



## 15 Conservation Measures



### Fifteen Low-Cost or No-Cost Energy Conservation Measures

The following are actions that commanders and civilian supervisors can direct in their commands / agencies to improve energy efficiency and energy security. This list of 15 energy saving measures can be implemented on all installations to reduce energy waste.

1. **Computers and monitors:** Computers and monitors should be turned off every day when not actively in use (Army Regulation 420-1, chapter 22). If the equipment is Energy Star rated as required by statute and regulation, then it has a sleep mode. If the sleep mode is activated after 20 minutes of inactivity, then the equipment is not required to be turned off when not in active use. However, few computers or monitors are enabled for the sleep mode even though they have the capability. Disabling energy reducing capabilities in any equipment is waste and abuse of Army resources.

2. **Government Vehicles:** Stop idling government vehicles when unattended or waiting for more than 30 seconds. Installation commanders should set this as a vehicle violation with a warning and then a consequence for second and follow-on violations.

3. **Interior Lights:** Turn off interior lights in all unoccupied area, even when one intends to return immediately. If funds are available, install occupancy sensors in hallways and common areas. Until occupancy sensors are installed, have procedures to turn off light switches or circuit breakers. Sometimes circuit breakers are the only way to turn off lights, as is the case in many maintenance and mess facilities.

4. **Office Equipment:** Scanners, copy machines, faxes, printers and other such equipment should be programmed with sleep modes to activate automatically when not in use. Equipment is required to be Energy Star rated and have a sleep mode by the Energy Policy Act of 2005, Energy Independence and Security Act of 2007 and AR 420-1. Purchase of equipment that does not meet Energy Star requirements should have a consequence to the manager and agent who authorized that purchase.

5. **Heating and Air Conditioning Equipment:** Use setback temperatures on all heating, ventilation and air conditioning equipment, including window air conditioners. If automated controls are not installed, activate procedures for manual adjustment of all heating and cooling equipment at the end of the every work day and for any periods an area is unoccupied during work hours (such as locker rooms, lunch and break rooms) . Required setback temperatures are found in AR 420-1, chapter 22. Enclosure

6. **Outdoor Lighting:** Turn off all outside lights during the day. Guardhouses, access points, gas stations, maintenance areas and storage areas are common locations where outside lighting is left on during daylight hours because of lack of attention, education and consequences. Vending machines should be delamped whether they are inside or outside. Seek changes to the contracts with vending machine owners to avoid providing utilities to vendors without requirement to pay a utility charge.

7. **Doors and Windows:** Doors and windows between conditioned spaces and non-conditioned spaces should not be rigged to stay open. Active management of doors and windows that control conditioned spaces is critical to reducing energy waste especially in maintenance areas with heating and/or air conditioning. Heating and cooling of vestibules (entry areas) should be eliminated except to prevent freezing of pipes in those areas. Thermostats for heating of vestibules should be set at no higher than 45 degrees and, in most cases, can be set at 40 degrees where the weather stripping is properly installed for entry doors. Air conditioning of vestibules should be shut off.

8. **Motors:** All motors and pumps that have automatic controls should be operated in the auto mode and not in the manual mode that causes them to run 24/7. Very few systems require 24/7 operation, and a review of the requirement can reduce the operating hours of many pumps and motors. Disable systems such as hot water circulating pumps than run 24/7 in facilities where the hot water is not required immediately at the faucet. Consider timing controls for the pumps motors during high-use or high-demand times, such as early mornings and/or late afternoons, which allows the motors or pumps to be off during non-occupied or low-use times.

9. **Light Bulbs:** Remove all incandescent lights from the installation. Prohibit lamps and fixtures that have incandescent lights from offices, maintenance areas, boiler rooms and closets. Require existing incandescent bulbs to be replaced with compact florescent, florescent, LED or Energy Star-rated laminars. Remove all incandescent lights from supply inventories (SSSC and self-help stores) and prohibit the purchase of incandescent replacement bulbs by units on the installation.

10. **Personal Equipment:** Eliminate and remove all extra refrigerators, microwaves, coffeepots and other appliances that service only one or two persons except as permitted by AR 420-1, chapter 22. Permit only the quantity of appliances needed for the number of personnel. Remove non-Energy Star appliances from the workplace by requiring all appliances to bear the Energy Star label. Remove non-complying appliances from the facility so that they do not simply move to another office. Prohibit personally owned appliances in the workplace.

11. **Exit Lights:** Replace all exit lighting with LED lighting fixtures.

12. **Gaps Around Doors and Windows:** Install or replace all weather stripping on every entry way where a gap or light is visible. Calk all joints, window frames, door jambs and any penetrations from the outside of the building. Infiltration around windows and doors is one of the main causes of wasted energy in conditioned spaces.

13. **Wiring and Switching:** Rewire all indoor lighting that is on 24/7, except LED exit fixtures required by code, to be on either switches or motion sensors. If there is a security or safety issue, motion sensor control meets the requirement.

14. **Filters:** Replace the filters and check the tension on fan drive belts where installed every 30 days during the heating season — normally November through March but varies based on climatic region — and the same during the air conditioning season — July through September based on climatic region. For non-heating and non-cooling months, replace and check every 90 days as a minimum.

15. **Rewinding Motors:** Replace all motors and pumps with high-efficiency Energy Star equipment every time a replacement is required. Prohibit rewinding or replacing with the same efficiency. Do not yield to the arguments that it is more convenient or less costly to rewind or replace with in-kind capability as the extra energy used by the less-efficient motors will pay the difference usually in less than three years.