Standard Operating Efficiency Procedures

Reference

Management Memo 09-049

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.

- 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).

- Enable automatic power-down or "Energy Saver" feature on all copiers, printers, and other electrical 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 who work outside of normal business hours must have the express approval of the Building Manager.

Building Heating and Cooling Systems

- When it will enhance energy efficiency, interior air shall not be mechanically heated above 68°F in winter nor mechanically cooled below 78°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.

Standard Operative Efficiency Procedures, Continued

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. This range may vary with each building's control system; the target range is plus or minus two degrees F from the temperature set point for a total fluctuation of four degrees F. Simultaneous or alternate heating and cooling operations to maintain exact temperature in work areas shall be avoided.

- Prohibit use of personal fans and heaters without the express written consent of the building manager.

- Keep windows and doors closed to prevent loss of heated or cooled air.

- Adjust window blinds or coverings, if installed, to prevent solar heat gain during summer and prevent heat loss in winter.

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

- 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.

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.

Standard Operative Efficiency Procedures, Continued

Lighting

- Turn off all lights in unoccupied rooms. 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. Please see the Illumination Levels Table below.
- Replace incandescent lighting with higher efficiency fluorescent or, if applicable, high intensity discharge (HID) lighting wherever possible.
- For fluorescent lights, make a special effort to replace older “core and coil” ballasts with newer energy-efficient electronic ballasts.
- When cost effective, install automatic daylight controls in day-lit zones (near windows and under skylights).
- Significant energy savings are possible by the selection of lower level general ambient lighting with small-area task lighting for higher level lighting requirements – an approach particularly appropriate for computer use areas. Use light colored ceiling, wall, and floor surfaces to boost overall illumination levels (dark surfaces absorb light). 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.

ILLUMINATION LEVELS

TYPE OF AREA	FOOTCANDLES	
	Horizontal	Vertical
General and Private Office Reading # 3 pencil or softer, ball-point pen, photocopies, keyboard, 8 and 10 point type	30	
Open plan office Intensive VDT use	30	5
Classrooms Reading # 2 pencil or softer	30	
White Boards		5
Chalk Boards		50
Machine Rooms – Active Operation	30	
Mail Sorting, machine equipment service	50	
Stairways and corridors	5	
Toilets and Washrooms	5	3

[Adapted from: IESNA LIGHTING HANDBOOK 9th edition – 2000
IESNA Lighting Design Guide, Chapter 10]