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**ACTION UNDER PRESIDENT'S AUTHORITY – AMENDMENT OF THE BUDGET FOR
CAPITAL IMPROVEMENT AND THE CAPITAL IMPROVEMENT PROGRAM AND
APPROVAL OF EXTERNAL FINANCING FOR 2007-08 ENERGY CONSERVATION
PROGRAM, LOS ANGELES CAMPUS**

It is recommended that:

Pursuant to Standing Order 100.4(q)

- (1) The President amend the 2007-08 Budget for Capital Improvements and the Capital Improvement Program to include the following project:

Los Angeles: 2007-08 Energy Conservation Program -- \$4,200,000, to be funded from external financing.

Pursuant to Standing Order 100.4(nn)

- (2) The President be authorized to obtain financing not to exceed \$4,200,000, subject to the following conditions:
 - a. Interest only, based on the amount drawn down, shall be paid on the outstanding balance during the construction period;
 - b. As long as the debt is outstanding, the Los Angeles campus' share of Federal Indirect Cost Recovery deposited to Fund 19933 shall be maintained in amounts sufficient to pay the debt service and to meet the related requirements of the authorized financing; and
 - c. The general credit of The Regents shall not be pledged.
- (3) Officers of The Regents be authorized to provide certification to the lender that interest paid by The Regents is excluded from gross income for purposes of federal income taxation under existing law.

- (4) Officers of The Regents be authorized to execute all documents necessary in connection with the above.

DESCRIPTION

The Los Angeles campus is requesting approval of the 2007-08 Energy Conservation Program at a total cost of \$4,200,000 to be funded from external financing. These funds are needed to reconfigure the Heating, Ventilation and Air Conditioning (HVAC) systems in six buildings to improve energy efficiency while meeting operating and occupancy needs.

Background

The University has experienced a dramatic increase in purchased utilities costs over the last seven years. For the Los Angeles campus, growth-adjusted purchased utilities expenditures have increased approximately 120 percent since 2000, a rate of increase that far exceeds budgeted increases for operations and maintenance of plant (OMP). At the December 2002 meeting of the Committee on Grounds and Buildings, The Regents requested that the President undertake a feasibility study for the adoption of a Green Building Policy and Clean Energy Standard for all proposed and to-be-renovated buildings. In June 2004, the President formally issued the "Presidential Policy on Green Building Design and Clean Energy Standards." President Dynes issued additional policy guidelines in January 2006. In March 2007, President Dynes further expanded the University's Policy on Sustainable Practices to address in more depth climate protection practices, as well as other areas.

The Los Angeles campus has identified the proposed Energy Conservation Program as one of a number of opportunities to increase energy efficiency and reduce the overall carbon footprint of the campus. The 2007-08 Program is the first component of a four-year program that would eventually encompass 185 HVAC subsystems in 25 buildings, cost \$16.7 million, and produce \$4.2 million (at current energy prices) in annual savings. The program would reduce annual campus greenhouse gas emissions by approximately seven percent (17,000 tons of CO₂). The program would also reduce the peak campus demand for chilled water by close to 2,000 tons.

Program Description

This program addresses buildings constructed in the late 1950s through the 1970s that use a then common double duct air distribution system. Such systems use single, constant volume supply fans that blow air over side-by-side heating and cooling coils into separate ducts that convey warm and cold air streams. The streams are mixed at the delivery points to yield the desired temperatures. A constant volume of heating and cooling water is circulated throughout the building to condition the air. While double duct systems are reliable, they are very energy inefficient because they continuously heat and cool air streams even when only heating or cooling is needed. The vast majority of subsystems included in this program have benefited from the campus deferred maintenance program with the installation of new cooling and heating coils, pumps, and new or refurbished fans. This previous work on the major components of these subsystems has provided the foundation to increase the systems' operating efficiency through reconfiguration of the distribution systems and modernization of control systems.

This Energy Conservation Program would modify each double duct air system to allow the amount of air supplied and exhausted to be regulated in accordance with building occupancy and outdoor air conditions. The air flow controls would be modified to allow only heated or cooled air, rather than a blend, to be supplied. Carbon Dioxide (CO₂) sensing would be added to monitor occupancy, and highly reliable campus weather stations would be added to monitor outside air conditions. Controls would be modernized to permit the use of sophisticated control algorithms to regulate system performance. Hot and cold water systems in each building would be converted to enable flows to vary based on needs driven by occupancy and outside atmospheric conditions.

The plan is to request approval for additional external financing of approximately \$4.2 million each year (2008-09, 2009-10, and 2010-11).

Sustainability

This Energy Conservation Program would comply with the UC Policy on Sustainable Practices and applicable policies for construction and maintenance. As required by this policy, the project would adopt the principles of energy efficiency and sustainability to the fullest extent possible, consistent with budgetary constraints and regulatory and programmatic requirements

Environmental Classification

In accordance with the California Environmental Quality Act (CEQA) and the University Guidelines for Implementation of CEQA, as amended, the proposed program is Categorically Exempt Class 1 Existing Facilities.

Financial Feasibility

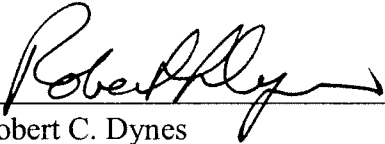
The total cost of the Los Angeles Campus 2007-08 Energy Conservation Program would be \$4,200,000 funded from external financing.

As long as the debt is outstanding, the Los Angeles campus share of Federal Indirect Cost Recovery deposited to Fund 19933 shall be maintained in amounts sufficient to pay the debt service and to meet the related requirements of the authorized financing. The projected annual debt service would be approximately \$418,000, calculated at an interest rate of 5.50% for 15 years. Total projected annual debt service from this source, including debt service for the entire Los Angeles Deferred Maintenance and Capital Renewal Program and the current Energy Conservation Program would be \$4,322,000, with a debt service coverage ratio of 4.23x times.

The UCOP Budget Office is currently negotiating with the State for language that would allow the use of operations support funds allocated in the State Budget for the financing of energy conservation projects. Should this negotiation be successful, the campus would request an amendment to allow for repayment from State General Funds.

The external financing would be paid from revenue sources identified in the external financing documents; therefore, the general credit of The Regents would not be pledged.

Approved by:

 3/12/08
Robert C. Dynes Date
President of the University

Attachment

ATTACHMENT

SUMMARY FINANCIAL FEASIBILITY ANALYSIS

Project Title:

2007-08 Los Angeles Campus Energy Conservation Program

Total Estimated Program Cost:

\$ 4,200,000

Proposed Source(s) of Funding:

External Financing

\$ 4,200,000

Proposed Financing Terms:

Interest Rate: 5.50% Duration: 15 Years

Pledged Source of Repayment (FY 2006-07):

Federal Indirect Cost Recovery

Deposited to Campus University General Funds (19933)

\$18,300,000

Estimated Annual Expense:

Projected Annual Debt Service (proposed project)

\$ 418,000

Existing Annual Debt Service (Los Angeles DM Program)

\$ 3,904,000

Total Annual Expense

\$ 4,322,000

Debt Service Coverage

4.23x