# COLORADO MOUNTAIN COLLEGE

**SUSTAINABLE ENERGY CONSERVATION PROCEDURE**

1. **Introduction** –Colorado Mountain College is committed to purchasing and using energy in the most cost effective and sustainable manner by following a policy of energy conservation and sustainability. This is spurred by rising utility costs, tighter budgets, and a growing emphasis on conservation of limited natural resources. The goal of this policy is to create a realistic document that builds an understanding of sustainability and identifies energy, water conservation and sustainability strategies for the entire college. This is a living document that will be reviewed and updated periodically as public awareness, management techniques and technologies change. Proposed Changes must be approved by the College Leadership Team.
2. **Objective** -Although Colorado Mountain College has implemented various measures over the years to conserve energy, the renewed emphasis on efficient building scheduling, operations, and maintenance reflected in this policy is expected to reduce energy consumption, and optimize utility and operation cost savings with minimal additional capital investment while providing a framework that supports sustainability. The college will educate faculty, staff, and students on energy conservation and sustainability as this group is instrumental to the success of this policy. Involvement by faculty and students is essential to foster program development and site participation.
3. **New Construction and Replacement -** New construction will be built to LEEDS Silver standards and the college will strive to install the most cost effective and energy efficient system possible. Replacement of equipment be it complete units or motors the college sill strive to install the most cost effective and energy efficient part or unit possible

1. **Guidelines**
	1. **Heating, Ventilating and Air Conditioning (HVAC)**
		1. **Interior Space Temperature Control**
			1. **Occupied Periods** - During occupied periods, room temperatures will be maintained between 70 and 74°F +/-2 degrees, per IBC code. Report comfort issues that are caused when areas fall outside of this temperature range.
			2. **Unoccupied Periods -** Whenever it is economically and technically feasible, night setback features of the Building Automation System will reduce heating temperatures to 55° and raise cooling temperatures to 85°F during unoccupied periods.
			3. **Exceptions** -Exceptions to the temperature standards may include special areas such as patient care, animal care, computer labs, or research facilities that require constant, cooler or warmer temperatures. The Office of Facilities Management will evaluate requests for exemptions on an individual basis.
			4. **Occupant Responsibilities** –
				1. Occupants of CMC buildings are encouraged to assist in the energy and sustainability effort by dressing appropriately to space conditions and not expect space temperatures to be adjusted outside of the temperature ranges established in this policy. The Office of Facilities Management will evaluate requests for exemptions on an individual basis.
				2. Occupants should refrain from placing furniture and equipment near thermostats that would prevent accurate space temperature readings.
				3. Occupants should refrain from locating furniture, equipment, and materials on or near baseboard heating or ventilation equipment that would prevent HVAC equipment from conditioning the spaces as designed.
				4. As HVAC equipment provides temperature control in the most efficient manner, and electrical infrastructure may not support the device loads, **use of space heaters and personal air conditioners are prohibited. Under certain conditions this may be waived by permission of the Facilities Office or site Maintenance Manager.**
		2. **Hours of Operation**
			1. **Regular Schedules** - HVAC equipment operating schedules will mirror the weekly building and classroom occupancy schedules and are updated each semester. **All college buildings will be scheduled where equipped with an energy management system (Control Logic and Alerton).**
			2. **Holiday and Schedules** – HVAC equipment operations will remain in unoccupied mode on holiday and recess periods. Building occupants should follow the recommended holiday shutdown procedures before leaving for extended holidays or vacation.
			3. **Special Events** - Space temperatures maintained during designated unoccupied periods may not be suitable for normal activities. Should spaces need to be used for special events, contact the Facilities Office at your site.
		3. **Ventilation**
			1. **Doors and Windows** – As HVAC equipment provides necessary ventilation in the most efficient manner, exterior doors and windows are to be kept closed at all times. A small personnel fan is permitted to keep the air moving in an office.
			2. **Ventilation Access** – Furniture and equipment should be placed such that it does not block vents or return registers.
			3. **Fume Hoods** – Fume hood sashes shall be closed and exhaust fans off when not in use to prevent loss of conditioned air.
	2. **Computers and Other Electronics** –Faculty and staff are to adjust power settings on computers and other electronic office equipment to maximize energy savings. For detailed instructions on how to activate power settings on your computer please contact the IT service desk. Standard power settings for computers
		1. CPUs set to enter systems stand-by mode after 15 minutes of inactivity
		2. Monitors and systems are to enter hibernate mode after 60 minutes of inactivity
		3. Exceptions to this policy are servers and infrastructure devices plus other monitored devices identified by IT to be necessary and running at all times.
	3. **Lighting**
		1. **Interior** – Lighting shall be turned off when not in use, when leaving a room unoccupied, and at the end of the day. Use of daylighting harvesting is encouraged in lieu of artificial lighting when sufficient to perform the task at hand. CFL bulbs are standard and use of incandescent and halogen lighting for any purpose is strongly discouraged.
		2. **Exterior** – All exterior building lights will be turned off during daylight hours. Parking lot lighting will operate between dusk until 12:00 midnight. If available the parking lot lights will be operated in banks with each bank having the possibility of a different schedule. The most efficient way to do this is thru a time, lighting control or to integrate it to our BAS system (ALC or Alerton) CMC realizes that health and safety issues will drive this by location and the ultimate decision will be with the guidance of the Campus CEO. As lights are replaced or new ones installed they shall be LED. See specs in standards
	4. **Water**
		1. **Facility** – Water is to be used sparingly. Showers and faucets should be turned off after each use. All shower heads will be low flow, Cold water should be used whenever possible, unless sanitary or other special requirements necessitate the use of hot water.
		2. **Irrigation** –Conservation efforts include the use of low volume fixtures, zoned irrigation systems, moisture sensors and rain switches to reduce unnecessary water usage. Xeriscaping and use of native plants and/or climate appropriate plants will be selected to minimize or eliminate need for irrigation.
	5. **Renovation and Construction**– All future Colorado Mountain College new construction, remodeling, renovation, and repair projects will be designed with consideration of optimum energy utilization, low life cycle operating costs, and compliance with all applicable energy codes and regulations. For further information about CMCs Facility Design Standards, contact at 970-945-8691.
	6. **Renewables** – CMC recently signed the American College & University President’s Climate Commitment ( ACUPCC). CMC has chosen to develop a comprehensive action plan for energy efficiency and to become a leader in sustainable practices in many regards.For more details on the initiative, including a timeline and goals click on the following link. <http://rs.acupcc.org/ip/1047/>
2. **Additional Information**
	1. The Facilities Department will track energy cost savings and will create a budget equal to the cost of energy saved for funding future energy efficiency and renewable projects. The site annual energy use will be tied to the annual review process of the facilities staff, and be a part of the departments Balanced Score Card.
	2. The Facilities Department will maintain an energy accounting system to continuously track facilities energy consumption. Information can be used to benchmark facility energy consumption against prior periods and against other buildings to identify and focus on opportunities for improvement. The information will be derived from electronic gas and electric meters installed on our buildings and placed into energy management software.
	3. Recycle bins will be place throughout all campuses. Faculty, staff and students should be encouraged to use them.
	4. Faculty and staff are encouraged to report building conditions that are not consistent with the guidelines outlined in this policy by submitting a work request to Facilities.
	5. The campus community is encouraged to make suggestions for additions or modifications to this energy policy, as well as other energy saving suggestions by contacting the Office of Facilities Management at 970-947-8406 or the Director of the Office of Sustainability (970-947-8332).

**Colorado Mountain College Energy Conservation**

**Summary/Checklist: Reviewed @ Each Building Audit**

**Energy Management**

* Building goals set on each campus annually
	+ Driven by Facilities, but owned by overall campus
	+ Energy Navigator used to track improvements
* Reviewed daily by Facilities to look for specific anomalies

**HVAC**

* Temperature band:  70 – 74 degrees
* Unoccupied Temperatures:  55 to 85 degrees
* Room Scheduling:  off hours, holidays, special evetns
* Occupant Responsibilities
	+ Dress appropriately (layer), but let facilities know if system not working
	+ Don’t place furniture in front of HVAC systems (thermostats, vents, baseboards, etc)
	+ Use of space heaters must be approved by Facilities
	+ Externals doors and windows need to be closed; notify Facilities if needed

**Lighting**

* Turned off when not in use
* Use of natural daylight vs electric lighting is encouraged
* Exterior lighting
	+ Turned off during daylight hours
	+ Parking lot lights will operate …….

**Water**

* Low flow heads will be used (sinks, showers, etc)
* Irrigation
	+ Xeriscaping where it makes sense
	+ Systems:  low volume fixtures, moisture sensors and rain switches

**Construction**

* New construction is built to  Silver LEEDS
* Renovations and new construction will be designed for optimum energy utilization
* Obsolete equipment replaced to optimize energy utilization