

SANTA BARBARA COUNTY BOARD AGENDA LETTER



Clerk of the Board of Supervisors
105 E. Anapamu Street, Suite 407
Santa Barbara, CA 93101
(805) 568-2240

Agenda Number:
Prepared on: 4/4/01
Department Name: General Services
Department No.: 063
Agenda Date: 4/17/01
Placement: Departmental
Estimate Time: 1 hour
Continued Item: NO
If Yes, date from:

TO: Board of Supervisors

FROM: Ronald Cortez, General Services Director

STAFF CONTACT: Doug Martin, General Services x2628
Bob Nisbet, General Services x2633

SUBJECT: Energy Efficiency Program; All Supervisorial Districts

Recommendation(s):

That the Board of Supervisors:

- A. Receive a staff presentation regarding the impacts of energy consumption and rate increases on County finances, and the implementation of an Energy Efficiency Program for County facilities to help mitigate those impacts.
- B. Adopt the attached resolution concerning energy conservation.
- C. That the Board approve the attached Budget Revision drawing \$410,000 from contingency to cover unanticipated energy cost increases in natural gas (\$215,000) and electricity (\$195,000).

Alignment with Board Strategic Plan:

The recommendations are primarily aligned with Goal No. 2: Ensure the Public Health and Safety and Provide Essential Infrastructure, and Goal No. 5: A High Quality of Life for all Residents.

Executive Summary and Discussion:

Over the past four months, significant events have occurred to the price and availability of electricity in the state of California. Wholesale prices of electricity charged to the utility companies that distribute to ultimate users have risen several hundred percent. The Utilities, in response to the cost increases, have asked for significant rates increases of up to 30 percent. On January 4, 2001, the California Public Utilities Commission (CPUC) approved a temporary hike of \$0.01 per kilowatt-hour (kWh).

On March 27, 2001, the CPUC made permanent the \$0.01 rate increase and added an additional \$0.03 per kWh. The impact of this latest increase on the County is unknown at this time, as the methodology of application of the rate increase has not yet been published.

General Services is responsible for the payment of utility bills for the majority of County – owned facilities. In the last two fiscal years, electricity has cost the County approximately \$1.7 million per year. The appropriation for the current year is \$1.805 million. Tracking current expenditures to date, it appears that the County is still within budget in spite of the increase in January. This is due to the fact that consumption has been reduced during the first three months of 2001 which has offset the January rate increase. We cannot expect conservation measures to continue to cover the increase in costs, however, as the March increase adds an additional \$0.03 per kWh. We anticipate that an additional \$195,000 will be necessary to cover the County's electricity bills through the end of the fiscal year.

Keep in mind that the cost of electricity is more than just a consumption charge per kilowatt-hour (kWh). Both utilities charge for peak demand, the maximum draw the meter registers during a billing cycle, as well as how much electricity is consumed. To further complicate things, different rate schedules are set for winter and summer periods and, on some accounts, the time of day that usage occurs. The two largest County accounts for electricity are on this tiered approach while the rest of the meters utilize flat rates per kWh with some variation for the season. The CPUC has now agreed in concept that a tiered rate approach is the best way to apply the latest rate increase. How that affects the County can only be determined once the rate schedule is published.

In the last two fiscal years, natural gas has cost the County approximately \$400,000 per year. The appropriation for the current year is \$445,000. Tracking current expenditures to date, the County has spent \$453,000 with three months left in the fiscal year. Natural gas rates have nearly doubled in the last twelve months. This necessitates a request from contingency to fund an additional \$215,000 to cover natural gas costs through the end of the fiscal year.

Energy Efficiency Program

In May 1996, General Services hired an energy consultant to prepare an Energy Efficiency Program. This document made recommendations regarding equipment retrofits at various County facilities that would reduce energy consumption. The program was based on the available budget for such projects at that time and covered a three-year period. Many of the recommendation contained in the study have been completed and General Services has hired the same consultant to update this plan. The update will be finished within the next 3 weeks and will cover an additional 3-year term beginning with fiscal year 2001-02. The plan will be based on an established hierarchy of Energy Control Measure (ECMs) and will make recommendations within all 5 of the categories which follow:

- I. **Conservation.** The most important method to combat the adverse fiscal impact to the County of these rate hikes is to aggressively market a conservation campaign with all County employees. This point cannot be stressed enough. Our consultant informed us that proper conservation could reduce our energy consumption by up to 30%. The County's Green Team has met and developed several recommendations to conserve energy. Measures as simple as turning office lights off when not in use and taking the stairs, not the elevator, can reduce the County's consumption of electricity, thus reducing our costs. This is the most important activity in the hierarchy, and costs the least amount to implement. A plan will be established to design and implement a successful campaign.
- II. **Equipment Operations and Controls.** The heating, ventilation, air conditioning, (HVAC) and lighting equipment in County buildings are sophisticated systems that must be maintained and operated properly. Controls that are not set correctly and equipment that is operating inefficiently due to improper maintenance will consume more electricity. This activity, like conservation, does not require new expenditures, but if monitored and maintained properly, can yield substantial reduction in electricity and natural gas usage.
- III. **Building Re-Commissions.** The HVAC equipment in new buildings are "commissioned" to operate as efficiently as possible. From the day a new building is occupied, it begins a decline in operating efficiency. This activity is different from *Equipment Operations and Controls* in two ways: 1) Re-commissioning a building will take steps, and make recommendations beyond setting the controls on the existing systems properly; 2) A recommissioning study must be done by an expert, can be expensive, and will make recommendations that will cost additional money. However, for certain buildings, the reduction in electrical consumption resulting from implementing the recommendations of a recommissioning study will "payback" the cost in three years on average.
- IV. **Retrofits.** Replacing equipment with technologically advanced equipment that consumes less energy is known as energy retrofits. The equipment that is replaced does not necessarily need to be old equipment that has outlived its normally accepted operating life. The majority of the County buildings were constructed before the promulgation of the California Title 24 Energy Standards. If an acceptable payback can be demonstrated, it may make sense to replace fairly new equipment. The most common example of a retrofit project is replacing fluorescent lighting tubes with advanced tubes that consume significantly less electricity.
- V. **Modernization.** Replacing equipment that has outlived its useful life is modernization. Normally, outdated equipment operates extremely inefficiently and replacing the equipment will achieve energy use reductions in addition to operation savings. Many modernization projects are planned in the County's Deferred Maintenance Program. Modernization and Retrofits are somewhat equal on the hierarchy scale. Each building offers distinct opportunities for improvements in energy efficiency. Therefore, each modernization and retrofit project must be evaluated separately. Most improvements will have an initial cost, but will yield annual savings (or cost avoidance) over the service life of the improvement. The payback is the point in time in which the total savings equal the initial cost.

One ECM that does not fall neatly into one of the five categories is utilizing motion sensors to turn lights and computers on and off. Such devices actually work against conservation but can yield an enormous savings when used in key places like restrooms. The County already is using motion sensors in some situations and this Program will likely recommend increasing the usage of these devices.

Shot-Term Projects (6 months)

On February 13, 2001, the Board allocated \$434,000 towards energy efficiency projects from unanticipated interest revenue. Additionally, General Services has approximately \$116,000 in the deferred maintenance budget that was planned to be used for lighting retrofit projects. Over the next 6 months, the department plans to spend this money as follows:

Automatic-Lowering Devices on 24 County Elevators (This item will not reduce energy consumption but is recommended as a safety measure in anticipation of blackouts this summer.)	\$100,000
Lighting Retrofits	\$150,000
Motion Sensors	\$ 28,000
Re-Commissioning Studies of Administration Building & County Courthouse	\$ 60,000
<u>Replace Air-Conditioning at Courthouse</u>	<u>\$212,000</u>
Total	\$550,000

Mandates and Service Levels:

None

Fiscal and Facilities Impacts:

Contingency will fund an additional \$410,000 in utility costs for the current fiscal year. Please note the attached Budget Revision.

Attachments:

- Resolution
- Budget Revision Request

**Energy Efficiency Program
All Supervisorial Districts
Agenda Date: April 17, 2001
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