Standard Operating Efficiency Procedures

Reference

Management Memo 04-11

General

State departments should follow the Standard Operating Efficiency Procedures described below:

- Department Directors or their designees should appoint Energy Coordinators for each location their department occupies. Energy Coordinators should work in conjunction with the Facility Manager to carry out Standard Operating Efficiency Procedures. Submit any departmental contact changes via e-mail to DGSEnergyInfo@dgs.ca.gov.

At the end of the workday or when not needed, employees should turn off lights, computers, monitors, printers, and scanners, except for equipment designated as 24/7 or for which there is a specific need for after hours operations (e.g., e-mail, e-mail servers, fax machines or other essential equipment)

Hours of Operation

- State-owned and leased buildings will be operational from 6:00 AM through 5:30 PM Monday through Friday (excluding facilities that are designated as 24/7 or continuously operational). All non-essential lighting and other electrical loads shall be minimized outside of normal building hours. Agencies are expected to make a reasonable determination as to what functions must continue outside of these hours.

- Facilities/organizations with employees on alternate workweek schedules will need to accommodate these schedules even if outside of normal hours of business.

Building Heating and Cooling Systems

- When it will enhance energy efficiency, interior air shall not be mechanically heated above **68 degrees** F in winter nor mechanically cooled below **78 degrees** F in summer unless such a temperature in a particular job or occupation may expose employees to a health and safety risk. Employees should consider dressing appropriately in anticipation of decreasing/increasing office temperatures.

Building Heating and Cooling Systems
(Continued)

- Whenever possible, building operators shall operate and adjust controls to get optimum advantage from outside temperatures for meeting cooling demand (e.g., using outside air economizers and night flush cycles). Avoid operating chillers and compressors when possible. All “pre-cooling” options for buildings shall be employed.

- Building temperatures shall be allowed to fluctuate within an acceptable range to avoid wasteful over-control patterns. Simultaneous or alternate heating and cooling operations to maintain exact temperature in work areas shall be avoided. This range may vary with each building’s control system; the target range is plus or minus four degrees F from the temperature set-point, for a total fluctuation of eight degrees F.

  Keep windows and doors closed to prevent loss of heated or cooled air. The local unit manager should retain authority to permit windows and doors being open for a reasonable time to fit individual circumstances, such as the adequacy of air circulation.

- Encourage temperature sensitive employees or employees who work after 5:30 PM to bring portable fans. This may allow further reductions in building ventilation rates, and will increase comfort levels during periods of elevated building temperatures. This strategy would be particularly effective if fans and other equipment are plugged into occupancy sensor power strips.

- For warm weather months, close blinds and window coverings on all south and west-facing windows to reduce solar heat gain to cool the building, if needed. For cool weather months, open blinds and window coverings on all south and west-facing windows to make use of solar heat gain to warm the building, if needed.

- Order data center operations to maintain ambient temperature settings at manufacturer specification maximums.

Standard Operating Efficiency Procedures, Continued

Building Heating and Cooling Systems (continued)

- Do not set domestic hot water temperatures above 105 degrees F unless this conflicts with a Code requirement for your facility. Building operators and tenants shall take every opportunity to minimize hot water usage.

  NOTE: Facility managers concerned with the possibility of problems associated with Legionella bacteria (i.e., "Legionnaires' Disease") in their water systems should investigate maintenance and water treatment options to control this bacterium. Please note that simply elevating hot water temperatures alone will not control Legionella unless system temperatures are maintained at 132 degrees F or higher, which creates a high danger of scalding.

Year-Round Maintenance

- Inspect and maintain ducts, air filters and related hardware to maximize effectiveness at the lowest acceptable power use.

- Tune-up all forced and induced draft gas and oil fired boilers at least twice annually. If there are automated combustion controls, verification of combustion efficiency shall be conducted at least twice annually.

- Service heating, ventilation and air-conditioning equipment on a preventive maintenance schedule rather than "repair-as-needed."

Standard Operating Efficiency Procedures, Continued

Lighting

- Turn off all lights in unoccupied rooms, including computer equipment rooms, and storage areas at all times. Install occupancy sensors if possible.
- Reduce lamps in number and/or wattage to provide the lighting level appropriate for the activities of the area affected. Replace incandescent lighting with higher efficiency fluorescent lighting wherever possible.
- For fluorescent lights, make a special effort to replace older "core and coil" ballasts with newer energy-efficient electronic ballasts.
- Significant energy savings are possible by the selection of lower level background lighting with small-area task lighting for higher level lighting requirements – an approach particularly appropriate for computer use areas. Keep lighting fixtures clean to maintain lighting levels.
- Have custodial personnel turn lights on only as needed and turn lights off when their work is done. Where possible, have custodial personnel work in teams to complete cleaning on each floor of multi-story buildings before turning on lights on another floor.

Other Reductions in Electrical Demand

- Set all video monitors and personal computers for automatic power-down ("sleep") mode after five minutes of non-operation. (All Energy Star monitors should have this feature available and can be turned on using the "Display" option of the desktop "Control Panel.") Note that the installation of screen savers by itself does not reduce power consumption and is not a substitute.
- Enable automatic power-down or "Energy Saver" feature on all copiers, printers, and other electrical equipment.
- Turn off refrigerated drinking fountains, where feasible.