

PROCEDURES FOR IMPLEMENTATION OF UC GREEN BUILDING POLICY

I. Purpose

At the July 17, 2003 meeting, The Regents approved “as University policy for all capital projects, the principles of energy efficiency and sustainability in the planning, financing, design, construction, renewal, maintenance, operation, space management, facilities utilization, and decommissioning of facilities and infrastructure to the fullest extent possible, consistent with budgetary constraints and regulatory and programmatic requirements.”
<http://www.ucop.edu/facil/greenbldgs/regpolicy.pdf>

On June 16, 2004 the President formally issued the University Policy on Green Building Design and Clean Energy Standards. Refer to the following link for policy:
http://www.ucop.edu/facil/greenbldgs/UC_green_clean.pdf

The purpose of this document is to provide further information and guidance to campuses for implementing University policies and standards for the design of green buildings. These standards are more detailed than those contained in the above referenced policies.

II. University of California Green Building Guide

The UC Green Building Guide is presented as an Excel spreadsheet, filename [UCGBGScoresheet.xls \(Link Scoresheet\)](#). This guide fulfills Item I.h. in the Presidential policy on Green Building Design: that the Office of the President will develop an internal evaluation system and certification standard based on the U.S. Green Building Council's (USGBC's) LEED™ 2.1 rating system and the U.S. EPA and DOE Laboratories for the 21st Century (Labs21) Environmental Performance Criteria for laboratory buildings. Other green building measures or application guides as may reasonably fit the types of buildings normally constructed by the University may be formally incorporated into this Guide in the future.

III. Standards for Internal Certification

The Presidential Policy states that all projects submitted for first formal scope and budget approval after the start of FY 2004-2005 shall:

- a) Outperform the required provisions of the California Energy Code's energy-efficiency standards by at least 20%;
- b) Incorporate the mandatory measures described in Section IV of this UC Green Building Guide; and
- c) Achieve the equivalent of a LEED™ 2.1 "Certified" rating.

Campuses may choose to undertake an external certification process (e.g. LEED) in lieu of using the UC Green Building Guide to achieve Item III. c (above). Submittal requirements for PPGs and at the time of Regents Design Approval, including follow-up through the Major Capital Projects Implementation Report reporting process, are described below.

IV. Development of Campus Baseline UCGBG Scoresheet

Based on UCOP understanding of each campuses design and construction practices and

standards, a draft Campus Baseline was prepared for review and finalization for eight campuses (Berkeley, Davis, Irvine, Los Angeles, Riverside, Santa Cruz, San Diego, San Francisco). Each draft Campus Baseline consisted of common points which are considered to be achievable within the normal cost range of UC building projects. Additional points which may be achievable on individual projects were also indicated in columns next to the Baseline Points column.

Campus Baseline points are derived from overall campus planning and development practices and standards embodied in the LRDP and LRDP EIR mitigation measures and in campus design and construction standards. UCOP Budget Office and Facilities Administration have reviewed and discussed draft baselines with each campus with the goal of finalizing each campus baselines for use with new projects starting in FY 2004-05. Once complete, the baseline constitutes a commitment by each campus to a standard of LEED equivalency for all new building projects.

V. Procedures for Compliance

Each UC new building project submitted for first formal scope and budget approval after the start of FY 2004-2005 shall comply with the terms of Green Building Design policy and the UC Green Building Guide. Significant renovations of existing buildings will also apply sustainability principles to the systems, components and portions of the building being renovated. To the extent feasible within approved funding, campuses are encouraged to apply sustainability principles to all projects currently in design.

- 1) Submittal of PPG and approval of project budgets: The final scope of each project, including measures to be taken in compliance with this policy, shall be confirmed in the approved PPG. If a project is not projected to meet the requirements of this policy under section III, the campus must request a waiver of the requirements of the discretionary components of this policy at the time the draft PPG is submitted.
 - a. Exceptions will be evaluated for scope, cost, and impact on the overall design by Office of the President staff in the Budget Office and Facilities Administration. Approval for exceptions prior to Budget Approval will be granted in a joint letter from the Senior Vice President – Business & Finance and the Vice President for Budget.
 - b. Exceptions requested after Budget Approval will be treated as a change in scope, subject to normal University procedures for approval of changes in scope.
- 2) Enrollment in Savings by Design: The Savings by Design program is California's new construction and renovation/remodel energy efficiency program, which is administered statewide and funded by utility customers through the Public Purpose Programs surcharge applied to gas and electric services (either the Public Goods Charge for electrical service customers, or the Gas Surcharge administered by the California Public Utilities Commission). Four utilities offer the program in their respective service territories: Pacific Gas & Electric (PG&E), San Diego Gas & Electric (SDG&E), Southern California Edison (SCE), and the Southern California Gas Company (SoCalGas). Services offered under the program include design assistance, energy analysis, and financial incentives.

As long as the Savings by Design program is funded by the California Energy Commission, all new building projects shall enroll in the Savings by Design program.. UCOP has confirmed that all campuses are eligible to use the Savings by Design program. Additionally, student housing and other large-scale residential projects will qualify for participation in the Savings by Design program.

All new UC building projects in conformance with this policy will qualify for both energy analysis services and life-cycle cost calculation services, as well as utility rebates.

- a. Energy performance analysis. As part of the Savings by Design program, the energy performance of each building shall be analyzed using the Whole Building method.
 - b. Life-cycle cost calculation. As part of Savings by Design program, each building will qualify for life-cycle cost calculation services. Obtaining life-cycle cost calculations fulfills Item L of the Policy of Green Building Design.
 - c. Utility Rebates. At the time of enrollment, each project has a choice of either receiving energy analysis services from the Savings by Design program directly, or providing monetary incentives to the design team to perform the analysis. Owner incentives (utility rebates) are paid separately on the basis of actual building performance as measured after completion.
- 3) Submittal for Design Approval: When bringing a project forward for Regents' Design Review, campuses shall submit two items in addition to the standard Regents' Item for Design Approval:
- a. The UC Green Building Guide score sheet identifying prerequisites and points to be incorporated into the project, and
 - b. The projections of energy use calculated using the Savings by Design Whole Building method, confirming compliance with energy conservation goals of this policy.

This submittal constitutes a commitment to the Regents that the green building policy objectives will be met.

- 4) Major Capital Projects Implementation Report: After Approval of Design, campuses shall continue to verify compliance annually through filing of the Notice of Completion by means of the annual Major Capital Projects Implementation Report submittal process after the close of each fiscal year.

VI. Mandatory Performance Objectives

In addition to the requirement to outperform the applicable current version of Title 24 by a minimum of 20%, the University of California Green Building Guide requires campuses to address additional measures in the design of new buildings. These measures are defined as either process requirements or as performance objectives. Relevant individual LEED measures which address these requirements and objectives are given as a reference in the scoresheet.

The widely-available United States Green Building Conference standards for green buildings serves as a reference for specific measures related to the points included in the UC Green Building Guide at www.usgbc.org.

For laboratory building projects, campuses shall incorporate both LEED measures and the Labs21 Environmental Performance Criteria (EPC), which specifically address sustainability issues in laboratory buildings. For the purposes of rating UC laboratory buildings internally, campuses may use Labs21 measures in the process of qualifying for an equivalent LEED rating. Criteria for determining whether a building is a laboratory (or not) are based on occupancy classifications of significant amounts of space in the building under the building code.

For acute-care facilities, further study will be conducted before a policy requirement stipulating green building ratings is adopted.

In the future, additional LEED™ measures may be defined and approved by the US Green Building Council, or by other agencies or organizations such as Labs21. To the extent which

these may address issues of sustainable campus development, or sustainable design and construction of building types commonly constructed by the University, these will be incorporated into future versions of the UC Green Building Guide.

For *non-laboratory* buildings, the mandatory performance objectives are:

- 1) Outperform the required provisions of the 2001 California Energy Code's energy-efficiency standards by at least 20%, and verify projected building performance by participation in the Savings by Design program using the Whole Building approach. (Reference: LEED Energy & Atmosphere Credit 1, Savings by Design).
- 2) Develop a commissioning strategy in support of project delivery. For the purposes of compliance with this policy, a commissioning strategy may employ appropriately trained UC Facilities Management personnel as commissioning agents. (Reference: LEED Energy & Atmosphere Prerequisite 1, Energy & Atmosphere Credit 4.2 - IS THIS LABS 21 OR LEED?)

For *laboratory* buildings, the mandatory performance objectives are:

- 1) Same as above; in addition, address systems which are not regulated by the 2001 California Energy Code's energy-efficiency standards:
 - a) Develop strategies for right-sizing of laboratory equipment in building energy budgets. Measure base usage of equipment electrical loads in comparable laboratories, and design electrical and cooling systems based on these measurements. (Reference: Labs21 Energy & Atmosphere Credit 8, Credit 9.1)
 - b) Verify and document laboratory ventilation requirements in programming phase. (Reference: Labs21 Prerequisite 4)
 - c) Develop energy and water metering strategies which further develop the ability of the campus to measure and effectively manage energy and water usage in buildings and campus-wide applications. (Reference: Labs21 Energy & Atmosphere 9.2)
 - d) Develop a strategy which can be applied in all new building designs that eliminates "once-through" water use by laboratory equipment except as needed as direct contact process water. (Reference: Labs21 Water Efficiency Prerequisite 1)
 - e) Develop a commissioning strategy in support of project delivery. For the purposes of compliance with this policy, commissioning strategy may use appropriately trained UC Facilities Management personnel as commissioning agents. (Reference: LEED Energy & Atmosphere Prerequisite 1; Credit 3)