Preamble

The energy and sustainability procedures provide goals and guidance to achieve energy conservation, sustainable building, facilities-management best practices, and integration across the district. The procedures are consistent with Executive Order S-12-04, which requests the community colleges active participation in statewide energy conservation and reduced electrical demand; Government Code §15814.30, which states that "all new public buildings for which construction begins after January 1, 1993, shall be models of energy efficiency and shall be designed, constructed, and equipped with all energy-efficiency measures, materials, and devices that are feasible and cost effective"; Government Code §15814.31, which requires that "all public buildings, when renovated or remodeled, shall be retrofitted to meet...Title 24 of the California Code of Regulations", including Part 6, Energy Code; and Title 24, Part 11, California 2010 Green Building Standards Code (CALGreen), effective as of January 1, 2011, and additional greenhouse gas and air quality mandates from the state including EO S-3-05, AB 32 of 2006, EO S-01-07, SB 97 of 2007, SB 375 of 2008,and SB X 1-2 of 2011.

A. Management and Organizational Structure

The district shall establish sustainability policies and procedures consistent with the California Community Colleges Board of Governors Energy and Sustainability Policy of 2008 and the California Community Colleges Sustainability Plan Guidebook of 2012, which are consistent with the various state mandates mentioned in the preamble to these administrative procedures. The district shall establish an effective structure to support an integrated approach to sustainability across all campus functions and communities, including the establishment of a broad-based district sustainability committee. To promote and accomplish the district's sustainability goals, the district shall appoint a sustainability coordinator to lead an Office of Sustainability with the requisite skills, responsibility and authority for carrying out the sustainability programs promulgated by these administrative procedures.

B. Energy Efficiency

The district will seek continuous improvement in energy efficiency from year to year. Auditing and monitoring of ongoing energy use will be conducted. Improving energy efficiency will be a principal consideration when equipment is replaced and facilities are remodeled. Energy-efficiency goals should be set so that all major capital projects at a minimum meet CALGreen Tier 1 Voluntary Standards for nonresidential buildings and

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References:	Executive Order S-12-04 Government Code §§15814.30, 15814.31 Title 24, California Code of Regulations (CCR), including Part 6, Energy Code
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Steering:	S/P / N/A

aim to achieve Tier 2 whenever possible for new construction. All major renovation projects should at a minimum outperform the current Title 24 Standards by at least ten percent (as determined by the designers based on required standard engineering protocols). The district shall develop a policy that takes advantage of all incentives available for these projects, including those available from the Community College System Office.

C. Facilities Operation

All district buildings and facilities, regardless of the source of funding for their operation, should be operated in the most energy-efficient manner without endangering public health and safety and without diminishing the quality of education. MiraCosta College should actively seek all available sources of funding for implementing energy-efficiency improvement and utilities infrastructure renewal projects. Funding sources should include federal and state budget appropriations, federal, state, and private sector grant opportunities, and other unique public/private sector financing arrangements that have been made available through legislative actions in California and the United States Congress. The district should 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.

In order to conserve purchased energy resources, the district will establish a behavior-based energy conservation program. This program will focus on energy savings that occur through changes in individual or organizational behavior.

Through measurement, assessment, planning, training programs, communication, leadership, and coordination with district personnel and energy-education experts, such a program will save the district money, while reducing the use of electricity and preserving the local environment.

The district will develop and maintain a computerized energy-management system to provide centralized reporting and control of campus energy-related activities. Training on new energy-management equipment, concepts and programs should be a regular part of staff development for facilities staff. Scheduling of building and/or facility usage should be optimized consistent with the approved academic and nonacademic programs to reduce the number of buildings operating at partial or low occupancy. To the extent possible, academic and nonacademic programs should be consolidated in a manner to achieve the highest building utilization.

To complement this program, appropriate energy-efficiency set points for heating and cooling of district facilities will be set. These limits do not apply in areas where other temperature settings are required by law or by specialized needs of equipment or scientific experimentation. Interior and exterior lighting, as well as use of water, both indoors and outdoors, will have appropriate limits set to ensure efficiency and to reduce overall operating costs.

The scheduling of buildings should be implemented in a manner to promote central plant and individual building air-conditioning-system shutdown to the greatest extent possible during the weekend and other holiday periods. Campus energy/utilities

managers should make all attempts to change or update building operating schedules to match the changes in the academic programs on a continuing basis.

Every person is expected to become an “energy saver”, as well as an “energy consumer.” The district is committed to and responsible for a safe and healthy learning environment. The faculty/staff member is responsible for implementing the guidelines during the time that he/she is present in the instruction room/office.

The custodial staff will be responsible for control of common areas, i.e. hallways, etc. during their regular evening work schedule. The energy specialist will be responsible for verification of the nighttime shutdown.

The energy specialist will provide regular (at least semi-annual) program update reports to the district administration as well as perform routine audits of all facilities, and communicates the audit results to the appropriate personnel.

The energy specialist will either indirectly or directly make adjustments to the district’s energy management system (EMS), including temperature settings and run times for heating, ventilation, and air conditioning (HVAC), and other controlled equipment.

The energy specialist will provide monthly energy savings reports to facilities management detailing performance results.

The administration will regularly communicate the importance and impact of the energy conservation program to its internal and external constituents.

Instructional classroom doors shall remain closed when HVAC is operating. Ensure doors between conditioned space and nonconditioned space remain closed at all times (i.e. between hallways and gym areas).

Proper and thorough utilization of data loggers will be initiated and maintained by the energy specialist to monitor relative humidity, temperature, and light levels throughout campus buildings to ensure compliance with guidelines. All exhaust fans that are capable of doing so without compromising safety shall be turned off daily. All office machines (copy machines, laminating equipment, etc.) shall be switched off during unoccupied times. Fax machines and networked printers may remain on. All computers should be turned off each night. This includes the monitor, local printer, and speakers. Network (i.e. LAN) equipment is excluded. All capable PCs should be programmed for the “energy-saver” mode using the power management feature. If network constraints restrict this for the PC, ensure the monitor “sleeps” after ten minutes of inactivity.

Cooling Season Occupied Set Points: 74°F - 76°F
Unoccupied Set Point: 85°F
Heating Season Occupied Set Points: 68°F - 70°F

Unoccupied Set Point: 55°F

D. Air Conditioning Equipment

Occupied temperature settings shall not be set below 74°F.

During unoccupied times, the air conditioning equipment shall be off. The unoccupied period begins when the employees and/or students leave the area. It is anticipated that the temperature an instruction room will be maintained long enough to afford comfort for the period the faculty remains in the instruction room after the students have left.

Air conditioning start times may be adjusted (depending on weather) to ensure instruction room comfort when instruction begins.

Ensure outside air dampers are closed where applicable during unoccupied times.

To further support the organization's behavioral-based energy conservation program, the district shall strive to develop and implement a preventive maintenance and monitoring plan for its facilities and systems, including HVAC, building envelope, and moisture control.

E. Sustainable Building Practices

New construction, remodeling, renovation, and repair projects should be designed with consideration of optimum energy utilization, low-life-cycle operating costs, and compliance with all applicable energy codes and regulations. Energy-efficient and sustainable-design features in the project plans and specifications need to be considered in balance with the academic program needs of the project within the available project budget. In an effort to reduce the creation of greenhouse gases, capital planning for facilities and infrastructure should 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 should be implemented to the greatest extent possible. New construction and major remodeling projects shall be designed to achieve at least CALGreen Tier 1 Voluntary Standards for nonresidential buildings and aim to achieve Tier 2 whenever possible.

The following elements should be considered in the design of all buildings:

1. Site and design considerations that optimize local geographic features to improve sustainability of the project.

2. Durable systems and finishes with long life cycles that minimize maintenance and replacement.

3. Optimization of layouts and design of spaces that can be reconfigured with the expectation that the facility should be renovated and reused versus demolished.

4. Systems designed for optimization of energy, water, and other natural resources.

5. Optimization of indoor environmental quality for occupants.

6. Utilization of environmentally preferable products and processes, such as recycled-content materials and recyclable materials.

7. Procedures that monitor and report operational performance, as compared to the optimal design and operating parameters.

8. Space should be provided in each building to support an active program for

recycling and reuse of materials.

In order to implement the sustainable building goal in a cost-effective manner, the process should 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 the individual building features, such as lighting, windows, heating, and cooling.

F. On-Site Generation and Renewable Energy

The district will develop a strategic plan for energy procurement and production to reduce energy requirements from the electricity grid, to promote energy independence using available, economically feasible, renewable technology (solar, wind, biomass), and for on-site generation. MiraCosta College will endeavor to develop self-generated energy capacity and procure energy through cost-effective alternatives that contribute to the state of California and California Public Utilities Commission Renewable Portfolio Standard requirements to meet or exceed forty percent use of renewable energy by 2014.

G. Transportation, Commuting, and Campus Fleet and Travel

The district will reduce vehicle miles traveled for both students and employees commuting to district campuses. Transportation patterns will be surveyed so that effective alternatives, such as public transportation and ride-sharing, can be effectively promoted. The district will also improve the efficiency of its vehicle fleet in areas of technology and fuels.

H. Water, Wastewater, and Sustainable Landscaping

Sustainable practices will be pursued in all matters of grounds and landscape management, including optimization of water efficiency through the use of irrigation controls, low-water plants, rainwater capture and reclaimed water; reduction of quantity and improvement in quality of runoff; the elimination of aggressive invasive species from campus plants; minimization of the grounds-keeping waste stream; elimination of the release of toxic substances into the campus environments on a regular basis and minimization of such releases on an emergency basis; maximization of energy efficiency in grounds-keeping equipment; and development of a wildlife and native plant management strategy that supports habitat preservation within the campuses and surrounding areas.

I. Solid Waste Reduction and Management

The district will use the broadly established principles of “reduce, reuse, and recycle” in its solid-waste-management program. Areas of focus may include paper waste, food waste, landscaping waste, and construction waste. The district will cost-effectively minimize its solid waste flow to reduce both greenhouse gases and landfill deposits.

J. Green Purchasing

The district will establish purchasing policies to meet sustainability goals. Efforts will be made to minimize transportation of goods and other greenhouse-gas-related factors and packaging of goods and other waste-stream-related factors. Standards will be

established for minimum recycled content of purchased goods, particularly paper. The district will strive to minimize the purchase of toxic materials, particularly in regard to facilities cleaning, and maintenance and grounds keeping.

K. Student and Curriculum Development

As a learning institution, MiraCosta College will become a model and classroom of sustainability for students, faculty, staff, and the community. To take educational advantage of physical sustainability improvements, the district will pursue efforts to develop a broad sustainability curriculum in career-technical education, science, and liberal arts. The Instructional Services Division and Academic Senate will provide leadership and support in this regard through appropriate committee processes and professional development opportunities. The district will provide structured support and leadership for student involvement in campus and community sustainability activities.

L. Campus and Community Outreach and Awareness

The district will promote community outreach to generate community support for campus sustainability efforts and to diffuse sustainability practices into the community. A featured sustainability website should be developed within the college website to disseminate news and information regarding campus sustainability efforts. Occasional community-oriented sustainability events shall be conducted. Partnerships with local governments, including school districts and special districts, to pursue joint sustainability projects should be explored and implemented when feasible.

M. Climate Action Plan

In response to the scientific consensus on anthropogenic climate change and the California Global Warming Solutions Act (Assembly Bill 32), the district will endeavor to monitor greenhouse gas emissions and develop and implement a plan for their reduction using the World Resources Institute’s Greenhouse Gas Protocol.