



# MEMORANDUM

**Date:** August 10, 2000

**To:** All State Agencies  
Board and Commission Heads  
All Department Directors

**From:** Department of General Services  
Executive Office

**Subject:** MANAGEMENT MEMO: ENERGY MANAGEMENT AT STATE FACILITIES  
DURING ELECTRICAL EMERGENCIES

On August 2, 2000, Governor Davis responded to this summer's critical shortage of electricity in California by issuing Executive Order D-15-00. This Executive Order requires certain agencies, under the leadership of the State and Consumer Services Agency, and in consultation with one another, to "...immediately institute energy conservation measures that will reduce energy consumption during Stage 2 and Stage 3 electrical emergencies." In addition, the Secretary of the State and Consumer Services Agency will communicate directly with Cabinet Secretaries regarding this supplement to ensure compliance with all energy-related Executive Orders.

The Executive Order further requires that:

- agencies develop and implement a comprehensive communications strategy to convey information regarding impending Stage 2 and 3 emergencies to facility managers and other agency personnel;
- future response efforts be coordinated;
- response efforts be monitored for effectiveness; and
- training programs be developed for state facility managers.

The attached Management Memo addresses the urgent and immediate actions that you can take this summer to reduce power demand during system emergencies. We are taking other actions to assist you in this critical effort:

- We are developing a communications protocol that will dramatically improve the timeliness of notification;
- We are developing an employee awareness campaign, including a poster, to remind us all about the need to conserve not just during emergencies, but always, and to enlist voluntary cooperation; and
- We will be conducting statewide training sessions and developing internet-based training particularly aimed at facilities management personnel.

All State Agencies  
All Board and Commission Heads  
All Department Directors

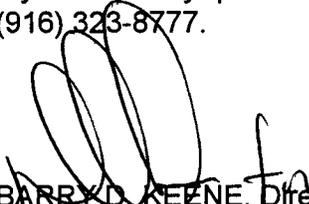
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The Independent System Operator (ISO), California's new not-for-profit corporation that handles the power dispatch duties formerly performed by the regulated utility companies, keeps watch on electricity supply and demand. The ISO has developed a system of alerts, warnings, and stages of emergency to notify the public of the current condition of the electric power system. These alerts range from "Alert" when the forecasted reserve margins for the following day are below 7 percent, to the extreme "Stage 3 Emergency" where power reserves are less than 1.5 percent and rotating outages are initiated to prevent total system collapse.

Of greatest concern to state agencies will be the declaration of a "Stage 2 Emergency" and "Stage 3 Emergency" by the ISO. At the Stage 2 level, when reserve margins have dropped to a dangerously low 5 percent, we can have maximum beneficial effect by curtailing the loads that state facilities impose on the electricity grid. By taking actions to reduce electricity use at these times, we set an example for California businesses that also could take voluntary action to ameliorate the crisis.

The State of California is a very large energy user and we know from experience that reductions by state agencies are significant enough to make a noticeable difference in correcting the supply and demand imbalance. Please help us make that difference.

If you have any questions, please call Doug Grandy, Chief, Energy Assessments Section, at (916) 323-8777.



BARRY D. KEENE, Director  
Department of General Services

BDK:DG:cl

Attachment

# MANAGEMENT MEMO

SUBJECT:

**ENERGY MANAGEMENT IN STATE FACILITIES DURING ELECTRICAL EMERGENCIES**

REFERENCES:

Supplemental to Energy Management Memo 99-13

NUMBER:

00-06

DATE ISSUED:

08/10/00

EXPIRES:

Until Superseded

ISSUING AGENCY:

DEPARTMENT OF GENERAL SERVICES

In the event of a **Stage 2 or 3 Electrical Emergency** as defined below, all state agencies and departments will follow this emergency energy conservation plan in all buildings they own, control, or operate.

Special service needs, such as those found in medical facilities, or special equipment, such as mainframe computers, or regulatory requirements may require exemptions to these general guidelines. Even in such situations, conscientious management practices still can reduce energy consumption.

## ELECTRICAL EMERGENCY

During periods in which electrical demand puts strains on the electric systems of the state's utilities, the California Independent System Operator (ISO) may declare an Electrical Emergency. Such a declaration can be made in progressive stages, depending upon the amount of reserve generation available to the California electrical grid. These stages are summarized here:

ISO Notice*	Condition
<b>ALERT</b>	Less than 7% operating reserve forecasted in DAY AHEAD market.
<b>WARNING</b>	Less than 7% operating reserve forecasted in HOUR AHEAD market.
<b>EMERGENCY Stage 1</b>	Emergency: Less than 7% operating reserves forecasted in REAL TIME. Customers with voluntary interruptible contracts should prepare for <i>potential</i> interruption.
<b>EMERGENCY Stage 2</b>	Emergency: Less than 5% operating reserves forecasted in REAL TIME. An interruption is in effect for voluntary interruptible loads only.
<b>EMERGENCY Stage 3</b>	Less than 1½% operating reserves forecasted in REAL TIME. All available interruptible load is called for interruption. Firm service customers (customers not on interruptible tariff) will also be called for interruption.

**\* The ISO can issue any notice at any time (i.e., notices do not necessarily occur sequentially but will be issued in response to system conditions). Interruptions can occur at any time but usually would occur during the afternoon peak hours (noon to six p.m.)**

California electrical demand is strongly dependent upon air conditioning loads. With the onset of weather conditions, such as multi-day heat storms, facility managers shall anticipate taking steps to reduce loads in state buildings as described below.

**When the ISO issues notice of a Stage 2 or Stage 3 Emergency, the following guidelines shall apply:**

#### **BUILDING HEATING AND COOLING SYSTEMS**

- Interior air shall not be cooled below 78 degrees F. unless such a temperature in a particular job or occupation may expose employees to a particular health and safety risk. Consider a declaration of casual dress code in anticipation of increasing office temperatures.
- All "pre-cooling" options shall be employed for buildings during evening hours.
- Building temperatures shall be allowed to fluctuate within an acceptable range in order to avoid wasteful over-control patterns. Simultaneous or alternate heating and cooling operations to maintain an 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.
- Windows and doors will be kept closed to prevent loss of conditioned air.
- Whenever possible, building operators shall operate and adjust controls to get optimum advantage from outside temperatures (e.g., using outside air economizers).
- Portable electric devices (e.g., microwaves, toaster ovens, and heaters) shall not be used in state facilities without the express permission of the facility energy manager. Fans are permitted.
- Domestic hot water temperatures shall not be set above 105 degrees F. Building operators and tenants shall take every opportunity to minimize hot water usage.<sup>1</sup>
- Blinds and window coverings on all south and west facing windows shall be closed to minimize solar heat gain.

#### **LIGHTING**

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<sup>1</sup> 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 bacteria. 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.

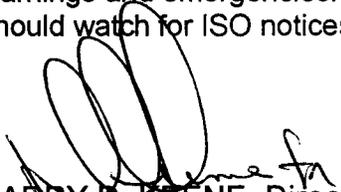
- All lights shall be turned off in unoccupied rooms at all times. If installed, occupancy sensors shall be enabled.
- Overhead lighting shall be reduced as much as possible without creating unsafe conditions or interfering with the performance of duties. Such reduction can be achieved by operating half-bank switches, where installed, by using task lighting, or by relying on daylighting where feasible and where this does not result in additional direct solar gain into the building.
- Custodial personnel shall turn lights on only as needed for custodial work and turn lights off when their work is done.
- Security and safety lighting shall be held to the lowest acceptable levels. Decorative lighting, inside or outside, shall be switched off.

#### OTHER REDUCTIONS IN ELECTRICAL DEMAND

- All video monitors and personal computers shall be set for automatic power-down ("sleep") mode. (All Energy Star monitors should have this feature available.) Note that the installation of screen savers by itself does not reduce power consumption and is not a substitute.
- All personal computers and other electrical equipment shall be turned off when not in use and at the end of each workday unless there is a specific need for after-hours operation.
- Use of photocopiers and printers shall be consolidated. Where possible, redundant printers and copiers shall be turned off and work shall be directed to nearby machines. Major copy and print jobs (i.e., over 20 pages) shall be deferred whenever possible.
- Unplug refrigerated water coolers and drinking fountains, where feasible.
- Use of break room electrical appliances (e.g., microwaves, toaster ovens, and coffee machines) should be discontinued.

Advice or consultation on this Management Memo as well as answers to technical questions or other questions regarding this policy, including funding sources available for project implementation, may be obtained from departmental energy managers or by contacting Douglas M. Grandy, Chief, Energy Assessments Section, Professional Services Branch, Real Estate Services Division, 717 K Street, Suite 409, Sacramento, CA 95814. Phone: (916) 323-8777, FAX: (916) 322-8809, E-mail [Doug.Grandy@dgs.ca.gov](mailto:Doug.Grandy@dgs.ca.gov)

The Department of General Services will contact state agencies to advise them of ISO alerts, warnings and emergencies. During hot weather conditions, state agency facility managers should watch for ISO notices through the local news media as well.



BARRY D. KEENE, Director  
Department of General Services

**Addendum to Supplemental Energy Management Memo # 00-06**

**Obtaining Information from the California Independent System Operator  
and Electric Utilities**

The California Independent System Operator is an independent corporation created by the State to plan and control the transmission grid. For additional information regarding electrical emergencies, please refer to the ISO's "PowerWatch 2000" website at:  
<http://www.caiso.com/newsroom/pw2000.html>

Other sources of information are the websites of the major California utilities, listed below. ***Note that the utilities are to take direction from the ISO in the event of system emergencies and may not have the most current information on websites.***

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| Pacific Gas and Electric Company          | <a href="http://www.pge.com/toc/bus_season_13.html">http://www.pge.com/toc/bus_season_13.html</a><br><a href="http://www.pge.com/customer_services/emergency/">http://www.pge.com/customer_services/emergency/</a> |
| Southern California Edison Company        | <a href="http://www.sce.com/safetysca/index_sf.htm">http://www.sce.com/safetysca/index_sf.htm</a><br><a href="http://www.sce.com/quicksca/index_qu.htm">http://www.sce.com/quicksca/index_qu.htm</a>               |
| San Diego Gas & Electric Company          | <a href="http://www.sdge.com/">http://www.sdge.com/</a><br><a href="http://www.sdge.com/aboutus/newsroom/">http://www.sdge.com/aboutus/newsroom/</a>   |
| Sacramento Municipal Utility District     | <a href="http://www.smud.org/">http://www.smud.org/</a><br><a href="http://www.smud.org/info/news.html">http://www.smud.org/info/news.html</a>   |
| Los Angeles Department of Water and Power | <a href="http://www.ladwp.com/home.htm">http://www.ladwp.com/home.htm</a><br><a href="http://www.ladwp.com/whatnew/dwpnews/dwpcrtoc.htm">http://www.ladwp.com/whatnew/dwpnews/dwpcrtoc.htm</a>                     |