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Office of the President

TO MEMBERS OF THE COMMITTEE ON GROUNDS AND BUILDINGS:

DISCUSSION ITEM

For Meeting of March 23, 2010

ANNUAL REPORT ON SUSTAINABILITY PRACTICES

EXECUTIVE SUMMARY

This is the sixth annual report on progress in implementing the Policy on Sustainable Practices (Policy), as required by the Regents' July 2003 action.

2009 calendar year highlights and achievements include:

- The University now has 32 Leadership in Energy and Environmental Design (LEED™ [1]) certifications (total of new construction, renovation, and existing building certifications), the most of any university in the country.

- Consistent with the recommendation of the UC Sustainability Steering Committee, and in response to the Regents' March 2008 Statement, the President issued a revised Policy in September raising the minimum green building requirement for new construction projects from LEED Certified or equivalent to LEED Silver or equivalent, with a goal for all projects to move from LEED Silver or equivalent to LEED Gold or equivalent.

- In response to the Regents' March 2008 Statement, the UC Sustainability Steering Committee recommended to the President that LEED certification be required for all new construction projects, and that the UC equivalent certification process option be eliminated. This recommendation is based on campus and industry best practices, the benefits accruing from credibility and consistency in the University's green building practices, the evolution of the LEED certification process, and constraints in University staffing resources available to implement an equivalent certification program.

- More than $29.8 million in energy efficiency grant funding has been received since 2004, with approximately $9 million received in 2009.

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[1] LEED is a registered trademark of the U.S. Green Building Council. This trademark applies to all occurrences of LEED in this document. LEED is a green building rating system developed and administered by the non-profit U.S. Green Building Council. The four levels of LEED certification, from lowest to highest, are Certified, Silver, Gold, and Platinum.

- Annual cost savings from energy efficiency projects implemented to-date are projected to reach nearly $15 million.

- The Regents approved $178 million in matching funding for energy efficiency projects from 2009-2011, matched by approximately $61 million from utilities. This investment will result in projected net savings of $17 million per year during the 15-year loan repayment period, and $35 million annually thereafter.

- As required by the Policy, all campuses completed climate action plans and have submitted, or will be submitting them, as required to the American College and University Presidents Climate Commitment.

- The University negotiated a systemwide opt-in car-share contract to increase car-share services and utilization across the system. UCSB, one of several campuses to opt into the contract, is saving $23,000 a year through its car-share program, and has tripled the number of shared vehicles available.

- Five campuses and the Office of the President have received certification for at least one LEED for Existing Buildings project from the U.S. Green Building Council (USGBC).

- Nine out of ten campuses met the goal of diverting at least 50 percent of municipal waste from landfill, with the other campus making significant progress towards that goal.

- More than 12 percent of the University's purchases that go through systemwide contracts met one or more environmentally-preferable purchasing standards.

- The University received multiple grants to fund students working collaboratively with staff and faculty to improve the sustainability of campus operations.

- The University partnered with the California State University (CSU) and the California Community Colleges (CCC) to hold the eighth Annual UC/CSU/CCC Sustainability Conference, which was hosted by the Santa Barbara campus and sold out with more than 750 participants.

- The University received twelve national and State awards (see Attachment 6).

- The University continues to be recognized in the top tier nationally in campus sustainability rankings.

- The University received media acclaim in local and regional newspapers, national publications such as the *New York Times*, *Christian Science Monitor,* and *USA Today*, and in multiple television and radio news broadcasts.

Future steps:

- Campuses are to develop sustainable food service goals and complete feasibility studies to determine how best to apply the Policy's sustainable food service guidelines to franchised, contract-operated, and medical center food service operations.

- The University will continue to work with the USGBC to finalize procedures for certifying multiple buildings through the LEED for New Construction and LEED for Existing Buildings rating systems, thereby further reducing the time and expense of achieving LEED certification.

- Campuses will implement climate action plans, largely by completing the energy efficiency projects identified through the strategic energy plan and funded by grants from utility companies.

- The University will continue to pursue purchasing initiatives and behavior changes that reduce resource consumption and thereby reduce operating costs in a time of budget constraints.

BACKGROUND

Pursuant to the Regents' action of July 2003, the President formally issued the Policy on Green Building Design and Clean Energy Standards in June 2004. Six additional policy sections have been subsequently added to those first two, and the expanded Policy is now referred to as the UC Policy on Sustainable Practices (Policy).

The current version of the Policy can be accessed at http://www.universityofcalifornia.edu/sustainability/documents/policy_sustain_prac.pdf.

In September 2009, President Yudof issued an updated version of the Policy which addressed recommendations from the Regents' March 2008 Statement on University of California Sustainability Programs and from the Systemwide Sustainability Steering Committee. The current Policy adds a section on sustainable food service, and revises and updates guidelines for green building design, climate protection practices, and sustainable transportation practices.

As required by the Regents, this sixth Annual Report monitors compliance with the Policy during the 2009 calendar year. The highlights are organized into the eight sections of the Policy Guidelines, followed by three cross-cutting topics: training, external recognition, and faculty, staff, and student collaboration.

2009 Highlights and Accomplishments

I. Green Building Design

I. a. Project Status Summary

The University has completed 32 LEED certified projects, the most of any university in the

country. A substantially larger number of projects have established LEED targets (at the time of project approval) and are in design or under construction. LEED certification occurs only after projects are completed. Since the passage of the Policy in 2004, as shown in Attachment 1, 125 new construction and 41 renovation[2] projects have committed to comply with the Policy. In 2009, all major capital new construction projects and significant renovation projects that received budget approval will comply with Policy guidelines. Eight projects achieved LEED for New Construction (LEED-NC) certification through the USGBC in 2009, all at the LEED-NC Gold level: four buildings at the Irvine campus, three buildings at the Merced campus, and one building at the Santa Barbara campus. Four projects achieved LEED for Commercial Interiors (LEED-CI) ratings: one at the San Diego campus (LEED-CI Gold), one at the Berkeley campus (LEED-CI Gold), and two at the San Francisco campus (one LEED-CI Silver and one LEED-CI Certified), bringing their campus total to three LEED-CI certified projects.

I. b. USGBC Campus Portfolio Pilot Program

In addition to individual project achievements, the Santa Barbara, Merced and Irvine campuses, as pilot members of the USGBC's Portfolio Program, are continuing discussions with the USGBC in order to establish prototype credits for each of these campuses. The Portfolio Program is designed to help companies, government agencies, and universities achieve LEED certification efficiently for a large number of buildings. In return for committing to certify a large portfolio of buildings under the LEED system, the USGBC provides discounts on certification fees, free consulting services, and other special support.

I. c. Energy Efficient Design

All projects implemented under the Policy are required to register with the Residential or Non-Residential New Construction Programs (formerly the Savings By Design Program). These energy efficiency programs, offered by California's four investor-owned utility companies and the Sacramento Municipal Utility District, provide design assistance, energy analysis, life-cycle costing, and financial incentives for new construction and major renovation projects. Financial incentives can be used to offset increased costs associated with constructing more energy efficient buildings. To date, 167 University projects totaling 20 million gross square feet have been registered with these programs. By the time these projects are completed, the University will have received $6.8 million in incentive payments from the utility companies, and is projected to avoid $4.8 million per year in energy costs. The Non-Residential New Construction Program was incorporated into the Energy Efficiency Partnership program with the state's investor-owned utility companies (outlined in *II. a*) in 2009, allowing University projects to earn higher levels of incentives.

I.d. Green Building Policy Changes

In September 2009, President Yudof issued an updated Policy that raised the minimum requirement for new construction projects to LEED-NC Silver with a goal to achieve LEED-NC Gold certification, within the constraints of program needs and standard budget parameters.

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[2] The green building policy requirements apply to all renovation projects. Significant renovation projects are those with a project budget of $5 million or greater and are required to target a LEED for Commercial Interiors or UC equivalent rating of Certified or higher. Of the 41 renovation projects listed in Attachment 1, thirty-one have a budget of greater than $5 million, while ten are under the Policy threshold and are voluntarily complying with the Policy.

Responding to regional water scarcity, the updated Policy also requires that all new building projects achieve at least two of the available credits in the LEED-NC Water Efficiency category. The revisions also clarify that the Policy applies to privatized development projects on Regents' land where the project is to be used for a University-related purpose.

These updates addressed the Regents' Statement on University of California Sustainability Programs (Statement), adopted in March 2008, which recommended increasing the green building requirements for new construction to LEED-NC Gold certification through the U.S. Green Building Council, in order to keep pace with industry best practices and maintain a leadership position on sustainability.

The March 2008 Statement also urged the University to further align with industry best practices by eliminating the option to pursue "UC equivalency" to LEED certification for new construction and significant renovation projects. The systemwide Green Building Working Group, composed of campus representatives, considered the Regents' Statement and recommended that the University heed the Regents' request to require third-party LEED certification through the USGBC. The recommendation is based on the following considerations: the fact that all campuses had already moved toward requiring third-party LEED certification through the USGBC; it reflects campus and industry best practices; it acknowledges the benefits accruing from credibility and consistency in the University's green building practices (which third-party verification achieves and "UC equivalency" does not); and it reflects the evolution of the LEED certification process. In addition to these external factors, due to staffing constraints the University does not have sufficient staff to replicate the USGBC's certification process.

In October 2009, the systemwide Sustainability Steering Committee, composed of campus representatives at the vice chancellor or associate vice chancellor level, approved this recommendation, which will be incorporated into the 2010 update to the Policy.

II. Clean Energy Standards

II. a. Energy Efficiency and Conservation in Existing Buildings

Since the statewide Energy Efficiency Partnership program (the Partnership) started in 2004, the University has implemented energy efficiency measures resulting in an annual reduction in energy use of more than 105 million kilowatt-hours and five million therms. This represents $15 million per year in avoided energy costs.

In March 2009, The Regents authorized financing to continue the Partnership program through 2011 by approving a $247 million program budget. The participating utility companies will contribute approximately $61 million in incentive grants, with the remainder being funded with campus contributions ($8 million) and external financing ($178 million). This program is expected to net the University approximately $17 million in additional cost savings per year for the first fifteen years, and upon debt resolution achieve savings of over $35 million per year based on 2008 energy rates.

As illustrated in Attachment 2, these investments should allow the University to achieve its

Policy goal of reducing systemwide growth-adjusted energy consumption by ten percent by the year 2014 compared to a baseline year of 2000[3]. Through 2008, the University had already reduced its growth-adjusted energy consumption by over 3.5 percent. This is a notable accomplishment especially because a portion of the square footage that the University added during this period was energy-intensive complex space, including laboratories and data centers. Furthermore, since the baseline year, there has been a significant increase in the number of consumer electronic devices, including laptops, MP3 players, and cell phones, all of which contribute to increased energy consumption in university buildings.

The Green Campus Program continues to provide student energy efficiency and conservation internship opportunities. Managed by the non-profit Alliance to Save Energy, the Green Campus Program has chapters on the Berkeley, Santa Cruz, San Diego, Irvine, Santa Cruz, and Merced campuses. Green Campus student interns partner with campus faculty and staff to educate the campus community through programs such as laboratory fume-hood sash management campaigns, office energy audits, light bulb exchanges, project-based courses, and green demonstration rooms in campus residence halls.

In order to demonstrate new energy efficient technology at dozens of campus sites systemwide, the University's California Institute for Energy and Environment partners with the California Energy Commission's Public Interest Energy Research program[4]. Campuses have expanded their energy efficiency project portfolios with additional measures based on these technologies, installing the most successful measures in multiple buildings and increasing the impact of the Partnership. Exemplary projects are showcased through Best Practice Awards at the annual UC/CSU/CCC Sustainability Conference.

II. b. Onsite Generation and Grid Purchases of Renewable Energy

Towards the Policy goal of installing ten megawatts of onsite renewable energy generation by 2014, through 2009 the University has installed more than 3.5 megawatts of solar photovoltaic power generation across six campuses. Most recently, the Merced campus dedicated a new one-megawatt installation, which will supply approximately twenty percent of the campus' annual electricity needs. The Merced campus' location in the sunny San Joaquin Valley makes it an ideal area to study and develop solar energy projects and related research. Faculty and student researchers will use data collected from the array to help them explore and create solutions that will benefit California, the nation, and the world.

Twenty percent of the electricity that the University purchases through a systemwide contract comes from renewable sources as required by the Policy.

III. Climate Protection Practices

III. a. Greenhouse Gas Inventories Updated

Campuses completed updated greenhouse gas emissions inventories in 2009, and are reporting

[3] The energy procurement baseline is derived from the University Strategic Energy Plan, Table 1.1A. This information was adjusted using updated information from the following locations: Berkeley, Davis, San Diego, and San Francisco Medical Center. See Attachment 2 for more information on data sources.

[4] For more information, and an interactive map of projects, see http://pierpartnershipdemonstrations.com/

and verifying these inventories through the California Climate Action Registry. Campuses are also reporting emissions inventories through the American College and University Presidents Climate Commitment (ACUPCC)[5]. See Attachment 3, "Greenhouse Gas Emission Inventories by Campus," for more details on the University's emission profile.

III. b. Climate Action Plans are National Models

In 2009, the University continued its leadership in the fight against global warming. Within the last year, six campuses finalized climate action plans for achieving emission reduction targets established by the Policy; the four remaining campuses completed their plans by March 2010. Plans identify projects to achieve the emission reduction targets described below, and rely significantly on the energy efficiency projects funded through the Partnership to meet near-term goals.

With most UC campuses completing and publicly posting their climate action plans months before the other signatories to the American College and University Presidents Climate Commitment, the University played a leadership role by providing model plans for other universities across the country to follow. UCLA was the first university in the country to submit its climate action plan to the ACUPCC.

III. c. Campuses Setting More Aggressive Targets

The Policy commits the University to reduce its greenhouse gas (GHG) emissions to year 2000 levels by 2014, to 1990 levels by 2020, and to achieve carbon neutrality (i.e. zero net greenhouse gases) as soon as possible. Through their climate action plans, several campuses committed to more ambitious emission reduction timetables, for example:

- UC Irvine and UCLA committed to reduce emissions to year 2000 levels by 2012;
- UC Berkeley will reduce its emissions to 1990 levels by 2014;
- UC Merced will be carbon neutral (i.e. will have no net greenhouse gas emissions) by 2020.

III. d. Anticipating Regulatory Change

The University's voluntary efforts have positioned it well to comply with forthcoming federal and State regulation of greenhouse gas emissions. The Governor's Office of Planning and Research has developed guidelines for inclusion of climate change analysis in the California Environmental Quality Act (CEQA). In anticipation of these guidelines, campuses have already begun to incorporate greenhouse gas emission analysis in CEQA documents. Three campuses (Berkeley, Irvine, and Los Angeles) have amended their Long Range Development Plan Environmental Impact Reports (LRDP EIRs) to include analysis of greenhouse gas impacts of

[5] Per ACUPCC guidelines, all campuses were required to implement two of seven "tangible actions." All University campuses are in compliance with this requirement. All ten campuses are implementing tangible action four: "Encourage use of and provide access to public transportation for all faculty, staff, students and visitors at our institution." All ten campuses also implemented one or more of the following: tangible action one "establish a policy that all new campus construction will be built to at least the U.S. Green Building Council's LEED Silver standard or equivalent;" action two: "adopt an energy-efficient appliance purchasing policy requiring purchase of ENERGY STAR certified products in all areas for which such ratings exist;" or action seven: "participate in the Waste Minimization component of the national RecycleMania competition, and adopt 3 or more associated measures to reduce waste."

campus development. A fourth campus, UC Merced, incorporated its goal of achieving carbon neutrality by 2020 into its LRDP, for which it received the Governor's Economic and Environmental Leadership Award, the State's highest environmental honor.

The Air Resources Board (ARB) is currently developing cap-and-trade[6] regulations to reduce state-wide greenhouse gas emissions in support of California's goals as codified in Assembly Bill 32 (AB 32). Under an AB 32 cap-and-trade system, large polluters will have to buy permits to emit greenhouse gasses, effectively establishing a price for carbon. The AB 32 cap-and-trade program is scheduled to begin in 2012 and run through 2020.

Based on the preliminary guidelines that ARB has released, it appears that the University will face increased costs under cap-and-trade. These costs will be both indirect, as electrical and gas utilities pass their compliance costs along to consumers in the form of higher rates, and direct, since several campuses are large emitters of greenhouse gasses and therefore will be required to buy permits from ARB.

Given the extreme uncertainty about the content of final regulations, it is impossible to say with certainty what cap-and-trade's financial impact on the University will be. The University's best estimate at this time is that the systemwide, direct compliance costs will be somewhere between $1 million and $18 million in the first year (2012) of cap-and-trade. This estimate does not include anticipated indirect costs of cap-and-trade, such as higher utility bills.

Through its sustainability program, the University is well-positioned to minimize its exposure to direct and indirect costs associated with an AB 32 cap-and-trade scheme. The University's energy efficiency and renewable energy initiatives greatly reduce its demand for electricity and natural gas, and the University's efforts to plan for its long-term of goal of carbon neutrality have identified promising projects (described in section *III. e*) that could significantly reduce its direct compliance costs.

III. e. Planning for Carbon Neutrality

The Climate Solutions Steering Group continued its efforts to complement campus-specific energy efficiency and renewable energy projects by exploring large-scale, systemwide strategies to achieve the University's long-term goal of carbon neutrality. The Climate Solutions Steering Group was convened by the Executive Vice President, Business Operations and is chaired by UC Irvine Vice Chancellor for Administration, Wendell Brase. The group comprises senior campus executives and representatives from the Lawrence Berkeley National Laboratory, the California Institute for Energy and the Environment, the University's Office of General Counsel, and the Budget and Capital Resources department in the Office of the President. Among other opportunities, the Climate Solutions Steering Group has been evaluating the technical and economic feasibility of procuring bio-methane that can offset natural gas consumption in the University's cogeneration plants. In addition to bio-methane investigations, the Climate Solutions Steering Group is developing a business model to afford maximum flexibility in

[6] Cap-and-trade is a regulatory system that sets a limit on overall emissions of pollutants – the "cap." A central authority issues pollution permits; each permit entitles its holder to emit a specific amount of pollution. The total number of permits issued equals the pollution cap. Emitters can "trade" pollution permits among themselves. The cap grows tighter over time, increasing the cost of polluting.

utilizing clean energy technologies that emerge as the most cost-effective and feasible. A key to this effort is exploring ways for the University to transport power from large-scale remote-site clean energy projects to load centers on campus under the current and evolving regulatory framework.

IV. Sustainable Transportation

All campuses continue to make progress in the area of sustainable transportation. The University negotiated a systemwide opt-in car share[7] contract to increase car share services and utilization across the system. By opting into the systemwide car share contract, UC Santa Barbara tripled the number of shared vehicles available on campus and is saving $23,000 per year on its car share program.

Reducing greenhouse gas emissions from business air travel continues to be a topic of discussion in the Sustainable Transportation Working Group because air travel represents the largest percentage of GHG emissions from transportation sources.

In its annual campus sustainability rankings, the Sierra Club awarded high scores in the transportation category to seven of the University's ten campuses. On a scale of one to ten, Santa Cruz earned a 10, Irvine a 10, Berkeley a 9, Los Angeles a 9, Santa Barbara a 9, San Diego an 8, and Davis a 7.

Campus achievements include:

- UCLA is already below 1990 greenhouse gas levels for transportation, and is almost back to 1990 traffic volume levels despite adding 31 percent to the campus square footage since 1990.
- UC Davis and UC Irvine installed energy efficient lighting in parking structures. At UC Davis this retrofit reduced CO_2 emissions by 312 tons and utility costs by 50 percent.
- UC Irvine replaced lead weights on its entire fleet vehicle tires with zinc coated steel weights, reducing water pollution from lead weights that cast from tires.
- UC San Diego has five hybrid compressed natural gas (CNG) buses and a CNG fueling station.

Attachment 4 provides the annual reporting of fuel consumption by the University's vehicle fleet. All but one campus provides pre-tax employee transit passes, in conformance with the policy. UC Merced will develop this program as they (and the local transit district) grow.

V. Sustainable Operations

V. a. Project Status Summary

To address the sustainability of ongoing operations and maintenance, every campus has submitted or will be submitting at least one building to the US Green Building Council for certification through the LEED for Existing Building Operations and Maintenance (LEED-

[7] Car sharing is a short-term car rental system that has proven highly popular on university campuses as an alternative to car ownership, for employee business trips for employees who commute via alternative transportation, for campus fleets to reduce the number of vehicles they need to purchase, and for students who need occasional vehicle use and can use car share vehicles rather than bring a car to campus.

EBOM) program. In 2009, four buildings achieved LEED-EBOM certification: UCLA's Public Affairs Building, San Francisco's Rock Hall, and San Diego's Campus Services Complex all received certification at the Silver level, and UC Santa Barbara's Bren Hall received a LEED-EBOM Platinum rating, the campus's third LEED-EBOM certification.

In 2002, Bren Hall was the first laboratory in the world to be certified at the Platinum level through LEED for New Construction; with its LEED-EBOM Platinum rating, Bren Hall became the first building in the country to receive two Platinum ratings.

The Policy requires that all campuses achieve LEED-EBOM certification for at least one building by July 1, 2008. Implementation of this policy guideline has been somewhat uneven. Eight University buildings on five campuses (San Francisco, Santa Barbara, Los Angeles, Santa Cruz, and San Diego) and the Office of the President have received LEED-EBOM certification. Berkeley, Davis, Irvine, Merced, and Riverside have yet to achieve LEED-EBOM certification for any of their buildings.

V. b. Expanding Beyond Pilot Projects

Advancing sustainable operations practices beyond an initial pilot building has been delayed by the postponed launch of the USGBC's Portfolio Program. It is anticipated that this program will streamline the LEED-EBOM certification process by allowing campuses to achieve some LEED credits on a campus-wide basis. The Policy includes guidelines requiring campuses to submit campus-wide credits to USGBC and requiring the University to develop an implementation plan to achieve LEED-EBOM certification for all buildings over 50,000 square feet. Due to the delay in the release of the Portfolio Program, both deliverables were postponed until July 2010 in the most recent update of the Policy. Santa Barbara is participating in the Portfolio Program's LEED-EBOM pilot phase and the Office of the President is working with the USGBC to ensure that the Portfolio Program serves the University's needs.

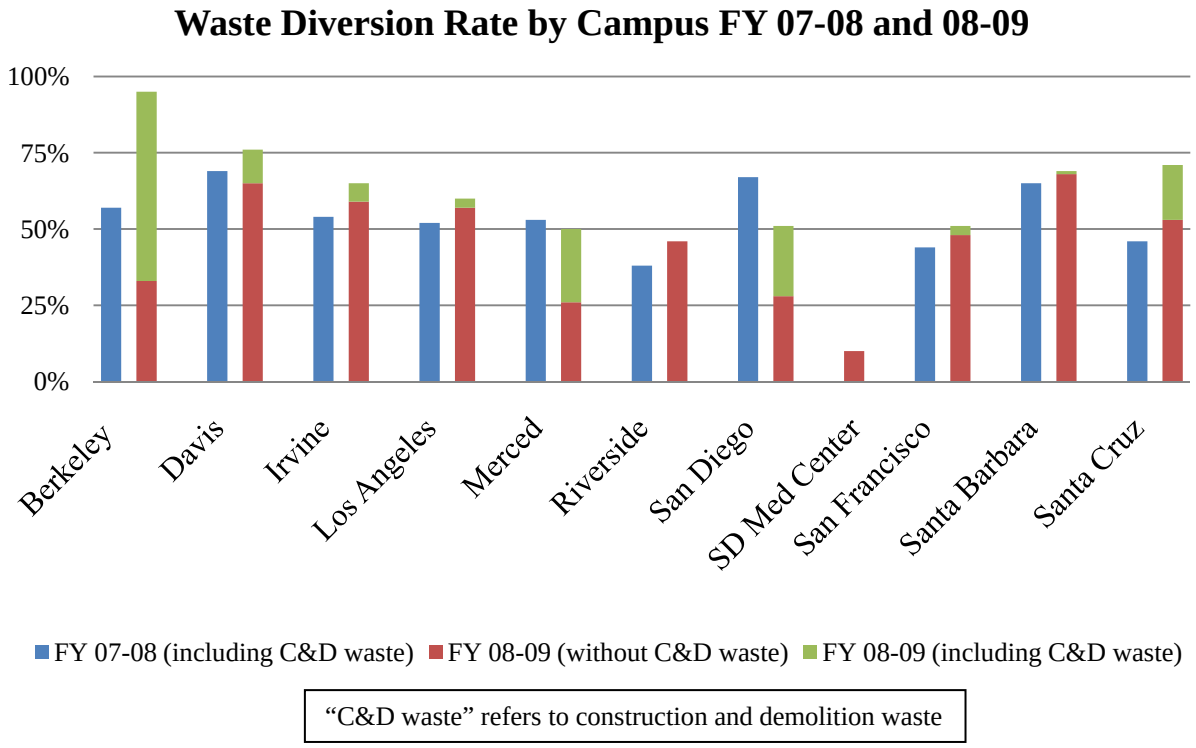
Despite delays in the release of the Portfolio Program, some campuses are institutionalizing LEED-EBOM practices and pursuing certification on additional buildings. Through its participation in the Portfolio Program's pilot phase, Santa Barbara will certify 25 buildings over the next several years and has hired a LEED program manager to oversee this effort. San Francisco is organizing a series of trainings to familiarize its facilities staff with the LEED-EBOM rating system. The campus plans to certify three additional buildings, and Facility Managers' job descriptions are being revised to include LEED-EBOM project management duties. Four additional campuses held training workshops building on the model workshop developed by the San Francisco campus.

V. c. Campuses as Living, Learning Laboratories

Per Policy guidelines, campuses are using LEED-EBOM projects to strengthen the educational mission of the University. Student interns were instrumental in completing LEED-EBOM projects at Santa Cruz and San Diego, and two members of the San Diego intern team were invited speakers at the world's largest green building conference last year. Based largely on San Diego's experience, the USGBC is offering workshops throughout the country to teach other universities how they can use LEED-EBOM projects as educational and career development opportunities for students.

VI. Recycling and Waste Management

The Policy Guidelines include a goal of diverting fifty percent of the municipal solid waste generated by each campus from landfills (by June 2008), mirroring the state requirement for municipalities and state agencies. In 2008-09 each campus submitted a Preliminary Integrated Waste Management Plan as required by policy. The data for 2008-09 are shown below. A key factor which affects the percentage of diversion from landfills is the amount of Construction and Demolition (C&D) material. As the volume of Construction and Demolition materials vary significantly from year to year depending on demolition, the diversion rates will similarly be inconsistent. The chart shows campus diversion rates for 2008-09 with and without this portion of the waste stream.



UC San Diego Medical Center submitted a waste diversion report in 2008, the only medical center to do so. Riverside is still below the required fifty percent diversion rate, but has negotiated a new waste hauling contract to enable them to meet the diversion target next year. The 75 percent diversion goal (June 30, 2012) will require developing additional diversion programs such as composting of food waste and green waste, and zero waste events.

The Waste Reduction and Recycling Working Group will continue work on: 1) an online data and reporting tool, 2) continued training of staff, as budget cuts have reduced staffing and service levels, 3) developing sustainable financial structures for waste reduction and recycling programs, in compliance with the policy requirement of funding mechanisms for implementation of the Integrated Waste Management Plans, 4) developing zero waste best practice for LEED-NC and LEED EBOM projects, and 5) including the cost of waste disposal and recycling into procurement life cycle cost analyses.

VII. Procurement

Sustainable procurement efforts in 2009 focused on increasing the purchase of environmentally-preferable products, reducing resource waste in the procurement process, promoting the increased use of recycled-content paper, and pursuing cost savings and environmental benefits by transitioning towards more networked printer use.

The percentage of products purchased through systemwide contract agreements that met one or more sustainability criteria increased from nine percent to twelve percent of total purchases. One particular focus has been to shift from virgin paper to thirty percent post-consumer recycled paper. The range of recycled content paper purchase as a percentage of total paper purchases by campus ranged from forty-one percent to sixty-three percent in fiscal year 2007-2008. In the 2008-2009 fiscal year, this percentage increased to forty-eight percent of paper purchases at the campus with the lowest rate of purchasing recycled paper to ninety percent at the campus with the highest rate.

More details on the contracts that now include sustainability requirements, along with sustainable business practices that have been implemented in the procurement area and the initiative to reduce costs and environmental impact by transitioning to networked printer use can be found in Attachment 5.

VIII. Food Services

The University added guidelines on sustainable food service as part of the September 2009 Policy update. These guidelines were based on a yearlong effort by the systemwide Sustainable Foodservices Working Group comprised of campus food service representatives.

VIII. a. New Policy Requirements

The newly-added sustainable foodservice guidelines require campuses to set goals in four areas:

- Purchasing: By 2020, at least 20 percent of all food purchased for campus food services is to be designated as "sustainable," as defined by the Sustainable Foodservices Working Group, based on third-party certifications for organic, locally-grown and other sustainability criteria.

- Operations: At least one dining facility per campus is to be certified as a green business, through a city or county certification program, or through the Green Seal or Green Restaurant Association programs.

- Education: Each campus will provide students with educational materials explaining the issues related to sustainable food products and foodservice business practices.

- Outreach: Campus departments, organizations, groups, and individuals are to engage in activities with the surrounding community in support of common sustainability goals.

Per the Policy, all campuses are required to develop goals in each area of the policy by December 2009, and report on progress towards meeting goals on August 15 of each year, beginning in 2010.

Campuses are also required to develop feasibility studies, by May 2010, to determine how to apply the sustainable foodservice guidelines to medical centers and to contract and franchise operators.

VIII .b. Early Actions
Many campuses have already begun implementing sustainable foodservice programs. For example:

- UC Berkeley's Cal Dining already exceeds the Policy's purchasing goal for the year 2020: as of last year, at least 25 percent of Cal Dining's food and beverage purchases went toward sustainable products. Cost premiums associated with some sustainable items have been more than offset by increased demand for meal plans.

- The Santa Cruz campus went trayless last year and has reduced food waste by more than 30 percent, saving the campus dining services nearly $500,000 in food expenditures and saving more than one million gallons of water. Trayless programs have been implemented at several other campuses with similar results, and are being considered at the remaining campuses.

- The Riverside campus launched a composting program as a collaboration between students, Dining Services, and Facilities Management, and is already diverting an average of twelve tons of food waste per month from landfills. Most other campuses are implementing similar composting programs in their dining halls and kitchens.

IX. Staff, Faculty and Student Participation in Sustainability Activities
The University's sustainability program contributes to the University's research, teaching and public service missions through collaborations among faculty, staff and students. For example, the Center for Agroecology and Sustainable Food Systems (CASFS) received a grant from the U.S. Department of Agriculture to establish a Sustainable Agrifood System (SAS) Fellowship for undergraduate and graduate students on five UC campuses. The student fellows are funded to integrate research and education into their campus sustainable food systems initiatives. The SAS Fellow from the Irvine campus was one of only six young activist leaders in the United States and Canada to win a Brower Youth Award from the Earth Island Institute for his work to evaluate and advance sustainable food practices on the Irvine campus as well as systemwide through the development of the new Sustainable Food Practices Policy Guidelines.

This increased utilization of campuses as living laboratories for research and learning continues to provide inspiring educational outcomes, environmental benefits and cost savings for the University. The student-run Education for Sustainable Living Program is a student-run program started in 2004 which is active on five campuses. The 2008-2009 course on the Los Angeles campus accumulated data demonstrating the multiple benefits of the course's "Action Research Teams" during the spring 2009 quarter: 8 teams, 45 students, 20 weeks, 7,500 hours of collective research resulted in:

- 2,365 students surveyed on waste, water and energy projects

- 238 students monitored behaviorally for five days.
- $2,700 saved switching to recycled napkins.
- 250 lbs of waste diverted to compost in 14 days.
- $32,000 dollars awarded for summer sustainability assessment research.

Additional highlights of collaboration among students, staff and faculty include:

- The Santa Barbara campus' Academic Senate Task Work Group on Sustainability appointed the campus' first designated faculty Sustainability Champion who will be funded to focus the campus community on faculty leadership in sustainability-related matters;
- Students at the Los Angeles campus awarded a grant to fund student interns to collect and report data as a charter participant in the new Sustainability Tracking, Assessment and Rating System (STARS) developed by the Association for the Advancement of Sustainability in Higher Education (AASHE);
- Students at the Irvine and San Diego campuses passed student fee referenda to provide $160,000 and $80,000, respectively, in annual funding for campus sustainability projects;
- Students and the Housing and Dining department at the San Diego campus collaborated to become only the second Fair Trade[8] campus in the country, committing to using Fair Trade certified food products (such as coffee, tea, and sugar) where available;
- UC Davis professors worked with the Climate Solutions Steering Group to explore the potential of a project to produce carbon-neutral bio-methane from cow manure for use in the University's cogeneration power plants; and,
- The San Diego campus opened a unique Sustainability Resource Center that demonstrates new sustainable products and technologies while providing a shared home for the campus Sustainability Office and several student sustainability groups.

X. Training

The University continued to promote excellence through training, both through individual training workshops and an annual conference. The eighth annual UC/California State University (CSU)/California Community Colleges (CCC) Conference hosted by the Santa Barbara campus in June 2009 attracted over 750 attendees – including 250 students – from ninety colleges and universities throughout California and neighboring states. The conference program highlighted and shared best practices in thirteen tracks of sessions organized around each of the sustainability topics in the Policy, plus a number of others. The fifth annual Higher Education Energy Efficiency Partnership Best Practice Awards were presented to exemplary UC, CSU, and CCC energy efficient projects at the conference.

Due to constrained budgets both within the University and in grant funding from the utility companies, the energy efficiency and green building training program established in 2004 was

[8] "Fair Trade" is a general term that refers to several third-party certification and labeling programs that aim to help producers in developing countries move toward economic self-sufficiency and adopt sustainable growing and production methods. Producers of Fair Trade certified products receive a higher price for their goods, receiving more of the economic value that would otherwise be captured by distributors or middle-men.

limited to a reduced number of trainings. However, the Partnership grant funding still provided for some crucial training opportunities to equip University staff to achieve the goals in the Policy. Several campuses sent key campus engineering and maintenance staff to earn Building Operator Certification. A sold-out training workshop shared best practices in using the LEED-CI rating system to "green" campus renovation projects. Additionally, five campuses received training in assessing campus buildings for water and energy efficiency improvements using the LEED EBOM rating system.

XI. External Recognition for UC

The Regents and the University continue to receive extensive recognition as national leaders in sustainability, and are benefitting from increased national media coverage and student interest in the topic of sustainability in higher education. During the 2009 calendar year, more than one hundred articles on the University's sustainability initiatives appeared in campus, local, regional and national media outlets, including *New York Times*, *Sierra Magazine*, *Christian Science Monitor*, *USA Today*, *Los Angeles Times*, *San Francisco Chronicle*, *Sacramento Bee*, and *San Diego Tribune*. The Merced, Davis, and San Diego campuses in particular received frequent television news coverage of their campus sustainability initiatives.

The Princeton Review conducted an annual survey in 2009 of college-bound high school seniors that indicated that a university's level of sustainability would influence the college choice of 67 percent of graduating seniors (up from 63 percent in 2008). Reflecting this increased importance in student recruitment, all major college guides have initiated "green ratings." The University had at least one campus ranked in the top tier of all green ratings, including the Santa Barbara campus being declared the top-ranked green university in the country by the environmental business website Greenopia.com. Attachment 6 provides a list of these and other awards achieved by the University and its campuses in 2009. Of particular note, the Merced campus earned the state's top environmental honor, the Governor's Environment and Economy Leadership Award, for its commitment in its Long Range Development Plan to achieve zero waste, carbon neutrality and zero net energy consumption by 2020. Merced is the third UC campus to earn this award, following the Santa Barbara and Irvine campuses.

XII. Future Steps

The University will continue its extensive efforts to meet the requirements in each of the eight Policy areas, with special focus on developing plans at each campus for achieving the goals of the new guidelines for sustainable food services. The University's medical centers will need to become more engaged in setting goals appropriate with their unique business environment. Student services auxiliaries and campus real estate offices will similarly need to collaborate with other sustainable food stakeholders to apply the Policy to franchised and other third-party foodservice providers on campuses.

The Policy will be updated in 2010 to include the requirement recommended by the Systemwide Sustainability Steering Committee for all new construction projects to achieve LEED-NC certification. The University will also work with the USGBC to finalize procedures for certifying multiple buildings through the LEED for New Construction and LEED for Existing Buildings rating systems, while also advocating for similar procedures to be developed for the LEED for Commercial Interiors rating system.

Implementation of climate action plans will require focus and funding to make progress toward aggressive targets for greenhouse gas emissions reductions. Continued implementation of the more than one thousand energy efficiency projects funded through the Partnership program will provide the core of those emissions reductions.

Finally, in this time of serious budget austerity, sustainability programs can and should be pursued to reduce resource consumption and thus reduce operating costs through purchasing initiatives and campaigns to promote sustainable behaviors. Examples under consideration include consolidating office printers, reducing paper consumption, and continuing to promote energy conservation by all members of the University community.

(Attachments)

1. New Construction and Renovation Projects: Compliance with UC Policy on Sustainable Practices
2. UC Systemwide Energy Profile
3. 2008 Greenhouse Gas Emission Inventories by Campus: A B
4. Fleet Fuel Consumption Data
5. Environmentally-Preferable Purchasing Progress
6. External Sustainability Awards and Rankings Received by UC: 2009