

 STATEWIDE POLICY	NUMBER 107-011-010	SUPERSEDES
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Division Enterprise Asset Management	REFERENCE Executive Order 06-02 ORS 276.900 ORS 459A.010	
Policy Owner Facilities		
SUBJECT Resource Conservation	APPROVED SIGNATURE Scott Harra, Director (<i>signature on file with DAS Business Services</i>)	

PURPOSE

Identify resource conservation and associated cost saving measures in state agencies; establish guidelines to promote the practice of resource conservation for energy, water, recycling and waste prevention; implement efficient building operations to ensure state agencies contribute toward state government’s goal of “net-zero” buildings and reduced greenhouse gas emissions.

APPLICABILITY

State agencies that own, operate or lease buildings as defined in this policy; contractors that operate cafeterias in state-owned or leased buildings; vending-machine operators.

FORMS/EXHIBITS/INSTRUCTIONS

None

DEFINITIONS:

- Agency:** Any state agency, board, commission, department, division, and any member of the Oregon University System.
- Agency Coordinator:** Person appointed by an agency director to facilitate and coordinate the resource conservation efforts within an agency.
- Ambient Lighting:** Overhead lighting in buildings, including work areas, hallways, bathrooms, break rooms, stairwells; does not include task lights in work stations.
- Communal Appliance:** A Personal Appliance acquired by an employee or informal employee group for communal use in break rooms or similarly suitable locations. Examples include refrigerators, microwaves and coffee makers.
- Computer:** Central processing units (CPU) and monitors, laptops, notebooks and tablets that connect to the network or otherwise plug into a building’s power grid. Other computer peripherals comprise “office equipment”
- Extended Operations:** Exceptions to Normal Operations for HVAC and Normal Lighting Operations for lighting.
- Facility Manager:** Single point of contact for tenants in a state-owned building.
- HVAC:** Heating, ventilating and air conditioning.
- Normal Operations:** Monday through Friday, 8 a.m. to 5 p.m.
- Normal Lighting Operations:** Monday through Friday, 7 a.m. to 6 p.m.
- Personal Appliance:** Any privately-owned device that requires energy or produces heat, designed for residential use, brought into the workplace for an individual’s use.
- Site Coordinator:** Person located at a branch or other agency location who works with the Agency Coordinator on resource conservation.

GUIDELINES:

I. Building Operations

This section applies to agencies with control of all or a part of building operations. All other agencies please skip to page 4, section II.

Agencies may set building operations that exceed the minimum requirements of this policy.

A. Energy Conservation

1. Heating and Cooling

- During Normal Operations, buildings with digital controls must use a five-degree floating temperature set point (dead band): 70°F for the heating season and 75°F for the cooling season.
- During Normal Operations, buildings with pneumatic controls maintain a year-round temperature of 72°F.
- Buildings remain closed on state holidays and weekends. Extended Operations require approval in advance by an agency administrator or Facility Manager.
- Delay the start time of HVAC systems as late as possible to achieve normal building temperature by 8 a.m. Use “optimum start” or other automatic programs. In periods of extreme weather, operate building systems at a minimal level during nights and weekends to maintain building temperatures.

2. Energy Reduction Requirements

- Buildings must realize energy savings of at least 20 percent from comparable consumption levels in the year 2000. If a building does not meet the minimum 20 percent target, the Facility Manager should consider the following:
 - a) Heat and cool only during Normal Operations; minimize energy consumption during off hours.
 - b) Actively manage window blinds throughout the day to retard heating and cooling loss. Close blinds at night to retard heat loss.
 - c) Close exterior, stairway and fire doors (except doors equipped with approved emergency-closure devices). Security doors must always remain closed.
 - d) In buildings where occupants control HVAC, identify one or more persons with the authority to control operable windows and HVAC settings.
 - e) Buildings with 10,000 square feet or less need HVAC controls that include a programmable thermostat with night setback and seven-day programming capability.
 - f) Buildings with more than 10,000 square feet must operate with an automated HVAC system.
 - g) HVAC operators must maintain and operate the systems under his or her control in the most efficient manner possible.
- Maximize incentives for energy-efficiency improvement projects including programs offered by local utilities, the Bonneville Power Administration, the Department of Energy’s Business Energy Tax Credit, and options offered by the Energy Trust of Oregon

3. Lighting

- During Normal Operations, operate lighting systems with 30- to 35-foot candles for ambient light, and ensure 50-foot candles at desk surface with task lights.
- Set ambient lighting levels for minimize energy conservation during Extended Operations. Lighting “sweep systems” will disable ambient lights and prevent a tenant override. Egress (emergency) lights will remain on 24/7, which allows approximately 10

percent of ambient lights to remain on for staff to safely exit buildings during Extended Operations. In addition, staff may use task lights during Extended Operations.

- State agencies encourage staff to telework, where possible, to maximize savings on energy and lights and minimize plug loads.
- Reduce overhead lighting by using fluorescent lights or LED task lights.
- Turn off lights in unoccupied rooms at all times. Disable or remove lighting that is not necessary for normal business or safety.
- Replace incandescent light bulbs with compact fluorescent lights where practical.
- Take advantage of natural lighting whenever possible.
- Turn off floor lighting after Normal Operations. If staff stays late or arrives early, use task lights rather than floor lights.
- Install motion detectors to control lighting in frequently unoccupied areas.
- Maintain security and safety lighting at the lowest acceptable levels.
- The DAS Director may approve exceptions to Normal Lighting Operations under extreme circumstances or in response to a special request from an agency director.

4. Holiday Lights: refer to policy 107-011-130, Holiday Decorations.

5. Water Heaters

Store hot water at a temperature of 120°F; use higher settings for cafeterias, laundries or bathing (recommendations of the American Society of Heating, Refrigerating and Air-Conditioning Engineers, 12-2000, Section 4.1.6 Recommended Treatment.)

6. Energy Consumption Reporting

- Agencies must review their monthly utility bills (electricity and heating fuel) and actively manage conservation.
- Agencies must report their monthly use quarterly to the Oregon Department of Energy's State Energy Use Database. DOE tracks adherence to the 20 percent reduction requirement of ORS 276.900.

7. Night Audits

To meet the Governor's goals for energy reduction in state buildings, DAS conducts quarter audits at night in buildings in Salem and Portland to determine whether tenants follow the requirements of this policy. Agencies not covered by DAS' night audits must audit their building(s) on a reasonable schedule approved by the agency director.

Components of a night audit (not an exhaustive list):

- Location of unauthorized space heaters and other unauthorized items, and whether the device is on or off
- Allowed items left on
- Copiers and office equipment
- Computers, monitors, and peripherals
- Task lights and other work station plug loads
- Break room appliances (includes appliances located in work stations not designated as break rooms).

A Facility Manager or members of a Green Team (where a team exists) may assist in night audits. DAS will share the results of its night audits with the Facility Manager and any Green Teams to help determine actions to improve compliance. Once the Facility Manager and Green Teams agree on an action plan, DAS will track the building's performance.

Agencies may be charged for excessive amounts of energy-consuming equipment that remains on during Extended Operations.

For more on Green Teams, visit:
http://www.oregon.gov/DAS/EAM/pages/building_info.aspx

B. Water Conservation

- Fully conform to local water system requests to conserve water.
- If responsible for irrigation of public grounds, consider installation of an automated irrigation system that tracks precipitation, or irrigate using a timer.
- If a local water system declares a drought or other water emergency, local state facilities and leased sites should seek ways to model water conservation. If a state facility is a large user, contact the local water authority to plan for coordinated efforts that may exceed the minimum requested for conservation.
- Install water-saving devices, where applicable.

C. Recycling and Waste Prevention

1. Recycling by Individuals

- Develop and implement specific waste prevention and recycling plans and goals in each building.
- Establish procedures, mechanisms and collection systems within each building for the proper separation and disposal of recycled items.

2. Collection of Recycled Materials

Collection of recycled materials continues as defined in ORS 279a. Collection includes corrugated cardboard, newsprint, mixed paper, beverage containers, glass containers, plastics, waste oil, clay-coated materials, batteries, copier toner and printer cartridges. The state will expand recycling opportunities whenever possible.

D. Custodial Operation

1. Process

When practical, perform custodial services during daylight hours. Where lighting systems allow, night crews should work in teams, and turn off lights as they vacate a space.

2. Products

Custodial crews must use the most sustainable and environmentally preferred products possible. Ensure the products are third-party certified or purchased through statewide price agreements.

E. Landscape Operation

1. Process

Use the highest level of sustainable and “green” practices to minimize fertilizers, pesticides and water.

2. Products

Use the most sustainable and environmentally preferred products possible. Whenever possible, use native plants and organic materials from local suppliers. Ensure the products are third-party certified or purchased through statewide price agreements.

3. Equipment

Use the most efficient power equipment. Phase out non-carburetor two-stroke engines and replace with more sustainable options by 2015. Use biodiesel or green electric power for mowers, tractors and transport vehicles

II. Workstation Operation

This section applies to all agencies.

A. Energy Conservation

1. Computers and Office Equipment

- Manage computers and office equipment in the most sustainable manner possible within the context of an agency's mission and resources.
- Manage the power environments in which computers operate through central, automated solutions that apply sleep or hibernation modes when a device remains idle. (Allow appropriate access for remote users and IT maintenance and support, such as fixes, patches and software rollouts.)
- In the absence of an effective central, automated solution for power management, ensure that all computer users turn off computers and monitors after Normal Operations. An agency's chief information officer may approve the following exceptions in which an authorized user merely "logs off" his or her CPU (and turns off the monitor):
 - a. Remote access for an essential user
 - b. Mission-critical operations (full-time or seasonal)
 - c. Periodic instances of IT maintenance and support after Normal Operations
- During Normal Operations, always turn off monitors when CPUs remain idle (a running screen saver uses energy; turning off a monitor conserves energy). Plug monitors into a power strip with other office equipment such as speakers and approved label printers (but probably not telephones); this enables single-switch shutdown of office equipment after Normal Operations.
- Whenever possible, eliminate personal printers in favor of shared printers.
- Avoid printing non-critical documents. Try to make printing the exception, not the rule. Print multi-page documents in two-sided (duplex) mode, rather than one-sided mode.
- To save on energy and printing, send hyperlinks instead of document attachments, especially when sending e-mails to large distribution lists. For instructions, please contact your department's Information Technology section.
- Develop a shared folder-file management strategy on the network for work units. This practice enables staff to view and share one set of documents electronically rather than maintaining multiple copies on the server.
- Avoid the operation of unnecessary energy-consuming devices within each workstation, such as cell chargers, speakers, label printers, electronic staplers, etc.

2. Personal Appliances

Do not use Personal Appliances in workstations or cubicles. Exceptions:

- Personal desk fans of up to 15 watts. Administrators may approve exceptions for higher-watt desk fans (up to 60 watts).
- Administrators may approve personal foot warmers of up to 150 watts for use in areas with abnormal chill and only after exhausting all reasonable energy-free options.
- Administrators may approve space heaters to accommodate employees with special needs or for use in areas in which the building's HVAC system does not provide sufficient comfort. Agencies should consider space heaters as a last resort.

Examples of prohibited Personal Appliances (not an exhaustive list):

candles	microwaves
coffee makers	refrigerators
coffee warmers	space heaters
crock-pots	toasters
fish tanks	warming plates
hotplates	water fountains
hotpots	

3. Office Areas – General

- Turn off all office equipment when not in use.
- Shut down (using a power-off switch) copiers, printers, computer monitors and speakers after Normal Operations.
- Enable automatic “power down” or “energy saver” features on fax machines after Normal Operations.
- Turn on lights in work areas only when needed; turn off after Normal Operations. When employees work early or late, do not turn on or leave on any unnecessary lighting. Turn off task lights when leaving for long meetings and after Normal Operations.
- Actively manage accessible window blinds to retard heating and cooling loss.
- When ordering surge protectors, purchase surge protectors with occupancy sensors. These devices contain “sensored” outlets for monitors, task lights, computer peripherals, etc., and “non-sensored” outlets for computers and other sensitive equipment. Items plugged into “sensored” outlets will turn off 15 minutes after the occupant leaves the space. Agencies may contact the DAS Sustainability Coordinator for information on incentives to recover some of the costs of surge protectors with occupancy sensors.

4. Break Rooms and Kitchenettes

- State facilities should maintain designated break rooms for the benefit of all employees based upon the number of employees per floor and number of floors in a building. DAS, the Facility Manager, and building tenants should agree on the location of break room(s), communal equipment capacity, plug loads, and custodial and safety issues.
- Kitchenettes and break rooms must not exceed agreed-upon equipment capacity or plug loads. Prior to purchasing or installing appliances for communal use, employee groups must contact their building’s Facility Manager to discuss equipment or plug-load changes. Facility Managers will coordinate with the DAS Facilities Division, Operations and Maintenance section as needed.
- DAS provides ENERGY STAR refrigerators in DAS-owned buildings as budget allows. When possible, DAS will replace existing refrigerators based on age and maintenance requirements, and will remove and recycle old refrigerators after consulting with the original owner of the equipment.
- In other state-owned or leased buildings, Communal Appliances are allowed under the following conditions:
 - 1) Keep appliances in good condition, ensuring clean cooling coils or vents, ample air space and no combustible items stored above or around the appliance.
 - 2) Set the temperature set point for refrigerators at no less than 40°F.
 - 3) Remove or replace under-used or ill-maintained refrigerators.
 - 4) Use appliances in the manner and capacity designed by the manufacturer.
 - 5) Use only UL-approved appliances.
 - 6) Locate appliances in central break rooms or kitchenettes only, placing the equipment on laminated or metal counters.
 - 7) Plug appliances directly into wall outlets; do not use extension cords.
 - 8) Purchase only ENERGY STAR-rated appliances for communal use, i.e., refrigerators, dishwashers, water coolers. By 2015, all state buildings must use ENERGY STAR-rated refrigerators.
 - 9) Do not use Communal Appliances in individual workstations.
- Designate Communal Appliances as “out of service” if a power emergency occurs or if DAS determines that a site has not achieved its energy-savings goals.
- Install commercial quality (grounded outlet) plug-in timers for communal water coolers and under-counter water heaters to ensure automatic shutdown after Normal Operations. Ensure the Facility Manager approves of the equipment and its installation process.

- Manage state-owned appliances for energy conservation.

5. Laboratories

Laboratory managers must develop energy conservation plans and standards, suitable to their labs.

B. Water Conservation

- Immediately report water leaks to a Facility Manager.
- Avoid excessive running water in restrooms or break rooms.

C. Recycling and Waste Prevention

1. Recycling

- Develop and implement specific plans and goals for waste prevention and recycling in each building.
- Establish procedures, mechanisms and collection systems within each building for the proper separation and disposal of recycled items.

2. Employee Training Program

- Make available a training program for employees that outlines an agency's expectations for waste prevention and recycling.
- Educate employees on proper separation and collection systems for recycled materials.
- Provide information on waste prevention and recycling in orientation for new employees.
- Provide employees with access to recyclable or reusable office or work materials.

III. Cafeteria Operation

This section applies to agencies and contractors that operate cafeterias in state-owned or leased buildings. All other agencies please skip to the Procedures section below.

A. Times of Operation

Operate cafeterias only during the hours required to meet the needs of the building tenants.

B. Energy Conservation

Turn off all equipment, machines, exhaust fans, and lights when not in use.

C. Equipment

- a. Monitor plug load capacity to ensure the space will accommodate the equipment.
- b. Do not add equipment not designed for the space.
- c. Prior to installing additional or replacement equipment, consult with DAS Operations and Maintenance, and the Facility Manager; submit documentation as requested prior to installing or reconfiguring equipment.

PROCEDURES:

Step Responsible Party

Action

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|----|--------------------------------|--|
| 1. | Statewide Resource Coordinator | a) Serve as DAS and statewide expert on resource conservation issues.
b) Assist Agency Coordinators, Site Coordinators and Facility Managers to develop resource conservation plans and standards.
c) Maintain state government's policies on resource conservation; obtain input from subject matter expert(s) and applicable stakeholders regarding conservation policies.
d) Work collaboratively with staff and other agencies to resolve resource conservation issues.
e) Educate coordinators on proper resource conservation.
f) Compile, maintain and distribute reports on resource conservation to state agencies and the legislative branch.
g) Monitor and record resource consumption and expenditures; report on energy use and costs as requested.
h) Evaluate resource consumption against established baselines for agencies and statewide goals.
i) Report the energy consumption data of DAS to the State Energy Use Database on a quarterly basis. |
| 2 | Agency Coordinator | a) Assign at least one Site Coordinator in state-owned or leased facilities of 100 or more employees, to ensure employees practice conservation measures.
b) Educate staff on appropriate techniques for energy conservation, water conservation, recycling and waste prevention in coordination with Site Coordinators and Facility Managers.
c) Assemble and distribute information and resource plans to Site Coordinators.
d) Coordinate with DAS' Statewide Resource Coordinator.
e) Evaluate resource consumption against established baselines for agencies and statewide goals.
f) Report the energy consumption data of his or her agency to the State Energy Use Database on a quarterly basis. |
| 3. | Cafeteria Operator | a) Follow the policy requirements listed above. |
| 4. | Employee | a) Comply with the resource conservation policy within the workplace. |
| 5. | Facility Manager | a) Encourage and assist employees to conserve and prevent the waste of resources.
b) Work collaboratively with Agency Coordinators, Site Coordinators and the DAS Facilities Division, where appropriate, to resolve issues with buildings, equipment or maintenance, including outdoor sprinkler systems. |
| 6. | Vending Machine Operator | a) Equip vending machines that sell cold beverages with VendingMiser® technology.
b) De-lamp vending machines. |
| 7. | Laboratory Manager | a) Develop energy conservation plans and standards, suitable to their labs. |
| 8. | Site Coordinator | a) Educate staff at a particular work site on proper resource conservation, waste prevention and recycling techniques.
b) Work collaboratively with Agency Coordinator to ensure that employees practice appropriate conservation measures to reach and maintain goals. |