



United States Department of Energy

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May 11, 2001

Mr. James E. Dyer
Regional Administrator
Nuclear Regulatory Commission
801 Warrenville Road
Lisle, IL 605324351

Subject: Presidential Directive on Energy Conservation at Federal Facilities

Dear Mr. Dyer:

On May 3rd, President George W. Bush directed the Heads of Federal Agencies across the country "to take appropriate actions to conserve energy use at their facilities to the maximum extent consistent with the effective discharge of public responsibilities". President Bush ordered federal facilities to review their existing operating and administrative processes and conservation programs and identify and implement ways to reduce such use, especially during periods of peak demand. Federal officials are required to report back to the President through DOE Secretary Spencer Abraham within 30 days on the conservation actions taken. The first attachment, *President Bush's Memorandum On Energy Cuts*, is the actual Directive issued by the President.

One of the missions of the U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy's Chicago Regional Office is to serve the Midwest regional needs of Federal facilities through the Federal Energy Management Program. In this regard and in response to President George W. Bush's Energy Directive, the second attachment, Plan of Action for Energy Conservation at Federal Facilities, is included to provide guidance when developing a conservation plan. Also, enclosed are samples of Federal Energy Management Program (FEMP) promotional literature that could be useful in implementing your energy plan. The promotional literature is free of charge from the Office of Energy Efficiency and Renewable Energy's FEMP and can be ordered by calling 1-800-363-3732. Please identify yourself as a Federal Agency when you call. Lastly, an introduction to utility load curtailment programs is enclosed.

For additional support and assistance, please visit the Chicago Regional Office web site at www.eren.doe.gov/cro. If you have questions or need assistance, please don't hesitate to call either of our FEMP Program Managers, Sharon Gill, 312-886-8573 or Michael Bednarz, 312-886-8585. We not only can assist you in developing your energy plan, we have technical and financial assistance available to implement energy efficiency improvements and the installation of renewable energy equipment.

Sincerely,

A handwritten signature in black ink that reads "Peter Dreyfuss".

Peter Dreyfuss
Director

Enclosures

MAY 03, 14:41 EST

Bush Memorandum on Energy Cuts

By The Associated Press

President Bush's Memorandum Thursday On Energy Conservation At Federal Facilities:

A key component of my administration's overall commitment to make the most economical use of public dollars and to protect the environment is to improve energy conservation at federal facilities. Further, with possible electricity shortages in California and in the Northeast and Northwest this summer, the federal government should set a good example of conservation by reducing its own energy use, particularly in regions where electricity shortages may occur and during periods of peak electricity demand. Such conservation would save public money, protect the environment and help to minimize shortages.

Therefore, I hereby direct the heads of executive departments and agencies to take appropriate actions to conserve energy use at their facilities to the maximum extent consistent with the effective discharge of public responsibilities. Agencies located in regions where electricity shortages are possible should conserve especially during periods of peak demand.

In addition, agencies should review their existing operating and administrative processes and conservation programs and identify and implement ways to reduce such use. Agencies should report to me, through the secretary of energy, within 30 days from the date of this memorandum on the conservation actions taken. The agencies shall take these and other appropriate energy conservation actions using existing budget authority.

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Electricity Load Curtailment for Federal Agencies

1. What is load curtailment and how can it affect my facility's energy use?

Electric "load curtailment" means reducing demand for electricity. Electric load curtailment is promoted by utilities when there is a need to reduce stress on the electric system, thereby decreasing the probability of forced outages (black-outs), and/or to reduce a utility's cost of producing and purchasing electricity during peak demand periods. An agency could curtail its own load, often termed "peak shaving", in order to reduce high electric costs which typically occur during peak electric demand periods. Many utilities offer its customers an added incentive to curtail load through special interruptible tariffs or load curtailment programs.

2. How does a load curtailment program work?

When the electric service provider needs to reduce the load on its system, it will notify a facility that participates in a curtailment program to reduce its electric load. This might mean any or all of: turning off a proportion of the facility's lights, raising the temperature at which its air-chiller operates, turning-off some of its elevators, etc., by an amount necessary to achieve the agreed load reduction. Smaller facilities can do this manually. Larger facilities may want to use a commercially available digital energy management system that can be programmed with an appropriate load-shedding algorithm.

3. What are the pros and cons of participating in a curtailment program?

The principal "pro" of load curtailment is that an agency can do "good" (help save electricity when it is in short, even critically-short, supply) and do "well" (save money and even earn a rebate) at the same time. The principal "con" is that many curtailment programs charge a hefty penalty if a facility fails to curtail its load when the service provider tells it to do so.

4. How do I sign-up for a curtailment program?

A facility's local electric service provider can offer a variety of programs that will help to curtail load. It may well also offer a variety of tariffs that charge lower prices for curtailable / interruptible electric power, or even pay the facility a rebate for curtailing load when the electric system is under stress.

A more detailed discussion of load curtailment and examples of several Midwest electric utility curtailment programs and tariffs reside on the Chicago Regional Office website at: www.eren.doe.gov/cro

ENERGY CONSERVATION PLAN FOR FEDERAL AGENCIES

Background

A key component of this Administration's overall commitment to make the most economical use of public dollars while protecting the environment is to improve energy conservation at Federal facilities. However, faced with possible electricity shortages in California, and in the Northeast and Northwest this summer, the Federal Government has further defined its commitment to include setting a good example of conservation by reducing its own energy use, particularly in regions where electricity shortages may occur and during periods of peak electricity demand.

On May 3, 2001 President Bush issued a directive to the heads of Executive Departments and Federal Agencies to take appropriate actions to conserve energy use at their facilities to the maximum extent consistent with the effective discharge of public responsibilities. Agencies located in regions where electricity shortages are possible should conserve electric use especially during periods of peak demand.

The Department of Energy (DOE) will be dispatching *Assessment of Load and Energy Reduction Technique* (ALERT) teams to the top 25 largest energy-using federal facilities in California to help them identify ways to curtail their load during peak usage. These ALERT Teams will identify key short-term measures at federal sites in the state to help the agency reduce peak load. DOE will hold workshops in the next few weeks to pass on the "lessons learned" by the ALERT Teams to all federal facilities.

Many federal facilities already realize the financial benefits of planning curtailment of electrical loads and have excellent plans in place. The federal government as a whole has reduced its energy consumption in buildings by 20% and is on track to achieve a 35% by 2010. While these gains have been measured in terms of efficiency, there is a corresponding reduction in demand on the electrical system. The requirement for emergency conservation plans is contained in Title 10, Code of Federal Regulations, Part 436, Subpart F, Paragraph 436.105.

Reporting of Conservation Actions to the President

Agencies should **act now** to review their existing operating, administrative processes and conservation programs to identify and implement additional ways to conserve such electrical usage. All agencies are required to report back to the President, through the Secretary of Energy, by June 3rd on the conservation actions taken. Agencies shall take these and other appropriate energy conservation actions using existing budget authority. The required format for the report will be provided by the Department of Energy's Federal Energy Management Program (FEMP).

Below are various action steps an agency can take to conserve energy.

General:

1. Establish/enhance communications with the local utility company. Understand their needs for load reductions. Work with the local utility to develop an individual facility plan.
2. Identify load reduction measures appropriate for a facility. Investigate separating loads into: (1) Life, health and safety driven; (2) Mission critical; and, (3) Non-critical. If not separately switchable, investigate modifying systems to allow terminating or reducing non-critical loads.
3. Establish a system to alert employees prior to expected high demand days including, but not limited to E-mail, voice mail, or public address announcement to all employees. Communicate early to allow employees to dress appropriately.
4. Monitor total facility demand as well as individual major loads (if separate metering is available). Monitor weather forecasts to predict high demand days and be proactive in communicating with the local utility to assess need to reduce load.
5. Initiate load reduction measures with employees to reduce lighting, personal computers and appliance use. While energy efficiency should be encouraged on a daily basis, stress the need for increased diligence to alleviate the emergency. Operational changes to air conditioning and other system-wide measures should be accomplished by facilities management. Federal facilities that have energy management and control systems are well suited for this task. Facilities should also consider additional measures appropriate for site specific circumstances.
6. Encourage employees to reduce electrical loads in their homes, to help alleviate demand on the utility system. If no one is at home during the workday, unneeded appliances and lights should be turned off, and air conditioning thermostats should be set to 78 F or higher before departing for the day. Also, some utilities offer cost incentives to residential customers who allow the utility to remotely cycle off power to air conditioning and electric water heating systems. Encourage employees to participate in these programs, to assist the local utility, while reducing their electricity bill.
7. Enhance employee awareness of energy efficiency through training and less formal methods. Provide training opportunities on smart energy practices so that employees can practice energy efficiency during emergency periods as well as year-round. In addition to training, run public service announcements about energy efficiency on televisions in cafeterias and other public use areas; send periodic e-mail messages about turning off lights and computers and implementing other efficiency practices; post signs or billboards near light switches or communal printers; and consider holding annual energy fairs prior to seasonal emergency periods to provide additional information for employees about how to manage energy use in the work place and in their homes.

Lighting Measures:

1. Turn off fluorescent lights when leaving an area for more than one minute. (During non-emergencies, five minutes is recommended, to keep from excessively reducing lamp life). Turn off incandescent lights when leaving areas for any period of time.
2. In areas with sufficient daylighting, turn off lights and adjust blinds, if available, to reduce glare.
3. Use task lighting and turn off general lighting, where it is feasible to maintain sufficient lighting levels for safety and productivity.
4. Turn off display and decorative lighting.

Personal Computers And Appliance Measures:

1. Turn off printers when not in use.
2. Turn off monitors when not in use.
3. Ensure ENERGY STAR power down features are activated.
4. If computers do not have ENERGY STAR features available, turn them off when leaving the office for more than 30 minutes.
5. Ensure that personal appliances such as coffee pots and radios are turned off.

Air Conditioning Measures:

1. Pre-cool building(s) below normal temperature settings prior to onset of peak demand period. Make sure to tell employees about this practice, so that they will not operate space heaters. During peak demand period, allow space temperatures to drift back up to normal settings (or as much as 5 degrees Fahrenheit (F) above normal settings).
2. Allow casual attire to make higher temperatures more acceptable.
3. Where systems allow, facility managers can lower chilled water temperatures several degrees below normal settings prior to peak periods and allow to drift above normal settings during peak periods.
4. Ensure that ventilation grilles and fan coil units are not blocked by books, flowers, debris, or other obstructions. This will improve air conditioning system efficiency and improve comfort.

Other Measures:

1. Operate emergency generators (many agencies have negotiated financial incentives from their local utility for operating generators). Ensure that generators have ample fuel for emergency operation and have been tested routinely.
2. Disable selected elevators and escalators **after** ensuring accessibility needs are met.
3. Where feasible, schedule high electrical energy use processes during off peak periods as defined by your local utility.
4. Encourage employees not to use copiers during peak demand period. Turn off selected copiers. Ensure power saver switch on copiers is enabled.
5. Turn off unnecessary loads such as fountain pumps.

Long Term Solutions:

1. Consider purchasing interruptible power for selected loads with high electrical demand which will not create adverse consequences to the site in the event that the utility curtails power. The cost savings from the lower rate may far outweigh the inconvenience of power being turned off within the interruption limitations established by the utility contract.
2. Consider installing sub-metering to identify high intensity loads to be shed during emergencies.
3. Investigate thermal storage systems or alternative energy sources for air conditioning such as natural gas chillers.
4. Install motion sensors and separate lighting circuits to allow turning off unneeded lights. (Some agencies have installed switching to separate public areas from agency work spaces).
5. Install an Energy Management Software and Control System to allow shedding and monitoring loads from one central location. If non-critical loads are not separately switchable, modify systems to allow terminating. Local utilities or energy services companies (ESCOs) can assist with this effort.
6. Consider adding on-site generation using micro-turbines, fuel cells, combined heat and power, renewable, or other appropriate technology.