; that procedure is generally initiated by the building manager. FM will do the audit in these cases, or pay for it to be done.

For energy efficiency retrofits under \$100,000, FM will pay for the retrofit out of utility savings. They will also use State funds for other projects, by combining energy efficiency with seismic retrofits, and take advantage of deferred maintenance savings to pay for added costs. One of the only cases where a department will pay for an energy efficiency retrofit directly, is if they are doing a renovation. FM will recommend they take fixtures out and replace them with energy efficient ones.

H. Financial Parameters

See chart above.

I. Potential Efficiency Gains

Administrative staff at FM and MM at UCSF is extremely conscious of the benefits of energy efficiency. FM is taking appropriate steps to make sure campus buildings are energy efficient. There is currently a lot of building retrofit work on three of the largest campuses: Parnassus just had a major retrofit done, with \$39,000 in savings last year. Laurel Heights had all major lighting systems replaced with energy efficiency (T8s and electronic ballasts), but there is still a lot of opportunity for savings in the HVAC system. Dave Bohler estimates that there is an additional savings of \$70,000 in rebates alone, and potentially \$90,000 per year in energy savings. The 97-98 rebates for the campus totaled \$47,500, and total energy savings amount to \$150,000 from past retrofits.

Dave sees a lot of potential in a water efficiency program, that would have additional benefits to energy efficiency. He believes there could be as much as 25 % savings in water conservation through replacing old walk-in boxes, water cooled A/C, adding solenoids to sterilizers and film processors, among other measures. Other energy efficiency programs currently under consideration (or in progress), are adding central a/c across campus (in some place this would add to the load where there is no a/c, but it would also replace inefficient older systems), and doing extensive lighting retrofits across campus. He believes roughly 50 % of the campus has been retrofit, and lighting accounts for 33 % of the total electricity use. Potential savings could easily be \$2 - 2.5 million.

As has been noted, product purchasing is very decentralized. There is a lot of potential efficiency gains for products purchased by individual departments. Recommendations for achieving that potential are outlined below.

J. Comments/Suggestions Regarding the Energy Star Purchasing Toolkit

Nine recipients of the Energy Star Purchasing Toolkit sent back surveys with comments. Most said they had usually looked for energy efficiency as a criteria in purchasing. Of those who said they hadn't, related that they would in the future.

Rating of the Tool Kit:

	Rating 1 - 5, 1 = poor, 5 = excellent
Readability	3.9
Ease of Use	3.4
Flexibility	3.2
Relevance to your division	3.3
Relevance to your organization	3.7
Level of Information	4.2

Comments:

- Could be condensed
- Very thorough/comprehensive, well organized but too much to read
- Product updates every 12 months (most)/6 months (two)/ 2 months (one)
- It's not relevant to a "traditional" office department
- Would like more information that is model specific, with comparisons
- Would like information on medical equipment

Products most relevant:

- Office Equipment (most)
- Lighting products, all non-residential products (one)
- None (one)

Products least relevant:

- Residential Construction
- Appliances
- None (Could use information at home)

Comments on LCC:

- Need a MAC version

- It was useful
- People won't pay attention to it

K. Other

It was noted that the building managers are the most difficult to educate, since they're always on call.

The Source doesn't advertise the energy efficiency of units. Manufacturers are responsible for all advertising, as The Source's funds are too low to advertise. They would be willing to display material, such as countertop displays.

III. Recommendations

A. Host Organization – Prioritize Recommendations Considering Cost vs. Benefit

The following are solutions we have found could address a number of barriers we came across through this project.

1. Rebuild America Program

UCSF recently joined the Department of Energy's Rebuild America program. Much of what is in this report, will become UCSF's action plan for the program. Dave Bohler has a number of programs he has targeted, including the water conservation program, the central a/c program, and extensive campus-wide lighting and HVAC retrofits, that he will include as actions in this program. We will also investigate innovative savings by working with national labs and area experts on laboratory energy efficiency. Cyane Dandridge, one of the investigators of this report, is the Rebuild program representative for UCSF.

2. Education of Users

Holding an annual conference that is more interactive in nature than the last conference will enable attendees to focus on issues they are facing in energy efficiency procurement, and help them overcome these issues. Potentially, the conference could be held in each school, on each campus, or even with each department. This conference could highlight several issues:

- a) Have sessions in which successful and progressive specifiers present their experiences, techniques and specifications, where everyone has a chance to address their own issues and where vendors have an opportunity to participate (at least during part of the session).
- b) Have sessions where specifiers, buyers and end users tell vendors how they can better serve their customers. These could also include fundamental training in how the energy efficient products benefit (or otherwise) the users.
- c) A workshop could be put together on energy-efficient lighting directed at procurement officials at the PG&E Energy Center. A tour of an energy efficient office building, led by the building facility manager could be held in conjunction with the workshop.
- d) Perhaps some sort of certification or periodic meetings could result from these sessions.

Additionally, there should be some level of education at various UCSF events over the year, especially at their annual computer fair, and Earth Day events. Creating links to websites that highlight energy efficiency products and services will also help educate users. Getting “green tips” into newsletters, similar to the comment by one of the conference attendees, will help users spread information among their peers.

Another important part of the education of users is to encourage greater use of the Energy Star Purchasing Toolkit. Giving the binder to each buyer seemed to overwhelm most staff members; we suggest giving them only the information pertinent to their purchasing strategy. Following are other recommendations regarding the Toolkit:

- a) Encourage individuals to use the EPA’s website by providing links to UCSF’s website
- b) Provide more detailed product-specific information.
- c) Set up Tool Kit as a web-based subscription service, much like existing services used by procurement officials such as Buyers Lab and Data Quest (www.dataquest.com). Offer a free subscription to users.
- d) Offer an Energy Efficient Product Procurement email listserv as part of Tool Kit subscription (or tap into existing procurement listserv services). Listserv would provide procurement officials with email notices of energy efficient product updates and provide a forum for email exchange of experience. The listserv could even give “green tips” periodically, and could keep users informed in a relatively non-intrusive way.
- e) Offer a training component with the Toolkit.

3. Increase use of Energy Star features in office equipment.

By meeting with Campus Computer maintenance (Information Systems) to discuss concerns about enabling ES features and impact on network operations, we can determine how feasible it would be to enable networked computers, on an ongoing basis. Depending on outcome, Computer Maintenance Group could also become involved in enabling Energy Star features.

4. Work with vendors to educate users, and to increase their market share of energy efficient equipment.

Vendors could be encouraged to display Energy Star information at the annual computer fair, to participate in conferences and workshops on energy efficiency and to promote energy-efficient products on campus. Additionally, MM should start building energy efficiency into their negotiated contracts to encourage the sale of energy efficiency. A meeting could be held with local vendors, to try to understand their barriers for selling energy efficiency at UCSF, and to help them overcome those barriers. Holding an interactive meeting in a non-sales environment between vendors and staff would create a dialogue to help overcome barriers as well. These could be organized by utilities and energy efficiency business associations.

5. Create an aggregate purchasing group

An aggregate purchasing group would reduce the overall cost of the products being purchased, thus lend to purchasers participating in an aggregate program. Energy efficiency would be built in to the specifications for the products being purchased. This

would be even more effective if purchasing over MM website becomes more prevalent. The aggregation scheme could also spread to other members outside the UCSF community, to get even better purchase prices.

6. Work with professional associations of procurement officials.

Examples include: National Association of Purchasing Managers; National Contract Management Association.; National Association of State Purchasing Officials. As with the University of Washington, presenting information at local chapter meetings and national conferences would target not only the UCSF audience, but also a larger audience in a variety of institutions.

The following barriers and recommendations outlined by UCSF through a survey.

Barriers

- People don't have the time to make energy comparisons or look for efficient products
- Energy costs are charged department-wide, so savings are hidden
- Product availability
- Want products that meet their needs, regardless of energy efficiency
- Decentralized purchasing practices
- No specific direction from upper management (such as chancellor)
- Energy efficient products are equivalent in quality

Solutions

- Work with vendors to help educate users, and find other means to educate users, such as the Conference.
- Have more participation from vendors and managers and buyers at the next Conference
- Have project managers and energy consultants from FM interject with options for energy efficient alternatives where appropriate
- Have greater direction from upper management (such as the chancellor)
- Recognition for departments who are saving energy
- Recognition for individuals who have ideas that could save energy (contest)

B. Other Similar Organizations - Prioritize Recommendations Considering Cost vs. Benefit on a Large Scale.

We believe that many of the above recommendations would work well in similar organizations. Joining the Rebuild America program is a recommendation we can make to any state or local government organization. The organization receives a variety of assistance, both through the Department of Energy, and through other sources such as National Labs and other Rebuild partnerships.

An interactive conference, especially one that would include interaction between vendors and users is an effective way to educate both parties, and start to overcome barriers. Other low cost recommendations include linking to EPA's website, and using a listserv to provide "green tips" that could be used for organization-wide newsletters.

Working with professional organizations would overcome barriers for a broad number of

similar organizations, as you would be able to target multiple organizations.

C. Purchasing Initiative - Necessary Procurement Tools and Aids

Case studies

Case studies can be built out of each of the pilot studies, or used from other programs (EPA or DOE programs), to share with organization wishing to do similar work. For case studies build on the pilot studies, the information in these reports could be condensed and presented in a format that is easier to read. Development costs would be minimal.

Green tips

Green tips could be developed on a monthly or other periodic basis, for inclusion in organization newsletter, or as general tips to be sent to a listserv. These tips could be taken from existing sources (again, EPA or DOE programs among others), and could focus on equipment and service related issues, as well as resources that exist to assist people in overcoming challenges. Again, development costs should be minimal for this effort.

Drop in policy language

Several of the organizations we spoke with were interested in other policies, city-wide, state-wide, or by department, that had been written and used by other organization. They were also interested in the processes used to get these policies in place; information on such could be included as a precursor to the language. Again, development costs should be minimal for this effort.

Toolkit more product focused

Several individuals were interested in product specific information about energy efficiency products, and a comparison between energy efficient and less efficient products. This could be done in conjunction with Consumer's Reports, which in the past has issued reports with energy efficiency information for products; including that information, as it is available would partially satisfy the requests. In general, however, this type of information can be difficult to provide, as product information can become very quickly outdated. We felt that having more specific information than just "Efficiency recommendation depends on type and wattage of the lamp" would be useful for the lighting section. Even some information on general wattage and efficiencies by product type would be useful, e.g. T12 vs. T8 vs. T5 lamps, or comparing CFLs to incandescents. The development cost of such an effort can be more extensive than the other measures mentioned above, but also could be minimal depending on the effort involved.

IV. Implementation Plan

UCSF, as a Rebuild America partnership, is currently writing their action plan for energy efficiency. This plan will outline the programs they will target both short and long term, as well as planning for expansion of their partnership. We will continue to work with them as their program representative for this initiative.

In general, UCSF will be focusing on education of users, and on building retrofits.

The implementation plan for improving energy efficiency procurement in UCSF would focus on bringing to action many of the recommendations proposed above. We would propose this happen in three phases.

Phase I: Scoping and Development

We would meet with representatives from three of the key players in the procurement function including facility managers, purchasing agents, and product vendors to identify informational needs and help design effective formats for addressing these (e.g., meetings, technical sessions, etc.). We would expect to recruit state individuals to be a part of developing and/or implementing educational activities. We would also identify state and regional organizations which could contribute value and resources. This could include the Pacific Energy Center which serves PG&E's service territory, the California Energy Commission, and local purchasing and facility professionals chapters, as well as other Rebuild America partnerships in the state. In the pilot project, we identified a number of existing groups we could access for this scoping phase.

- Work with the Public Affairs office, as well as Facilities Management and Materials Management, to identify the best way of working with purchasing agents. This may include already scheduled meetings, or organizing new meetings.
- Work with FM and MM to determine project priorities and actions needed.
- Work with Public Affairs to determine the design their next conference
- Work with other facility managers in the UC system, potentially through the Office of the President.
- Contact local chapters of pertinent associations.
- Attend one of the many meetings held for UC purchasing agents, including annual computer fairs.
- Work with the local vendor associations and the Northwest Energy Efficiency Council to convene a meeting of vendors to similar to the one held in Washington State.
- Work with other Rebuild America partnerships in the state, such as the utilities or universities.

Phase II: Educational activities

In this phase, we would act on priority recommendations emerging from the scoping meetings by developing educational formats, topic areas and a schedule for conducting workshops or meetings. Examples might include interactive workshops with each of these key player groups; technical presentations at agency and professional association meetings; vendor fairs/product days for information exchange. We would also work with various organizations to provide information to UCSF such as case studies and green tips for the UCSF web page. There are several other areas FM and MM might identify as priority assistance needed, such as work on their aggregation strategy.

Phase III: Feedback and Next Steps

In this phase, we would review feedback from participants involved in Phase II activities to identify which projects and events were useful and specific actions that resulted.

V. Results

These design and focus of implementation plan activities should be on these results:

- Common understanding of energy efficient procurement challenges,
- Increased commitment to solutions,
- Greater awareness of opportunities,
- Increased understanding of current information sources, and increased networking to improve access to information,
- Understanding of the resources vendors can bring to the process,
- Improved vendor-customer relationship.