Budget Workgroup (BW)
Summary Points of Meeting
March 12, 2010
Hawai‘i Hall Room 309
9:00 am – 10:00 am

Attendees: Kathy Cutshaw, Reed Dasenbrock, Tom Ramsey, Maenette Benham, David Chin, Alan Teramura, Marla Acosta, Annette Chang, Tom Bingham, Gary Ostrander, Francisco Hernandez, and David Ross.
Guest: David Hafner

UH Mānoa Energy Status Report (David Hafner):
David Hafner highlighted efforts of the UH Mānoa campus to reduce energy costs: http://www.manoa.hawaii.edu/facilities/MiscDocs/Energy_Update_20100203.pdf

- The steady/reliable increase in CIP funding facilitated the allocation towards investments into energy savings infrastructure. 30% of the biennium capital program is toward HVAC mechanical upgrades.
- Based on a baseline of 121,000,000 kWh, 75% of all energy savings come from mechanical upgrades. The Energy Usage Reduction Plan established percent reduction targets through 2014.
- In FY 2009, the campus reduced energy usage by over 7% ($1.5M savings). We are on target for FY 2010 with an anticipated $3.5M in savings.
- The Mānoa Green Days over the winter holidays resulted in $40K savings as well as indirect secondary benefits. During the overall two (2) month period from December 2009 – January 2010, energy reduction resulted in estimated savings of $225K.
- The student dormitories have a separate energy budget with a flat/stable energy usage. Most dorms do not have air conditioning. At the towers, lighting and windows were changed and efforts to educate students about energy usage occurred. For the future, we are looking forward to a system that could better monitor energy usage.
- Currently, there is a $200M backlog to replace/repair scheduled equipments on campus and approximately $500M if we include modernization/renovations. As scheduled or required replacements occur, the newest technologies are being installed to achieve energy savings (i.e., Watanabe Hall).
- It is expected that utility rates (HECO) will increase next year.
- KWh future estimates do not include anticipated new buildings, such as Campus Center’s new facility.
- Campus is also looking to designate existing buildings as “green”, i.e., Sinclair Library (except basement) and Gartley Hall.
- Future initiatives include:
  - Installation of intelligent metering technology
- Installation of photovoltaic rooftop systems to provide Distributed Generation capability
- Intelligent building power distribution and control systems
- A new “smart grid” campus electrical substation
- Time-of-day billing and demand response

**Group Discussion:**

- Alternative energy sources: PV systems and partnership mechanisms are being considered. Several departments/buildings want to put up a plant with ranging KW plans. One idea is to consider utilizing undeveloped land on West Oahu for PV systems to generate energy for UH Mānoa.
- Billing for energy usage: UH System, RCUH, UHF are currently not on a recharge plan. Buildings that are include the National Weather Service.
- Shortened semester: What would the impact on energy usage be if the semester is shortened by one (1) week? A potential indicator could be the holiday cost savings over the spring break. A complementary strategy may be to put like operations together.

**Recommendations/Follow-up:**

The BW noted two (2) areas to address in future efforts:

1) Communications

Recommend that D. Hafner provide similar presentations throughout the campus, such as to occupants of buildings, Faculty Senate Congress, and individual schools, to create an understanding of the bigger picture, and to gain assistance and support by campus units on implementation. There are number of projects/efforts going on, but have not been very good in communicating and educating the campus on the strides made. A great time to highlight the many successful efforts in energy savings is the upcoming Earth Day.

2) Policy

Recommend developing policy related to:

a) Utilizing open air/green buildings (new and existing facilities) wherever possible;

b) Utilizing classroom and other space;

c) Reducing barriers to seeking alternative energy strategies at UH Mānoa, such as certain regulatory processes that are obstacles to funding.

- R. Dasenbrock will follow-up with the Law School regarding item 2c.
- D. Hafner suggested the BP group and others consider the cost per square foot to operate a facility compared to using institutional gross revenues.

**Next Meeting: Friday, March 19, 2010 at 9am in Hawai‘i Hall 309.**