

*Corrected*

## **AGENDA**

### **COMMITTEE ON CAMPUS PLANNING, BUILDINGS AND GROUNDS**

**Meeting: 3:00 p.m., Tuesday, March 25, 2014**  
**Glenn S. Dumke Auditorium**

Rebecca D. Eisen, Chair  
J. Lawrence Norton, Vice Chair  
Douglas Faigin  
Margaret Fortune  
Lou Monville  
Cipriano Vargas

#### **Consent Items**

Approval of Minutes of Meeting of January 29, 2014

1. Amend the 2013-2014 Non-State Funded Capital Outlay Program, *Action*
2. Amend the 2013-2014 State Funded Capital Outlay Program, *Action*

#### **Discussion Items**

3. California State University Seismic Safety Program Annual Report,  
*Information*
4. Report on Systemwide Sustainability Goals and Proposed Policy Revision,  
*Information*

**MINUTES OF MEETING OF  
COMMITTEE ON CAMPUS PLANNING, BUILDINGS AND GROUNDS**

**Trustees of the California State University  
Office of the Chancellor  
Glenn S. Dumke Auditorium  
401 Golden Shore  
Long Beach, California**

**January 29, 2014**

**Members Present**

Rebecca D. Eisen, Chair  
J. Lawrence Norton, Vice Chair  
Douglas Faigin  
Margaret Fortune  
William Hauck  
Bob Linscheid, Chair of the Board  
Lou Monville  
Cipriano Vargas  
Timothy P. White, Chancellor

**Approval of Minutes**

The minutes for the November 2013 meeting were approved as submitted.

**Amend the 2013-2014 Capital Outlay Program, Non-State Funded**

Ms. Elvyra F. San Juan, assistant vice chancellor presented agenda item 1, requesting approval to amend the non-state capital outlay program for a housing renovation and a new basketball performance center, both projects at San Diego State University.

The committee recommended approval of the proposed resolution (RCPBG 01-14-01).

**Amend the 2013-2014 Capital Outlay Program, State Funded**

Ms. San Juan presented agenda item 2, requesting approval to amend the state capital outlay program for a student services renovation project at the California Maritime Academy and a hot and chilled water expansion project at California State Polytechnic University, Pomona.

The committee recommended approval of the proposed resolution (RCPBG 01-14-02).

**Status Report on the 2014-2015 State Funded Capital Outlay Program—Governor's Budget**

This information item was not presented during the meeting due to time constraints. The item can be referenced on the trustees' agenda website.

**Approval of Schematic Plans**

President Hirshman, San Diego State University, along with Ms. San Juan presented the item for approval of schematic plans for San Diego State University—Basketball Performance Center. President Hirshman stated that this facility will provide a dedicated practice facility for the university's men's and women's basketball teams, that currently does not exist. He added that the privately funded facility will further the engagement of students on campus by enhancing San Diego State's successful athletic program. CEQA requirements for the project have been completed and staff recommends approval.

The committee recommended approval of the proposed resolution (RCPBG 01-14-03).

With no additional questions, Trustee Eisen adjourned the meeting.

## **COMMITTEE ON CAMPUS PLANNING, BUILDINGS AND GROUNDS**

### **Amend the 2013-2014 Capital Outlay Program, Non-State Funded**

#### **Presentation By**

Elvyra F. San Juan  
Assistant Vice Chancellor  
Capital Planning, Design and Construction

#### **Summary**

This item requests approval to amend the 2013-2014 non-state capital outlay program that was approved by the Board of Trustees at the September 2012 board meeting to include the following projects:

#### **1. California State University, Northridge Career Center**

**PWCE<sup>1</sup>                      \$1,748,000**

California State University, Northridge wishes to proceed with the partial renovation of the fourth floor of Bayramian Hall (#09) for the Career Center. The proposed renovation of 7,500 gross square feet (GSF) will allow the Career Center to offer a full range of services in one location including student access to improved technology. The existing Career Center currently occupies 5,300 GSF in University Hall (#5). The space to be vacated in University Hall will be used to consolidate the department of University Advancement to help strengthen campus funding raising efforts. The fourth floor of Bayramian Hall was previously occupied by the Learning Resource Center, which has relocated to the Oviatt Library (#115).

The reconfigured and expanded space will support a modern university career center, thereby providing improved student outreach and tutoring for job placement. The proposed project includes technology enhancements that support increased use of desktop and laptop computers; use and charging of tablets and smart phones; and improved wireless internet access. The project will address deferred maintenance needs related to flooring, painting, ceilings, and electrical systems.

This project is an allowable capital expenditure funded by interest earnings and trust funds.

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<sup>1</sup> Project phases: P – Preliminary Plans, W – Working Drawings, C – Construction, E – Equipment

**2. San Diego State University  
Page Pavilion**

**PWCE                      \$3,100,000**

San Diego State University wishes to proceed with the renovation of approximately 8,000 GSF on the first and third levels of the Student Services East (#59) building to create the Page Pavilion. The project proposes to renovate the first floor elevator lobby and convert the third floor open courtyard to an enclosed space that will serve as a hub for students, faculty, and alumni of the College of Business Administration. The Page Pavilion will consist of an attractive central gathering space, a boardroom, meeting rooms, and research spaces for students and faculty.

The project is intended to be funded entirely from donor funds. Currently, \$1.6 million of donor funds are on hand or pledged for the project with fundraising efforts still in progress. If necessary, funding from departmental non-state reserves will provide temporary bridge funding to complete construction pending the results of additional fundraising efforts. These funds may be expended on capital expenditures.

**3. California State University, San Marcos  
Field House Expansion**

**PWCE                      \$11,400,000**

California State University, San Marcos wishes to proceed with the design and construction of the Field House Expansion (#24) to provide a multipurpose venue for sports, enabling the campus to achieve National Collegiate Athletic Association Division II membership standards. The project, located adjacent to the existing M. Gordon Clarke Field House (#23), will enhance the academic mission by providing not only a facility for the athletic teams to practice and compete, but also an on-campus venue for students to attend games and support the university's athletic programs as well as participate in recreational/intramural sports. The gym can also be used by the kinesiology department for academic needs.

The 26,500 GSF single-story building will serve the athletic, recreational, and academic support programs. The new facility will include a 1,400-seat gymnasium; locker rooms for men's and women's basketball; space for visiting teams and officials; an entry lobby with a ticket and concession stand; along with public restrooms and building support spaces.

The project is planned to be financed through the California State University Systemwide Revenue Bond program, less a \$5.5 million contribution from student union reserves. The Board of Trustees will be requested to approve the financing of the project at a future meeting. Debt service for the bonds will be paid from previously approved student union program fees.

**Recommended Action**

The following resolution is recommended for approval:

**RESOLVED,** By the Board of Trustees of the California State University, that the 2013-2014 non-state funded capital outlay program is amended to include:

- 1) \$1,748,000 for preliminary plans, working drawings, construction, and equipment for the California State University, Northridge Career Center;
- 2) \$3,100,000 for preliminary plans, working drawings, construction, and equipment for the San Diego State University Page Pavilion;
- 3) \$11,400,000 for preliminary plans, working drawings, construction, and equipment for the California State University, San Marcos Field House Expansion.

## **COMMITTEE ON CAMPUS PLANNING, BUILDINGS AND GROUNDS**

### **Amend the 2013-2014 Capital Outlay Program, State Funded**

#### **Presentation By**

Elvyra F. San Juan  
Assistant Vice Chancellor  
Capital Planning, Design and Construction

#### **Summary**

This item requests approval to amend the 2013-2014 state capital outlay program that was approved by the Board of Trustees at the September 2012 board meeting to include the following project:

<b>California Polytechnic State University, San Luis Obispo</b>		
<b>Campuswide Utility Improvements</b>	<b>PWC<sup>1</sup></b>	<b>\$4,000,000</b>

California Polytechnic State University, San Luis Obispo wishes to proceed with the design and construction of a campuswide utility conservation improvement project. The project will address efficiency and operational improvements to the campus lighting and electrical systems, central heating and cooling plants, as well as domestic water fixtures with a focus on occupant comfort, reduced operating costs, and an enhanced learning environment.

The project scope includes the replacement of existing interior and exterior lighting fixtures with updated, energy efficient, lamps/ballasts and control technology. Additionally, the project will redesign heating, ventilation and air conditioning operating schemes for improved efficiency, improve central boiler and chiller plant operation, install low-flow domestic water fixtures, and replace old transformers with new high-efficiency units. The project will reduce campus annual energy consumption by 3.9 percent measured in British thermal units per square foot. The water conservation measures will save 2.8 million gallons annually. Along with addressing some of the campus deferred maintenance, the project will benefit the campus with an estimated \$337,000 in annual utility savings.

The project will be financed through two loans: 1) California Energy Commission's Energy Conservation Assistance Act loan (\$3 million, at a 1 percent interest rate) and 2) Pacific Gas and Electric's On-Bill Financing program (\$1 million, at a 0 percent interest rate). Avoided energy costs will be utilized to meet loan repayment obligations. Additionally, the project will capture

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<sup>1</sup> Project phases: P – Preliminary Plans, W – Working Drawings, C – Construction

energy savings incentives through the UC/CSU/Investor-Owned Utility (IOU) Energy Efficiency Partnership.

### **Recommended Action**

The following resolutions are recommended for approval:

**RESOLVED**, that the Board of Trustees of the California State University authorizes the chancellor or his designee to apply for an energy efficiency loan for California Polytechnic State University, San Luis Obispo from the California Energy Commission to implement energy efficiency measures; and be it further

**RESOLVED**, that the Board of Trustees of the California State University authorizes the chancellor or his designee to apply for an energy efficiency On-Bill Financing Loan for California Polytechnic State University, San Luis Obispo from the Pacific Gas & Electric Company to implement energy efficiency measures; and be it further

**RESOLVED**, that in compliance with the California Environmental Quality Act (CEQA), the Board of Trustees of the California State University finds that the activity funded by the loans is a project that is exempt under Section 15301 of CEQA; and be it further

**RESOLVED**, that if recommended for funding by the California Energy Commission, Board of Trustees of the California State University authorizes the chancellor or his designee to accept a loan for California Polytechnic State University, San Luis Obispo up to \$3,000,000; and be it further

**RESOLVED**, that if recommended for funding by the Pacific Gas & Electric Company, Board of Trustees of the California State University authorizes the chancellor or his designee to accept a loan for California Polytechnic State University, San Luis Obispo up to \$1,000,000; and be it further

**RESOLVED**, that the amount of the loan will be paid under the terms and conditions of the Loan Agreement of the California Energy Commission; and be it further

**RESOLVED**, that the amount of the loan will be paid under the terms and conditions of the Loan Agreement of the Pacific Gas & Electric Company; and be it further



**RESOLVED,** By the Board of Trustees of the California State University, that the 2013-2014 state funded capital outlay program is amended to include: \$4,000,000 for preliminary plans, working drawings, and construction for the California Polytechnic State University, San Luis Obispo Campuswide Utility Improvements.

## **COMMITTEE ON CAMPUS PLANNING, BUILDINGS AND GROUNDS**

### **California State University Seismic Safety Program Annual Report**

#### **Presentation By**

Elvyra F. San Juan  
Assistant Vice Chancellor  
Capital Planning, Design and Construction

#### **Summary**

This item presents the California State University Seismic Safety Program Annual Report for the July 2012 to June 2013 period.

#### **Seismic Policy and History**

The California State University Board of Trustees initiated an assessment of the seismic hazards posed by CSU buildings as directed by former Governor Deukmejian's executive order and legislative provisions. In 1993, the CSU Board of Trustees adopted the following policy:

*It is the policy of the Board of Trustees of the California State University, that to the maximum extent feasible by present earthquake engineering practice, to acquire, build, maintain, and rehabilitate buildings and other facilities that provide an acceptable level of earthquake safety for students, employees, and the public who occupy these buildings and other facilities at all locations where CSU operations and activities occur. The standard for new construction is that it meets the life-safety and seismic hazard objectives of the pertinent provisions of Title 24 of the California Code of Regulations; the standard for existing construction is that it provides reasonable life-safety protection, consistent with that for typical new buildings. The California State University shall cause to be performed independent technical peer reviews of the seismic aspects of all construction projects from their design initiation, including both new construction and remodeling, for conformance to good seismic resistant practices consistent with this policy. The feasibility of all construction projects shall include seismic safety implications and shall be determined by weighing the practicality and cost of protective measures against the severity and probability of injury resulting from seismic occurrences. [Approved by the Board of Trustees of the California State University at its May 19, 1993 meeting (RCPBG 05-93-13)]*

Out of this policy, the CSU Seismic Review Board was established to provide advice on the ongoing seismic condition of the CSU building stock and technical counsel in how to effectively

implement a seismic oversight program. Now celebrating its 20 year anniversary, the CSU Seismic Policy has improved and evolved, while the Seismic Review Board provides input to state building codes and is periodically asked to provide counsel and assessments on structural and seismic matters for other state agencies and institutions.

### **The CSU Seismic Review Board Membership**

The following individuals serve as members of the CSU Seismic Review Board:

- Charles Thiel Jr., PhD, President, Telesis Engineers (Chairman)
- John Egan, GE, Principle Engineer, AMEC Geomatrix
- John A. Martin, Jr., SE, President, John A. Martin and Associates, Inc.
- Richard Niewiarowski, SE, Consulting Structural Engineer
- Thomas Sabol, PhD, SE, Principal, Englekirk and Sabol
- Theodore C. Zsutty, PhD, SE, Consulting Structural Engineer (Vice Chair)

Since its inception, board membership has been remarkably stable. In June 2013, Gregg Brandow, one of the original seismic review board members, elected to retire. As part of succession planning, the Seismic Review Board plans to identify several prospective candidates for consideration by the CSU for future appointment. The appointment is made by the Assistant Vice Chancellor, Capital Planning, Design and Construction.

### **CSU Seismic Mitigation and Program Activities**

The California State University maintains an ongoing seismic mitigation and oversight effort comprised of six elements:

1. **Mitigate urgent falling hazard concerns.** Mitigate significant life-safety threats posed by falling hazards as a priority. The initial falling hazard concerns identified at the 23 campuses and off-campus centers in 1994 have been mitigated. There are no known falling hazard concerns outstanding; the last systemwide assessment was completed in 2005-2006.
2. **Identify, broadly prioritize and periodically re-evaluate existing seismic deficiencies.** The last comprehensive systemwide seismic assessment was completed in 2008. The buildings that pose a life-safety threat have been prioritized into two published listings: *Seismic Priority List 1* (Attachment A), which are buildings that should be retrofitted as soon as practical, and *Seismic Priority List 2* (Attachment B), which are buildings that trigger a seismic retrofit when any construction work other than maintenance is performed. Several of these listings can be completed within the minor capital project cost threshold of \$634,000; however, state capital budget constraints continue to limit available funding for these structural renovations.

Of the more than 200 buildings priority-listed since inception, the current published listing (revised November 15, 2013) for Priority List 1 contains 31 buildings and Priority List 2 has 42 buildings. To accurately reflect existing conditions, projects are removed from the priority lists when required work is completed. The following projects were completed and removed from the Priority Lists during this reporting period:

- CSU Stanislaus – Science 1 – renovation completed.
- CSU East Bay – Warren Hall – building demolished.

The following projects merit special note:

*CSU East Bay, Warren Hall.* Warren Hall, long the CSU's most pressing seismic concern, was successfully imploded on August 17, 2013. The demolition afforded the opportunity for US Geologic Survey and allied groups to monitor the effects of the implosion to more comprehensively characterize the adjacent Hayward fault and geostrata. The Warren Hall Replacement Building project is currently in construction.

*California State Polytechnic University, Pomona, Classroom/Laboratory and Administration (CLA) building.* A partial replacement building (Administration Replacement Facility) was funded in the 2013-2014 state capital outlay budget. The project is currently in the design phase.

The success of CSU's Seismic Review Board has resulted in requests to provide technical support to other state institutions and departments. This includes work with the University of California Office of the President and directly with select UC campuses, the Department of General Services, the Division of State Architect, and the California Community Colleges.

4. **Provide peer review for all major construction.** Each CSU major capital project undergoes building code review and a separate seismic peer review. The Seismic Review Board was active in the update to California's building codes. The Board participated in a voting capacity on the technical structural review committees that are charged to create the structural appendices (ASCE-41<sup>1</sup> and its successors) that are adopted. The Board continues to take a proactive role in this regard and provides technical input to the state in the development of future state building code requirements. As a result, various technical changes and updates were made during the 2012-2013 reporting period to maintain the currency of the trustees' CSU Seismic Requirements ([http://www.calstate.edu/cpdc/ae/Seismic/CSU\\_Seismic\\_Policy\\_Manual.pdf](http://www.calstate.edu/cpdc/ae/Seismic/CSU_Seismic_Policy_Manual.pdf)).
5. **Develop a Seismic Event Response Plan.** The CSU's current systemwide emergency response plan was updated and reissued July 5, 2013. When a significant seismic event occurs, pre-defined CSU and Seismic Review Board actions are triggered. Initial damage

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<sup>1</sup> American Society of Civil Engineers' Standard Number 41, Seismic Rehabilitation of Existing Buildings

assessments by campus first responders are promptly relayed to Chancellor's Office senior management and the CSU Building Official/Chief of Architecture and Engineering. The Seismic Review Board Chairman confers with potentially affected campuses to determine if an on-site presence by the Seismic Review Board is warranted. If so, the chair of the Seismic Review Board is pre-designated and empowered to act as a special Deputy Building Official to make campus police-enforceable building occupancy posting assessments in the immediate post-earthquake period regarding the safety of buildings where structural damage has occurred. Once initial life-safety assessments are made, follow-up structural repair strategies can be developed. View plan: [http://www.calstate.edu/cpdc/ae/review/seismic\\_peer.shtml](http://www.calstate.edu/cpdc/ae/review/seismic_peer.shtml).

During this reporting period there were no significant seismic events that impacted CSU campuses.

6. **Conduct seismic-related staff continuing education.** In November 2012, Capital Planning, Design and Construction convened a systemwide facilities management conference in San Diego that included a training/management session on comparative structural systems. In addition, systemwide building official training 'Managing CSU Code Compliance' was conducted in September 2013 at the Chancellor's Office.

In summary, the Seismic Review Board has served the California State University and the state with distinction for over 20 years. It works behind the scenes to provide highly actionable, interpretive counsel to the university on a complex and evolving technical subject. Its efforts have allowed the CSU to realize great efficiencies with its entrusted capital dollars while at the same time fostering the creation of engaging places that support the university's academic mission. In normal operations the Seismic Review Board acts in a timely manner; in times of a seismic event it stands ready to provide immediate counsel as part of a larger emergency response system. The CSU Seismic Review Board is highly regarded within the profession and is one example of a quiet success story within the CSU.

**CSU Seismic Priority List 1**  
**(Ordered by Campus)**

This list identifies facilities that warrant urgent attention for seismic upgrade as soon as resources can be made available. Repair and maintenance work is allowed.

<b>Campus</b>	<b>Building</b>	<b>Building #</b>	<b>Capital Outlay Notes</b>
<b>BA</b>	Faculty Towers	6	P 2014-15 Request
<b>BA</b>	Physical Education (Old Gym)	33	-
<b>BA</b>	Doré Theatre	39	PWC Funded 2013-14 – In design
<b>CI</b>	Ironwood Hall ('SH' Shops – mid section)	24	No office use – storage only
<b>DH</b>	Leo F. Cain Library	20	P 2014-15 Request
<b>EB</b>	Library	12	P 2014-15 Request
<b>EB</b>	Corporation Yard	5	PWC 2016-17 Planned Request – No present office use
<b>HU</b>	Van Duzer Theatre (Theatre Arts)	10	PWC 2014-15 Request
<b>HU</b>	Library	41	PWC 2014-15 Request
<b>LB</b>	Liberal Arts 2	13	Under construction
<b>LB</b>	Liberal Arts 3	12	Under construction
<b>LB</b>	Liberal Arts 4	11	Under construction
<b>LA</b>	State Playhouse Theatre	1	PWC 2014-15 Request
<b>LA</b>	Administration	8	PWC Funded 2012-13 – In design
<b>PO</b>	Classroom/Lab/Administration	98	PWC 2015-16 Planned Request
<b>PO</b>	Kellogg West	76	PWCE 2016-17 Planned Request
<b>SD</b>	Love Library	54	PWCE 2018-19 Planned Request
<b>SF</b>	University Park South (F8 Carport and adjacent structures)	73-74	-
<b>SF</b>	University Park South (Apartment Building Parking Structure 41)	74	-
<b>SF</b>	Residence (Tiburon)	T-11	Potential Minor Capital Project
<b>SF</b>	Marine Support (Tiburon)	T-21	Potential Minor Capital Project
<b>SF</b>	Blacksmith Shop (Tiburon)	T-22	Potential Minor Capital Project
<b>SF</b>	Dispensary (Tiburon)	T-37	Potential Minor Capital Project
<b>SF</b>	Building 49 (Tiburon)	T-49	Potential Minor Capital Project
<b>SF</b>	Building 50 (Tiburon)	T-50	Potential Minor Capital Project
<b>SF</b>	Physiology (Tiburon)	T-54	Potential Minor Capital Project
<b>SJ</b>	North Parking Garage (Stair Towers)	53	Design complete
<b>SJ</b>	Student Union	3	Under construction
<b>SJ</b>	Rubis Residence (Moss Landing)	None	-
<b>SL</b>	Old Power House	76	Unoccupied
<b>SL</b>	Crandall Gymnasium	60	Unoccupied – PWC Funded 2012-13 – In design

P = Preliminary Plans    W = Working Drawings    C = Construction    E = Equipment

NOTE: Existing building numbers correspond with building numbers in the Space and Facilities Data Base (SFDB).

**CSU Seismic Priority List 2**  
(Ordered by Campus)

This list identifies buildings that warrant special attention for seismic upgrade. Buildings must be seismically retrofitted when any new construction work occurs on a listed facility. Repair and maintenance work is allowed.

Campus	Building	Building #	Capital Outlay Notes
BA	Runners Café	38	PWCE 2016-17 Planned Request
CI	Ironwood Hall (Old Power Plant)	24	-
CI	Chaparral Hall	22	P 2014-15 Request
CI	Ironwood Hall (Warehouse)	24	-
CI	Ironwood Hall ('SH' Shops – north section)	24	-
CH	Whitney Hall	13	-
CH	Physical Science	8	-
FR	Grosse Industrial Technology	12	-
FR	University Student Union	80	-
FL	Titan Bookstore	6	Preliminary design study complete
LB	Peterson Hall 1	37	PWC 2016-17 Planned Request
LB	Peterson Hall 2	38	PWC 2016-17 Planned Request
LA	Career Center	17	-
LA	Student Health Center	14	Preliminary design study complete
LA	Physical Sciences	12	P 2016-17 Planned Request
LA	John F. Kennedy Memorial Library	7	PWC 2018-19 Planned Request
PO	Administration	1	P 2016-17 Planned Request
PO	Letters, Arts and Social Science	5	PWC 2017-18 Planned Request
PO	Engineering	9	-
PO	Art/Engineering Annex	13	-
PO	Drama/Theater	25	-
PO	Arabian Horse Center	29	Potential Minor Capital Project
PO	Poultry Unit	31	Potential Minor Capital Project
PO	Sheep Unit	38	Potential Minor Capital Project
PO	Ag Storage/Blacksmith	50	Potential Minor Capital Project
PO	Los Olivos Commons	70	PWCE 2015-16 Planned Request
PO	Manor House	111	-
PO	University House	112	-
SA	Douglass Hall	4	-
SF	HSS Classroom Building (Old Humanities)	3	PWC 2018-19 Planned Request
SF	Administration	30	Long term shoring in place
SF	University Park North (Apartment Building 6)	100	-
SF	University Park North (Apartment Building 7)	100	-
SF	University Park North (Apartment Building 8)	100	-
SF	University Park North (Apartment Building 9)	100	-
SF	Administration (Tiburon)	T-30	Potential Minor Capital Project
SF	Rockfish (Tiburon)	T-33	Potential Minor Capital Project
SJ	Yoshihiro Uchida Hall	45	Under construction
SJ	Yoshihiro Uchida Hall Annex	45a	Under construction
SJ	SPX East	46	Under construction
SJ	SPX Central	47	Under construction
ST	J. Burton Vasche Library	1	P 2014-15 Request

P = Preliminary Plans    W = Working Drawings    C = Construction    E = Equipment

NOTE: Existing building numbers correspond with building numbers in the Space and Facilities Data Base (SFDB).

## **COMMITTEE ON CAMPUS PLANNING, BUILDINGS AND GROUNDS**

### **Report on Systemwide Sustainability Goals and Proposed Policy Revision**

#### **Presentation By**

Elvyra F. San Juan  
Assistant Vice Chancellor  
Capital Planning, Design and Construction

Caitlin Steele  
Director of Sustainability and Energy  
San Francisco State University

#### **Summary**

This item reports on the achievements of sustainability goals set by the California State University Board of Trustees in September 2005 in approving the Revised Policy on Energy Consumption, Sustainable Building Practices, and Physical Plant Management. The *CSU Commitment to Sustainability, 2011 Report*<sup>1</sup> summarized the accomplishments in sustainability across the university. The report and proposed policy changes were not presented to the board due to the state's severe reductions to the CSU operating budget and the estimated cost to implement new goals. An update to the 2011 report ("*...2013 Report*") is being finalized and will be released this spring.

This item reports on the progress of the CSU and brings forward the draft policy revision, which proposes to broaden the application of sustainability principles across all areas of the university and simplifies board policy by moving detailed policy elements to the appropriate administrative procedures manual.

Attachment A illustrates the proposed policy revision showing strikethroughs and insertions from the existing policy. Attachment B is the proposed policy as a clean stand-alone document and will come forward to the board as an action item at the next board of trustees meeting. This two-step process permits the board's review and input of the proposed changes.

#### **Strategic Plan**

The California State University's strategic plan, *Access to Excellence*, fosters "active learning

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<sup>1</sup> *CSU Commitment to Sustainability, 2011 Report*, [http://www.calstate.edu/pa/documents/CSU\\_Sustainability\\_Report\\_2011.pdf](http://www.calstate.edu/pa/documents/CSU_Sustainability_Report_2011.pdf).



that is engaged with communities, in an explicit context of global awareness, designed to equip students to be successful in society and in the workforce.” Accordingly, the CSU’s mission includes promoting “an understanding and appreciation of the peoples, natural environment, cultures, economies, and diversity of the world.” It is in this context it is proposed that the board’s policy be broadened to further incorporate sustainability into all aspects of the university including the academic curriculum. The vision is for the CSU to be a leader that operates in an environmentally sound manner while educating a workforce capable of creating a sustainable world.

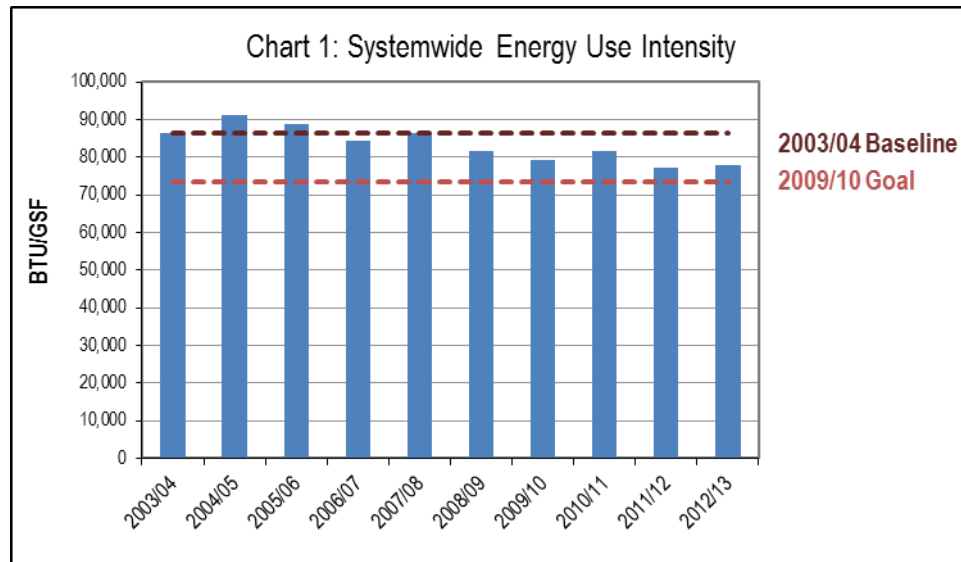
### **Sustainability Goals**

The California State University (CSU) energy policy, in place since 1978, was last revised in 2005 to incorporate updated energy conservation, and energy independence goals as well as elaborate on sustainable building design practices and plant management principles that support these efforts. The *CSU Commitment to Sustainability, 2013 Report* will provide a broad spectrum of progress in facilities design and operations, energy conservation, academic programs and student involvement illustrating CSU’s leadership in reducing the system’s environmental impact and carbon footprint. In addition to a number of specific guidelines for the campus, the board also established the following major goals in September 2005:

- 1) To reduce energy consumption by 15 percent from 2003-2004 levels, to 73,300 BTU/GSF, by the end of 2009-2010;
- 2) To promote energy independence and reduce procurement of electricity from the electrical grid by increasing on-campus energy generation capacity from 26 to 50 megawatts by 2014;
- 3) To meet or exceed the state’s and California Public Utilities Commission (CPUC) Renewable Portfolio Standard that set a goal of procuring 20 percent of its electricity needs from renewable sources by 2010; and
- 4) To design new buildings and major renovations to meet or exceed the minimum requirements of the (to be developed) CSU Sustainability Measurement System, patterned upon the U.S. Green Building Council’s Leadership in Energy and Environmental Design (LEED) standards.

### **Energy Conservation**

The CSU has made progress on the goal to reduce energy consumption to a level that is 15 percent less than the CSU consumed in 2003-2004. While the CSU did not attain the 15 percent goal, its energy use intensity did decrease by 8.2 percent, to 79,000 British Thermal Units per Gross Square Foot (BTU/GSF) by 2009-2010, and continued to decrease to 10 percent below the baseline to 77,900 by 2012-2013. Chart 1 shows the systemwide performance for the period from 2003-2004 to 2012-2013.



The CSU attributes the progress to the combined use of support budget operating funds, capital outlay funds, and utility company incentive funding used to implement campus projects and conservation measures. It has been difficult to achieve additional energy reduction as minimal capital outlay funds have been available to fund heating ventilating and air conditioning (HVAC) retrofits and replacements; lighting upgrades; and utility infrastructure improvements.

The CSU continues to partner with the University of California and the Investor Owned Utilities to create the Energy Efficiency Partnership to secure incentive co-funding for energy conservation projects. The availability of incentive funds helps to reduce the campuses project implementation cost. The Investor Owned Utilities include Pacific Gas and Electric, Southern California Edison, Southern California Gas, and San Diego Gas and Electric and has resulted in the CSU receiving \$29.2 million in co-funding to leverage CSU funds spent on energy efficiency projects.

The CSU also began participating in electrical demand response programs in 2004 where a campus volunteers to reduce its electrical usage during peak demand times. Campuses typically reduce fan motor speeds and turn off lighting to reduce electrical use to help the electrical grid avoid brownouts. In 2012, eight campuses enrolled in demand response programs providing up to four megawatts of load shedding capacity.

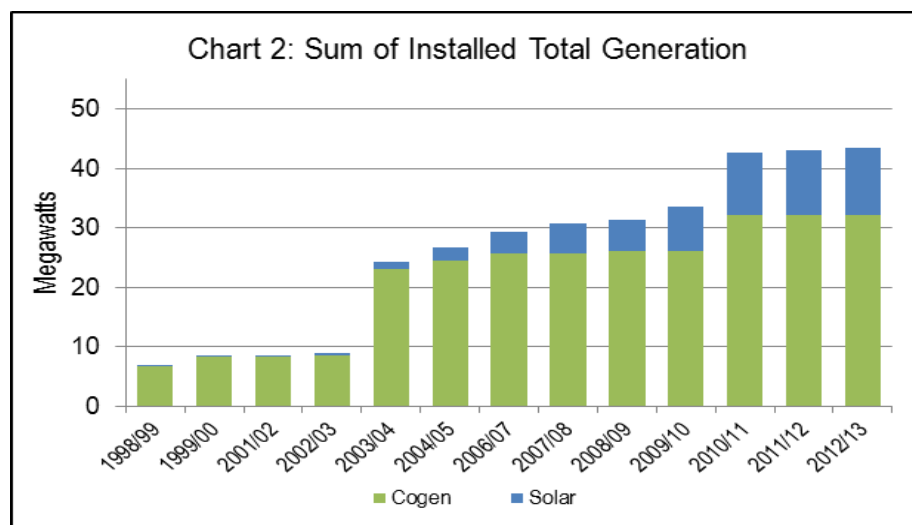
### Energy Independence Progress

The board's goal set in 2005 to increase the amount of self-generated electricity from 26 megawatts to 50 megawatts (MW) by 2014 is shown below and illustrated in Chart 2.

<b>Energy Independence</b>	<b>Prior Generation</b>	<b>Goal for 2014</b>	<b>Achieved in 2013</b>	<b>Percent of Goal</b>
Solar Power	2 MW	10 MW	11.3 MW	113%
Clean Tech/Cogeneration	24 MW	40 MW	32.2 MW	80%
<b>Total</b>	<b>26 MW</b>	<b>50 MW</b>	<b>43.5 MW</b>	<b>87%</b>

Of the desired 50 MW installed capacity, the CSU achieved 87 percent of the board's goal, or 43.5 MW. The installation of solar power generation added 9.3 MW to surpass the board's goal, while clean energy technologies, like cogeneration and fuel cells, added 8.2 MW. In 2011, in coordination with the California Department of General Services, a systemwide Request for Proposal was issued soliciting interest in financing, constructing and operating solar photovoltaic generation at 17 campuses. Unfortunately, the economics of the proposals were favorable for only the Sacramento campus based on the proposed cost per kilowatt hour from the solar generation. Campuses have also pursued projects independently as stand-alone projects, or as part of a major building renovation or new construction (of which at least two are not included in the table above as they are not yet operational). For example, the Department of Finance supported the use of bid savings to install solar panels as part of the CSU Stanislaus Science I building renovation.

Progress to install clean technology and power cogeneration systems (systems that generate hot or chilled water in addition to electricity) has been slow. At one time, the CSU Dominguez Hills campus was pursuing the installation of a cogeneration facility, however when the 2008 fiscal crises occurred, the campus found it was difficult to secure capital financing at a reasonable interest rate. The CSU will continue to pursue economically viable solutions to increase its energy independence; it has made good progress in spite of financial challenges.



## **Renewable Energy Procurement**

CSU campuses have, through their various electrical utilities and electric service providers, sought to procure 20 percent of purchased electricity from renewable sources. Campuses achieved this goal through the CSU Direct Access electricity procurement or their local utility company.

<b>Renewable Electricity Content in 2010</b>		
<b>Utility</b>	<b>Percent Renewable</b>	<b>Number of Campuses</b>
Shell Energy North America– Direct Access	20.0%	10 & Chancellor’s Office
Southern California Edison	19.4%	4
Pacific Gas and Electric	17.7%	5
Turlock Irrigation District	21.3%	1
Sacramento Municipal Utility District	21.0%	1
Los Angeles Department of Water & Power	20.0%	2

The two utilities that failed to meet the Renewable Portfolio Standard in 2010, Southern California Edison and Pacific Gas and Electric, have both made significant progress toward the 20 percent goal, achieving 20.8 percent and 19.4 percent in 2012, respectively.

## **Sustainable Building Design**

The CSU designed a sustainability measurement system called the Program for Environmental Responsibility. The system had some elements similar to the U.S. Green Building Council’s (USGBC) Leadership in Energy and Educational Design (LEED) rating system, but contained differences to require buildings with greater energy efficiency than LEED and modified to recognize the building as part of the campus community, not strictly a stand-alone commercial building. However, due to the gradual change of the campus community’s acceptance and student preference for participation in the LEED rating system, and in recognition of changes made to LEED to encourage energy efficiency and recognize central plants, the use of the separate CSU system was suspended. As a result, the proposed policy update removes the requirement for a separate CSU measurement system.

## **Physical Plant Management**

Campus directors of facilities operations work to operate buildings in an efficient manner given the age of the buildings, occupant needs, and academic program requirements. Building temperature controls, lighting levels, scheduled usage and preventative maintenance are addressed as best possible following the intent of the trustees. Increased effort on water conservation and waste reduction is necessary and has not been the focus of systemwide efforts

in comparison to energy reduction.

Systemwide support of physical plant management has resulted multi-year procurement contracts for electricity and natural gas; physical plant benchmarking to promote best practices; development of an energy information systems solicitation to more efficiently track and report consumption, and training programs for managers and operational staff.

### **Proposed Policy Revision**

The proposed policy revision (Attachments A and B) aims to expand sustainability practices and principles beyond facilities operations and campus development. It encourages the further incorporation of sustainable principles into the academic curriculum such that students can apply this knowledge to their selected field of interest and workforce employment. The proposed revision is in alignment with the Systemwide Academic Senate Resolution, Sustainability in the California State University (AS-2800-07/FGA/AA- May 10-11, 2007), that encourages the faculty to consider teaching about sustainability and supports the development of campus operational practices so that our universities serve as learning laboratories for our students.

In addition, this revision proposes broad direction to apply sustainability principles and practices to all areas of the university, across the various business units, academic programs, enterprise operations and auxiliary entities that comprise the campus community. Broadening the sustainability principles to areas such as procurement, information technology, food service, student housing, parking and transportation recognizes that every business unit and academic department contributes to the CSU's environmental impact.

The strategic direction will enable each campus to develop and implement its practices in consideration of the continued budget challenges and various stages of campus sustainability discussions and efforts. While the board's longstanding policies in energy efficiency and utility management have directly resulted in reduced utility operating costs, due to the broader nature of the proposed policy, staff is recommending moving the detailed prescriptive elements regarding facilities design and operation into the appropriate section of the Integrated California State University Administrative Manual.

### **Fiscal Impact**

It is expected that the policy will prompt more discussions across campuses on sustainability and the assessment and revision of campus business and academic programs. Estimating costs to revise campus programs is complicated as certain changes will reduce utility costs while other measures will increase costs. In addition, campuses are at different stages of incorporating sustainable business practices and some have already established sustainability committees and

assigned responsibilities to staff to support the effort. Further, various faculty across all disciplines have already integrated sustainability, climate change and/or environmental awareness into student course interaction. Existing campus sustainability faculty, staff and student leaders will share best practices and lessons learned to help move the institution forward.

A broad brush estimate of \$175 million will be needed to implement the proposed policy by implementing additional conservation measures, installing on-site generation, and further adopting sustainable practices. The primary cost drivers included in this estimate are the cost to achieve additional energy conservation and install additional on-site generation (\$150 million) to improve our energy independence and reduce our reliance upon the state's electrical grid. The remaining \$25 million is an initial estimate of primarily administrative and academic personnel costs, and implementation of revised practices to effect changes and monitor the progress of the institution overtime.

## **Proposed Sustainability Policy (with edits shown)**

The existing policy is shown in regular font. Substantial changes from the existing policy are shown in *italics* and ~~striketrough~~. The use of brackets ([ and ]) denote policy sections that will be moved to the appropriate Business and Finance department procedures manual, annotated by the term ‘Move’ in the parenthetical information where the date of the original policy and any revisions are documented.

### ***University Sustainability***

1. *The CSU will seek to further integrate sustainability into the academic curriculum working within the normal campus consultative process. (14-New)*
2. *The CSU will develop employee and student workforce skills in the green jobs industry, promote the development of sustainable products and services, and foster economic development. (14-New)*
3. *The CSU will pursue sustainable practices in all areas of the university, including:*
  - a. *business operations such as procurement; informational technology; student services; food services; facilities operations; design and construction; among others, and;*
  - b. *self-funded entities such as, student housing, student unions, parking, children’s centers, auxiliaries operations. (14-New)*
4. *Each CSU is encouraged to designate a sustainability officer responsible for carrying out and/or coordinating campus sustainability program efforts. (14-New)*

### ***Climate Action Plan***

1. *The CSU will strive to reduce systemwide facility greenhouse gas (GHG) emissions to 1990 levels, or below, by 2020 consistent with AB 32, California’s Global Warming Solutions Act of 2006 (HSC §38550). Emissions will include both state and auxiliary organization purchases of electricity and natural gas; fleet, marine vessel usage; and other emissions the university or self-support entity has direct control over. The Chancellor’s Office staff will provide the baseline 1990 facility emission levels (for purchased electricity and natural gas) for the campuses that existed at that time and assist campuses added to the CSU after 1990 to determine their appropriate baseline. (14-New)*
2. *The CSU will strive to reduce facility GHG emissions to 80 percent below 1990 levels by 2040. Campus tracking and reporting of their GHG inventory will be grounded in the American College and University President’s Climate Commitment guidelines or equivalent, with consideration to campus requested improvements. Metrics will include GHG emissions*

*per FTE.* (14-New)

3. *The CSU will encourage and promote the use of alternative transportation and/or alternate fuels to reduce GHG emissions related to university associated transportation, including commuter and business travel.* (14-New)

### **[Energy Conservation Goal**

Each campus will continue to reduce energy consumption *and energy use intensity*. ~~The next goal of reducing energy consumption by 15% will be evaluated at the end of the fiscal year 2009/2010 and reported to the trustees in January 2011. The baseline for this goal is fiscal year 2003/04, and is measured by BTU/GSF (British thermal unit per gross square foot) for both state and non-state supported areas of the campuses.~~ (05-New; 14-Move)]

### **Energy Independence and Procurement Goal**

1. The CSU shall pursue energy procurement and production to reduce energy capacity requirements from *fossil fuels* ~~the electricity grid~~, and promote energy independence using available economically feasible technology (~~solar, wind, biomass~~) for on-site *and/or* renewable generation. The CSU shall endeavor to increase its self-generated energy capacity from ~~26 to 50~~ *44 to 80* megawatts (MW) by ~~2014~~ *2020*. (05-New; 14-Revise)
2. [Campuses will consider installing and/or operating clean and ultra-clean cogeneration plants and proven renewable energy generation technologies in order to reduce greenhouse gas emissions, and to improve campus energy efficiency, utility reliability, and service diversity to increase production from ~~24 to 40~~ *32.2 to 65* MW. (05-New; 14-Move)]
3. ~~Campuses will pursue cost effective renewable generation in order to increase production from 2 to 10~~ (05-New)
4. ~~As the cost effectiveness of a project may change based on the (1) development of new technologies, (2) market forces on energy prices, (3) availability of subsidies for projects, and (4) changes in state regulations, campuses may consider the most economically feasible and cost effective self-generation method to support the systemwide 50 80 MW goal.~~ (05-New)
2. The CSU will endeavor to ~~meet or~~ exceed the State of California and California Public Utilities Commission Renewable Portfolio Standard (RPS) *sooner than the* ~~that established~~ *a* goal of procuring ~~20~~ *33* percent of its electricity needs from renewable sources by ~~2010~~ *2020* ~~subject to the constraints of program needs and standard budget parameters.~~ (05-New; 14-Revise)



## Energy Conservation and Utility Management

1. All CSU buildings and facilities, regardless of the source of funding for their operation, will be operated in the most energy efficient manner without endangering public health and safety and without diminishing the quality of education *and the academic program*. (78-Adopt; 88-Revise; 01-No Change; 04-No Change; 14-Revise)
2. All CSU campuses will continue to identify energy efficiency improvement measures to the greatest extent possible, undertake ~~all-necessary~~ steps to seek funding for their implementation and, upon securing availability of funds, expeditiously implement the measures. (78-Adopt; 88-Revise; 01-No Change; 04-No Change; 14-Revise)
3. [The CSU will promote the use of cost effective renewable ~~non-depleting~~ energy sources wherever possible, both in new construction projects and in existing buildings and facilities. The campuses will consider the implementation of load shifting technologies such as thermal energy storage. (78-Adopt; 88-Revise; 01-Revise; 04-Revise; 14-Revise and Move)]
4. [The CSU will take the necessary steps to provide adequate, reliable, and cost effective utilities infrastructure at all campuses for meeting the needs of present and planned buildings and facilities. (78-Adopt; 88-Revise; 01-No Change; 04-Revise; 14-Move)]
5. [The CSU will actively seek all available sources of funding for implementing energy efficiency improvement and utilities infrastructure renewal projects. Funding sources will include federal and state budget appropriations, federal, state and private sector grant opportunities, and other unique public/private sector financing arrangements, which have been made available through legislative actions in California and the United States Congress. In the event these funding sources are unable to meet the requirements for an approved energy program, priorities within the existing support appropriations will be examined to determine if funds could be made available for project development purposes. (78-; 88-Adopt; 01-No Change; 04-No Change; 14-Move)]
3. The CSU will cooperate with federal, state, and local governments and other appropriate organizations in accomplishing energy conservation and utilities management objectives throughout the state; and inform students, faculty, staff and the general public of the need for and methods of energy conservation and utilities management. (78-Adopt; 88-Revise; 01-No Change; 04-No Change; 14-No Change)
4. Each CSU campus will designate an energy/utilities manager with the responsibility and the authority for carrying out energy conservation and utilities management programs. The Chancellor's Office will have the responsibility to coordinate the individual campus programs into a systemwide program. (78-Adopt; 88-Revise; 01-No Change; 04-No Change;

14-No Change]

5. The CSU will monitor *monthly* energy and utility usage ~~monthly~~ on all campuses and the Chancellor's Office, and will prepare a systemwide annual report on energy utilization. The Chancellor's Office will maintain a systemwide energy database in which monthly campus data will be compiled to produce systemwide energy reporting. Campuses will provide the Chancellor's Office the necessary energy and utility data, *such as electricity and natural gas consumption; water and sewer usage; fuel consumed by fleet vehicles, boats, and ships; waste disposal* for the systemwide database in a timely manner. (78-; 88-Adopt; 01-Revise; 04-No Change; 14-Revise)
6. Each CSU campus ~~will~~ *is encouraged to* develop and maintain a campuswide integrated strategic energy resource plan, which will include tactical recommendations in the areas of new construction, deferred maintenance, facility renewal, energy projects, water conservation, solid waste management, and ~~an structured~~ energy management plan. This plan will ~~drive~~ *guide* the overall energy program at each campus. (78-Adopt; 88-Revise; 01-Revise; 04-Revise; 14-Revise)
7. [Each campus energy/utilities manager shall solicit and evaluate feedback from faculty, staff, and students to monitor the effects of energy conservation efforts on instructional programs and the environment. Training on new energy management concepts and programs will be provided as necessary. (78-; 88-Adopt; 01- Revise; 04- No Change; 14-Move)]
8. ~~[A component of~~ Each campus's emergency plan shall address action required to respond to short-term electrical outages, large-scale grid failures, natural gas curtailments, and other utility shortages or failures. (78-; 88-; 01-Adopt; 04-Revise; 14-Move)]
9. ~~All major capital projects starting design beginning in the fiscal year 2006-2007 shall meet the following requirements: new construction projects shall at a minimum outperform the 2005 Title 24 Standards (California Energy Code) by at least 15 percent. Major capital renovations projects shall at a minimum outperform the Title 24 Standard by at least 10 percent. These efforts will help to reduce the BTU/square foot consumption of the projects.~~  
(05-New; 14-Deleted due to new state energy code requirements)

### **Water Conservation**

1. All CSU campuses will ~~take every necessary step to conserve~~ pursue water resource conservation to reduce water consumption by 10 percent by 2016, and 20 percent by 2020 including such steps to develop sustainable landscaping, install controls to optimize irrigation water use, reduce water usage in restrooms and showers, and promote the use of reclaimed/recycled water. ~~The use of decorative fountains should be minimized.~~ In the event of a declaration of drought, the CSU will cooperate with the state, city, and county

governments to the greatest extent possible to ~~reduce effect additional~~ water use conservation. (78-; 88-Adopt; 01-No Change; 04-No Change; 14-Revise)

### **Waste Management**

1. *Campuses shall seek to reduce the solid waste disposal rate by 50 percent (PRC §42921) by 2016, by 80 percent by 2020, and move to zero waste. (14-New)*
2. *The CSU will encourage the reduction of hazardous waste in the sciences to the extent possible while supporting the academic program. (14-New)*

### **Renewable Energy Sustainable Procurement**

1. *Campuses will promote use of suppliers or vendors that reduce waste, repurpose recycled material, or support other environmentally friendly practices. (14-New)*
2. *To achieve zero waste, campus practices should: (1) encourage use of products that minimize the volume of trash sent to landfill or incinerators; (2) participate in the Cal Buy Recycled program or equivalent; and (3) increase recycled content purchases. (14-New)*
3. *Campuses shall continue to report the aggregate recycled content of purchased material consistent with PCC §12153-12156. Campuses shall strive to increase that proportion to 75 percent by 2016, and to 90 percent by 2020. (14-New)*

### **Sustainable Food Service**

1. *All campus food service organizations shall track their sustainable food purchases. Such tracking and reporting will be grounded in the Real Food Challenge guidelines, or equivalent, with consideration to campus requested improvements. Campuses shall strive to increase their sustainable food purchases to 20 percent of total food budget by 2020. (14-New)*
2. *Campuses and food service organizations shall collaborate to provide information and/or training on sustainable food service operations to staff and patrons. (14-New)*

### **Sustainable Building Practices**

1. *All future CSU new construction, remodeling, renovation, and repair projects will be designed with consideration of optimum energy utilization, low life cycle operating costs, compliance with all applicable energy codes (enhanced Title 24 energy codes) and regulations. ~~In instances where a project's current funding does not include energy or~~*

~~sustainable design features consistent with low life cycle costing, augmentations may be sought, when warranted.~~ In the areas of specialized construction that are not regulated through the current energy codes, such as historical buildings, museums, and auditoriums, the CSU will ensure that these facilities are designed to consider energy efficiency. Energy efficient and sustainable design features in the project plans and specifications will be considered in balance with the academic program needs of the project within the available project budget. (78-Adopt; 88-Revise; 01-Revise; 04-Revise; 14-Revise)

2. [Capital planning for state and non-state facilities and infrastructure shall consider features of a sustainable and durable design to achieve a low life cycle cost. Principles and best practices established by leading industry standards or professional organizations shall be implemented to the greatest extent possible. The CSU is supportive of campuses pursuing third-party accreditation for campus facilities; however current Department of Finance (DOF) policy does not permit the use of state capital funds for such administrative costs. Therefore, campuses considering outside accreditation shall identify alternative means of funding for associated costs. (04-Adopt; 14-Move)]
3. [Sustainable design for capital projects is a process of balancing long-term institutional needs for academic and related programs with environmental concerns. In the context of designing to provide for university and academic needs, the following attributes will be considered “sustainable:”
  - a. Siting and design considerations that optimize local geographic features to improve sustainability of the project, such as proximity to public transportation and maximizing use of vistas, microclimate, and prevailing winds;
  - b. Durable systems and finishes with long life cycles that minimize maintenance and replacement;
  - c. Optimization of layouts and designing spaces that can be reconfigured with the expectation that the facility will be renovated and re-used (versus demolished);
  - d. Systems designed for optimization of energy, water, and other natural resources;
  - e. Optimization of indoor environmental quality for occupants;
  - f. Utilization of environmentally preferable products and processes, such as recycled-content materials and recyclable materials;
  - g. Procedures that monitor, trend, and report operational performance as compared to the optimal design and operating parameters. (04-Adopt; 14-Move)]
4. [In order to implement the sustainable building goal in a cost effective manner, the process will: identify economic and environmental performance measures; determine cost savings; use extended life cycle costing; and adopt an integrated systems approach. Such an approach treats the entire building as one system and recognizes that individual building features, such as lighting, windows, heating and cooling systems, or control systems are not stand-alone

systems. (04-Adopt; 14-Move)]

5. [The CSU encourages the use of materials and systems with reduced environmental impacts. The design team (architect/engineer *and construction manager (if applicable)*) shall recommend building materials and methods with life cycles (manufacture, installation, maintenance, repair, and replacement) of reduced environmental impacts. Considerations include energy efficiency, energy required in the manufacturing process, life cycle duration, and maintenance and replacement costs. (04-Adopt; 14-Revise and Move)]
2. Capital Planning, Design and Construction of ~~The CSU Office of the Chancellor's Office~~ shall ~~develop a CSU Sustainability Measurement System and self verification standard.~~ *monitor building sustainability/energy performance and maintain information on design best practices to support the energy efficiency goals and guidelines of this policy.* The ~~system~~ *sustainability performance* shall be based on LEED<sup>TM</sup> principles with consideration to the physical diversity and microclimates within the CSU. ~~The Sustainability Measurement System shall support the energy efficiency goals and guidelines of this policy.~~ (05-New; 14-Revise)
3. The CSU shall design and build all new buildings and major renovations ~~beginning in the fiscal year 2006-07 to meet or exceed the minimum requirements of the CSU Sustainability Measurement System, which shall be~~ equivalent to LEED<sup>TM</sup> "Certified" "Silver". Each campus shall strive to achieve a higher standard ~~in the CSU Sustainability Measurement System~~ equivalent to LEED<sup>TM</sup> "Silver" "Gold" or "Platinum" within project budget constraints. Each campus may pursue external certification through the LEED<sup>TM</sup> process. ~~Campuses that elect to pursue LEED<sup>TM</sup> certification shall seek non state funding sources to support that effort.~~ (05-New; 14-Revise)
4. [The CSU shall incorporate appropriate training programs for CSU facilities personnel with the aim of promoting and maintaining the goals of this policy. (05-New; 14-Move)]

### **Physical Plant Management**

1. [Purchased energy resources on CSU facilities will not be used to heat above 68°F or cool below 78°F. Domestic hot water temperatures will not be set above 115°F. These limits will not apply in areas where other temperature settings are required by law, or *for health and safety purposes, or by specialized needs of equipment, or for scientific experimentation.* (78-; 88-Adopt; 01-Revise; 04-No change; 14-Move)]
1. Each campus shall operate and maintain a ~~computerized~~ *comprehensive* energy management system that will provide centralized reporting and control of the campus energy related activities. (78-Adopt; 88-Revise; 01-Revise; 04-No Change; 14-Revise)

3. [Campus energy/utilities managers will make the necessary arrangements to achieve optimum efficiency in the use of natural gas, electricity, or any other purchased energy resources to meet the heating, cooling, and lighting needs of the buildings and/or facilities. Except for areas requiring special operating conditions, such as electronic data processing facilities, or other scientifically critical areas, where rigid temperature controls are required, building and/or facility temperatures will be allowed to fluctuate between the limits stated above. Simultaneous heating and cooling operations to maintain a specific temperature in work areas will not be allowed unless special operating conditions dictate such a scheme to be implemented. (78-; 88-Adopt; 01-No Change; 04-No Change; 14-Move)]
2. [Scheduling of building and/or facility usage will be optimized consistent with the approved academic and non-academic programs to reduce the number of buildings operating at partial or low occupancy.] To the extent possible, academic and non-academic programs will be consolidated in a manner to achieve the highest building utilization. [Further, the scheduling of buildings will be implemented in a manner to promote central plant and individual building air conditioning system ~~shutdown~~ *management* to the greatest extent possible during the weekend and other holiday periods. Campus energy/utilities managers make all attempts to change or update building operating schedules to match the changes in the *considering health, safety and academic programs needs* on a continuing basis.] (78-; 88-Adopt; 01-No Change; 04-No Change; 14-Revise and Move part)
5. [Air conditioning equipment, including supply and return air fans, are to be shut off on weekends, holidays, and for varying periods each night, except where it would adversely affect instruction, electronic data processing installations, or other scientifically-critical or 24-hour operations. (78-; 88-Adopt; 01-No Change; 04-No Change; 14-Move)]
6. [Campuses will participate in state sponsored demand reduction programs, where practical, during periods of CAISO (California Independent System Operator) Stage Alerts. Reductions in non-critical loads will be made in an effort to aid in the state electrical grid integrity. (78-; 88-; 01-Adopt; 04-No Change; 14-Move)]
7. [Outdoor air ventilation will be set at 10 cfm/person or such other higher limits as prescribed by state law or regulations. This restriction does not apply to situations where 100 percent outside air is called for by properly installed and tuned economizer cycles. (78-; 88-Adopt; 01-Revise; 04-Revise; 14-Move)]
8. [Windows in air-conditioned facilities will be kept closed to prevent loss of conditioned air, unless facilities are equipped with an air-conditioning and heating interlock that shuts off mechanical cooling or heating when windows are opened. (78-; 88-Adopt; 01-No Change; 04-No Change; 05-Revise; 14-Move)]
9. [Portable electric heaters and fans are not to be used in CSU facilities unless specifically

required by occupants because of documented medical conditions, failure of the building heating, ventilating or air conditioning systems, or when building heating, ventilating or air conditioning systems cannot be adjusted to achieve minimum comfort levels within the provisions established under Item No. 1. Campus energy/utilities managers will grant such exemptions on a case-by-case basis. Use of refrigerators for non-instructional purposes should be consistent with good energy management practices. Each campus will prepare their own guidelines to discourage the use of personal *fans and* refrigerators. (78-; 88-Adopt; 01-No Change; 04-Revise; 14-Revise and Move)]

10. [All lighting, except what is required for security purposes, is to be turned off when buildings and facilities are unoccupied, such as at the end of the workday. Custodial personnel will turn lights back on only for the time actually required for custodial work. (78-; 88-Adopt; 01-No Change; 04-No Change; 14-Move)]
11. ~~All CSU campuses will, to the greatest extent possible, change custodial hours from evening/night shifts to day shifts to reduce custodial energy usage. Any revisions to the custodial shift schedule will be made in consultation with the energy/utilities manager. Building ventilation and lighting systems will not be operated any more or longer than what is required under health and safety codes during the low load custodial occupancy periods.~~ (78-; 88-Adopt; 01-No Change; 04-No Change)
12. [Indoor lighting will be reduced in number and/or wattage, wherever possible, to provide for the minimum but adequate lighting levels consistent with the needs of instructional programs and state-mandated standards for the efficient and effective use of the space. Existing incandescent *and halogen* lamps for general-purpose lighting will be phased out and future incandescent *and halogen* lamps will not be allowed unless exempted for very limited and specialized tasks by the campus energy/utilities managers, *this includes floor, task and track lighting*. New lighting systems will be in the form of the latest energy saving technology. (78-; 88-Adopt; 01-Revise; 04-No Change; 14-Revise and Move)]
13. [Outside lighting on building exteriors and campus grounds will be maintained at levels necessary to provide security and safety to promote confidence within the campus community. Good energy management practices shall be observed within this guideline. (78-; 88-Adopt; 01-No Change; 04-No Change; 14-Move)]
14. [Purely decorative lighting on CSU campuses beyond reasonable display lighting, inside or outside, will not be added. Existing decorative lighting beyond reasonable display lighting will be eliminated on a continuing basis. ~~In general, decorative lighting will not be used for commercial or holiday purposes unless specifically exempted by the campus president.~~ (78-; 88-Adopt; 01-No Change; 04-No Change; 14-Move)]
15. [All natural gas fired boilers on the campuses will be tuned at least twice annually and

brought up to maximum efficiency unless automated combustion controls are installed. In the case of automatic controls, verification of combustion efficiency shall be conducted routinely or at least monthly for central plant and quarterly for decentralized boilers. A permanent record of these readings will be maintained on each campus. (78-; 88-Adopt; 01-No Change; 04- No Change; 14-Move)]

16. [All CSU campuses will maintain their energy plant and utilities infrastructure improvements in good working order and will undertake preventive maintenance schedules to maintain the highest possible system efficiencies ~~and, hence, the lowest to minimize~~ operating costs. (78-; 88-Adopt; 01-No Change; 04-No Change; 14-Revise and Move)]
17. [~~When replacing energy consuming and/or utilities infrastructure equipment, the most cost effective models will be selected.~~ Life cycle costing procedures, instead of first capital cost only, will be utilized as in the *evaluation and selection* basis for ~~all energy consuming equipment selection.~~ All possible efforts will be made to secure additional funding if required to ~~effect lowest life cycle procurement.~~ (78-; 88-Adopt; 01-No Change; 04-No Change; 14-Revise and Move)]
3. All CSU campuses will implement a utilities charge back system to recover *direct and indirect* costs of utilities provided to self-supporting and external organizations *pursuant to Integrated California State University Administrative Manual (ICSUAM)*. (78-; 88-Adopt; 01-No Change; 04-No Change; 14-Revise)
18. ~~All CSU campuses will take every necessary step to conserve water resources, including such steps as installing controls to optimize irrigation water, reducing water usage in restrooms and showers, and promoting the use of reclaimed water. The use of decorative fountains should be minimized. In the event of a declaration of drought, the CSU will cooperate with the state, city, and county governments to the greatest extent possible to effect additional water conservation.~~ (78-; 88-Adopt; 01-No Change; 04-No Change)
19. [The CSU will encourage continued energy conservation and lowest utilities operating costs on its campuses by instituting incentive plans designed to recognize and reward meritorious achievements by campus staff, faculty, and students beyond normal expectation. These incentive plans will be designed in such a fashion that they are adaptable to changing budget constraints from year to year. (78-Adopt; 88-Revise; 01-No Change; 04-Revise; 14-Move)]

*The following resolution is presented for approval:*

***RESOLVED***, That the revised Sustainability Policy in Agenda Item X of the May 20-21, 2014 meeting of the trustees' Committee on Campus Planning, Buildings and Grounds is adopted; and be it further



***RESOLVED***, That the progress in achieving the goals stated in this revised Sustainability Policy shall be evaluated at the end of 2016-2017; and be it further

***RESOLVED***, That the chancellor or his designee is authorized to take the necessary steps to implement the intent of this policy including seeking available state, federal, grant, and private sector funds.

## **Proposed Sustainability Policy (with edits accepted)**

### **University Sustainability**

1. The CSU will seek to further integrate sustainability into the academic curriculum working within the normal campus consultative process. (14-New)
2. The CSU will develop employee and student workforce skills in the green jobs industry, promote the development of sustainable products and services, and foster economic development. (14-New)
3. The CSU will pursue sustainable practices in all areas of the university, including:
  - a. business operations like procurement; informational technology; student services; food services; facilities operations; design and construction; among others, and;
  - b. self-funded entities such as, student housing, student unions, parking, children's centers, auxiliary operations. (14-New)
4. Each CSU is encouraged to designate a sustainability officer responsible for carrying out and/or coordinating campus sustainability program efforts. (14-New)

### **Climate Action Plan**

1. The CSU will strive to reduce systemwide facility greenhouse gas (GHG) emissions to 1990 levels, or below, by 2020 consistent with AB 32, California's Global Warming Solutions Act of 2006 (HSC §38550). Emissions will include both state and auxiliary organization purchases of electricity and natural gas; fleet, marine vessel usage; and other emissions the university or self-support entity has direct control over. The Chancellor's Office staff will provide the baseline 1990 facility emission levels (for purchased electricity and natural gas) for the campuses that existed at that time and assist campuses added to the CSU after 1990 to determine their appropriate baseline. (14-New)
2. The CSU will strive to reduce facility GHG emissions to 80 percent below 1990 levels by 2040. Campus tracking and reporting of their GHG inventory will be grounded in the American College and University President's Climate Commitment guidelines or equivalent, with consideration to campus requested improvements. Metrics will include GHG emissions per FTE. (14-New)
3. The CSU will encourage and promote the use of alternative transportation and/or alternative fuels to reduce GHG emissions related to university associated transportation, including commuter and business travel. (14-New)

## **Energy Independence and Procurement**

1. The CSU shall pursue energy procurement and production to reduce energy capacity requirements from fossil fuels, and promote energy independence using available economically feasible technology for on-site and/or renewable generation. The CSU shall endeavor to increase its self-generated energy capacity from 44 to 80 megawatts (MW) by 2020. (05-New; 14-Revise)
2. The CSU will endeavor to exceed the State of California and California Public Utilities Commission Renewable Portfolio Standard (RPS) sooner than the established goal of procuring 33 percent of its electricity needs from renewable sources by 2020. (05-New; 14-Revise)

## **Energy Conservation and Utility Management**

1. All CSU buildings and facilities, regardless of the source of funding for their operation, will be operated in the most energy efficient manner without endangering public health and safety and without diminishing the quality of education and the academic program. (78-Adopt; 88-Revise; 01-No Change; 04-No Change; 14-Revise)
2. All CSU campuses will continue to identify energy efficiency improvement measures to the greatest extent possible, undertake steps to seek funding for their implementation and, upon securing availability of funds, expeditiously implement the measures. (78-Adopt; 88-Revise; 01-No Change; 04-No Change; 14-Revise)
3. The CSU will cooperate with federal, state, and local governments and other appropriate organizations in accomplishing energy conservation and utilities management objectives throughout the state; and inform students, faculty, staff and the general public of the need for and methods of energy conservation and utilities management. (78-Adopt; 88-Revise; 01-No Change, 04-No Change; 14-No Change)
4. Each CSU campus will designate an energy/utilities manager with the responsibility and the authority for carrying out energy conservation and utilities management programs. The Chancellor's Office will have the responsibility to coordinate the individual campus programs into a systemwide program. (78-Adopt; 88-Revise; 01-No Change; 04-No Change; 14-No Change)
5. The CSU will monitor monthly energy and utility usage on all campuses and the Chancellor's Office, and will prepare a systemwide annual report on energy utilization. The Chancellor's Office will maintain a systemwide energy database in which monthly campus data will be compiled to produce systemwide energy reporting. Campuses will provide the Chancellor's Office the necessary energy and utility data, such as electricity and natural gas

consumption; water and sewer usage; fuel consumed by fleet vehicles, boats, and ships; waste disposal for the systemwide database in a timely manner. (78-; 88- Adopt; 01-Revise; 04-No Change; 14-Revise)

6. Each CSU campus is encouraged to develop and maintain a campuswide integrated strategic energy resource plan, which will include tactical recommendations in the areas of new construction, deferred maintenance, facility renewal, energy projects, water conservation, solid waste management, and an energy management plan. This plan will guide the overall energy program at each campus. (78-Adopt; 88-Revise; 01-Revise; 04-Revise; 14-Revise)

### **Water Conservation**

1. All CSU campuses will pursue water resource conservation to reduce water consumption by 10 percent by 2016, and 20 percent by 2020 including such steps to develop sustainable landscaping, install controls to optimize irrigation water use, reduce water usage in restrooms and showers, and promote the use of reclaimed/recycled water. In the event of a declaration of drought, the CSU will cooperate with the state, city, and county governments to the greatest extent possible to reduce water use. (78-; 88-Adopt; 01-No Change; 04-No Change; 14-Revise)

### **Waste Management**

1. Campuses shall seek to reduce the solid waste disposal rate by 50 percent (PRC § 42921) by 2016, by 80 percent by 2020, and move to zero waste. (14-New)
2. The CSU will encourage the reduction of hazardous waste in the sciences to the extent possible while supporting the academic program. (14-New)

### **Sustainable Procurement**

1. Campuses will promote use of suppliers and/or vendors that reduce waste, repurpose recycled material, or support other environmentally friendly practices. (14-New)
2. To move to zero waste, campus practices should: (1) encourage use of products that minimize the volume of trash sent to landfill or incinerators; (2) participate in the Cal Buy Recycled program or equivalent; and (3) increase recycled content purchases. (14-New)
3. Campuses shall continue to report the aggregate recycled content of purchased material consistent with PCC §12153-12156. Campuses shall strive to increase that proportion to 75 percent by 2016, and to 90 percent by 2020. (14-New)

### **Sustainable Food Service**

1. All campus food service organizations should track their sustainable food purchases. Such tracking and reporting will be grounded in the Real Food Challenge guidelines, or equivalent, with consideration to campus requested improvements. Campuses shall strive to increase their sustainable food purchases to 20 percent of total food budget by 2020. (14-New)
2. Campuses and food service organizations shall collaborate to provide information and/or training on sustainable food service operations to staff and patrons. (14-New)

### **Sustainable Building Practices**

1. All future CSU new construction, remodeling, renovation, and repair projects will be designed with consideration of optimum energy utilization, low life cycle operating costs, compliance with all applicable energy codes (enhanced Title 24 energy codes) and regulations. In the areas of specialized construction that are not regulated through the current energy codes, such as historical buildings, museums, and auditoriums, the CSU will ensure that these facilities are designed to consider energy efficiency. Energy efficient and sustainable design features in the project plans and specifications will be considered in balance with the academic program needs of the project within the available project budget. (78-Adopt; 88-Revise; 01-Revise; 04-Revise; 14-Revise)
2. Capital Planning, Design and Construction of the Chancellor's Office shall monitor building sustainability/energy performance and maintain information on design best practices to support the energy efficiency goals and guidelines of this policy. The sustainability performance shall be based on LEED principles with consideration to the physical diversity and microclimates within the CSU. (05-New; 14-Revise)
3. The CSU shall design and build all new buildings and major renovations to meet or exceed the minimum requirements equivalent to LEED "*Silver*." Each campus shall strive to achieve a higher standard equivalent to LEED "*Gold*" or "*Platinum*" within project budget constraints. Each campus may pursue external certification through the LEED process. (05-New; 14-Revise)

### **Physical Plant Management**

1. Each campus shall operate and maintain a comprehensive energy management system that will provide centralized reporting and control of the campus energy related activities. (78-Adopt; 88-Revise; 01-Revise; 04-No Change; 14-Revise)
2. To the extent possible, academic and non-academic programs will be consolidated in a manner to achieve the highest building utilization. (78-; 88-Adopt; 01-No Change; 04-No Change; 14-Revise)

3. All CSU campuses will implement a utilities charge back system to recover direct and indirect costs of utilities provided to self-supporting and external organizations pursuant to Integrated California State University Administrative Manual (ICSUAM). (78-; 88-Adopt; 01-No Change; 04-No Change; 14-Revise)

The following resolutions are presented for approval:

**RESOLVED**, That the revised Sustainability Policy in Agenda Item X of the May 20-21, 2014 meeting of the trustees' Committee on Campus Planning, Buildings and Grounds is adopted; and be it further

**RESOLVED**, That the progress in achieving the goals stated in this revised Sustainability Policy shall be evaluated at the end of 2016-2017; and be it further

**RESOLVED**, That the chancellor or his designee is authorized to take the necessary steps to implement the intent of this policy including seeking available state, federal, grant, and private sector funds.