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**ENERGY MANAGEMENT**

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This instruction implements AFPD 23-3, *Energy Management*. It prescribes energy conservation goals and requirements for all organizations at Hill Air Force Base, Utah Test and Training Range, and Little Mountain Test Annex. It establishes the methodology to conserve energy resources in vehicles, equipment, operations, and facilities. All organizations and tenants comply with this instruction and perform specific tasks, as required, to eliminate waste and conserve energy resources. Maintain and dispose of records created as a result of prescribed processes in accordance with AFMAN 37-139, *Records Disposition Schedule*.

**SUMMARY OF REVISIONS**

This revision includes additional clarifications and requirements for the use of Space Heaters (addition to paragraph 5.1.2. and new paragraphs 5.1.2.1. through 5.1.2.7.).

**1. Introduction.** Hill AFB and all tenants installations managed by Hill AFB consume significant amounts of energy in support of the national defense policy. Restrictive budgets and potential pollution of the environment require Hill AFB to establish policies for responsible management, control, metering, and using energy.

**2. Goals.** Executive Order 13123, *Greening the Government Through Efficient Energy Management*, June 1999, establishes the energy reduction goals for facilities and equipment. All organizations and tenants will develop and implement programs with the intent of reducing energy consumption by a minimum of 20 percent by the year 2005, based on fiscal year 1990 energy consumption (Mbtu) per-gross-square-foot area of its buildings in use. Only energy measures that are cost effective will be accomplished.

**3. Responsibilities And Authorities.** The following responsibilities and authorities are established:

### 3.1. Energy Program Manager/Organization Energy Manager.

3.1.1. The Hill AFB Energy Program Manager is assigned by the 75 Civil Engineer Squadron Commander (75 CES/CC), and is responsible for the oversight and advocacy of the base energy program. The Energy Program Manager will monitor energy use trends and patterns, and track progress toward meeting established goals. The Energy Program Manager will also identify opportunities to reduce energy use and coordinate implementation plans with the affected organizations. Provides guidance and assistance to organizations at Hill AFB.

3.1.2. Each organization will assign additional duties to at least one individual to be an organization energy manager. Individuals assigned will monitor energy use within their organization and coordinate facility energy audits, meet with the Hill AFB energy program manager as required to receive guidance and technical advice on the base energy program.

### 3.2. Energy Management Steering Group (EMSG).

3.2.1. The EMSG establishes base policy for energy-related matters. Each quarter the EMSG will meet to review progress in meeting energy reduction goals, and discuss opportunities that will result in reductions in energy use. The EMSG will assign tasking to implement approved programs.

3.2.2. The EMSG is chaired by the OO-ALC Vice Commander (OO-ALC/CV), with the 75th Air Base Wing Commander (75 ABW/CC) as the vice chairperson.

3.2.3. Each organization will be represented at the EMSG quarterly meetings by the Director or Deputy Chief. Organizations that consume less than one percent of the total base energy use are not required to attend the EMSG.

3.2.4. The Base Energy Program Manager will prepare the agenda for the EMSG meeting, which will be disseminated to each organization's POC prior to the meeting. The information in the agenda will be presented to the steering group. All organizations are encouraged to participate and present best practices and lessons learned.

**4. Requirements.** To eliminate waste and conserve energy resources, Hill AFB will apply the following practices and principles.

4.1. All organizations will utilize life cycle cost analysis to determine the most efficient and cost-effective applications of new construction, retrofitting existing facilities, equipment installation and industrial processes. Computer software such as Basic Life Cycle Cost (BLCC) and A Simplified Energy Analysis Method (ASEAM) are acceptable tools to model efficiency and project energy use.

4.2. Promote vehicle energy efficiency. Maintain and acquire an energy-efficient vehicle fleet.

4.3. Utilize alternate fuel for vehicles to the extent practical as determined by the Transportation Officer.

4.4. Increase energy efficiency through capital investment and improved operations. Annually prioritize and submit to Headquarters Air Force Material Command energy improvement projects that qualify for special funding under the Energy Conservation Investment Program (ECIP) and Facility Energy Management Program (FEMP).

4.5. Initiate energy conservation projects utilizing private sector funding when it is in the best interest of the Air Force.

4.6. The Base Utility Manager will aggressively pursue opportunities to obtain Utility Company rebates or project financing when it is in the best interest of the Air Force.

4.7. Recognize significant achievements of individuals and organizations that contribute to and promote efficient energy use and cost savings. Encourage all personnel to utilize the Air Force IDEA Program to submit ideas and proposals that will result in reducing energy use and enhance the work environment.

4.8. Use public media, such as base newspaper, computer bulletin board, posters, and handouts to disseminate information on energy awareness. Encourage all organizations to adopt practical energy conservation measures in daily business practices.

## **5. Facility Energy Conservation Policy.**

5.1. An overall policy on facility energy must include certain restrictions and guidance. Individual situations that appear to need special consideration will be presented to the EMSG.

5.1.1. Critical air conditioning and heating requirements in specialized facilities such as but not limited to medical, computer, food service, equipment calibration, and ICBM storage facilities are exempt from the temperature restrictions contained in this Instruction. Temperature controls in these facilities will be set in accordance with mission requirements.

5.1.2. Privately owned air conditioners and space heaters are prohibited. Government owned, individually operated air conditioners and space heaters are prohibited except as authorized in writing by 75 Civil Engineer Group Commander (75 CEG/CC). Individuals may obtain authorization by completing an AF Form 1768, **Staff Summary Sheet** with concurrence from the individual's management, the organizations safety officer, and Fire Protection (775 CES/CEF). Each organization shall monitor the use of government owned air conditioners and space heaters, and ensure compliance with base policy. Space heaters and air conditioners already in-place and meeting standards listed below can and will be used without further authorization. Any future purchases shall be in compliance with this publication. In addition to written authorization, employees must be in full compliance with the following conditions:

- 5.1.2.1. Space heaters shall only be used when conditions require.
  - 5.1.2.2. Space heaters shall be:
    - 5.1.2.2.1 UL Listed.
    - 5.1.2.2.2 Equipped with a safety tip-over switch.
    - 5.1.2.2.3 Enclosed heat coils.
    - 5.1.2.2.4 Attended at all times.
    - 5.1.2.2.5 Unplug heater when not in use.
    - 5.1.2.2.6 Heater shall not be used with an extension cord unless coordinated by 775 CES/CEF.
    - 5.1.2.2.7 Heater shall not be plugged into system/modular furniture.
    - 5.1.2.2.8 Heater shall be located away from all combustible material.
  - 5.1.2.3. Violations of above stipulations will cancel authorization.
  - 5.1.2.4. Authorization for use of heater is granted only when conditions require.
  - 5.1.2.5. Supervisor is responsible to annually monitor and ensure above stipulations are complied with.
  - 5.1.2.6. Authorization must be reviewed annually.
  - 5.1.2.7. Management will provide to the Maintenance Engineering Flight Office (75 CES/CEOM) and the American Federation of Government Employees (AFGE) Local 1592 a list of all employees who have space heaters and air conditioners, bargaining unit and non-bargaining unit, by name, organization and building number in order to ensure all heaters and air conditioners are in compliance.
- 5.1.3. The actual start date for the heating and cooling seasons is dependent upon current weather conditions. It is common for seasonal temperatures to fluctuate several degrees above or below normal during the year. The start and end dates listed below are for planning purposes only.
- 5.1.3.1. Heating season begins, 15 October.
  - 5.1.3.2. Heating season ends, 15 May.
  - 5.1.3.3. Cooling season begins, 15 June.
  - 5.1.3.4. Cooling season ends, 15 September.
- 5.1.4. Heating and cooling systems will be operated to take maximum advantage of outside make-up air. Civil Engineering will delay the start-up of central heating plants and cooling systems, and will shut them down early to the extent practical.
- 5.1.5. Temperature set points in facilities at Hill AFB, Utah Test and Training Range, and Little Mountain Test Annex will be maintained in accordance with the following guidelines in Table 5.1. with the exception of facilities listed in paragraph 5.1.1. Additional exceptions will be considered on a case-by-case basis in accordance with paragraph 5.1.2.
- 5.1.6. The lighting levels specified in Table 5.2. represent the range for which individual light levels should be met. It should be understood that these levels are guidelines established by the Illuminating Engineering Society (IES) and represent the average light levels within the occupied space. When designing a modification to or new installation of lighting, the listed minimum level shall be considered as the design maximum. Any special lighting level requirements shall be

resolved by the individual directorate by obtaining written approval from the Aerospace Medicine (75 AMDS/SGP) and coordination by the Energy Management Office. Additional exceptions will be considered on a case-by-case basis in accordance with paragraph 5.1.2.

**Table 5.1. Cooling and Heating**

<b>Heating</b>		
<b>Type of Facility</b>	<b>Occupied Hours</b>	<b>Unoccupied Hours</b>
Office Space	65-70 Degrees F	55 Degrees F
Storage	55 Degrees F	55 Degrees F
Maintenance Shops	55 Degrees F	50 Degrees F
<b>COOLING</b>		
<b>Type of Facility</b>	<b>Occupied Hours</b>	<b>Unoccupied Hours</b>
Office Space	76-80 Degrees F	82 Degrees F
Storage	Unconditioned	Unconditioned
Maintenance Shops	Unconditioned	Unconditioned

**Table 5.2. Lighting Levels**

<b>IES Recommended Illuminance Values</b>	
<b>Area/Activity</b>	<b>Foot-candles</b>
Offices, General	20 – 50
Hallways	10 – 20
Conference Rooms	20 – 50
Rest Rooms	20 – 50
Service Areas	30 – 50
Shop Areas	30 – 50
Warehouse/Active	20 – 50
Warehouse/Inactive	5 – 10
Storage Areas	5 – 20
Maintenance Areas	20 – 50
General Aircraft Maintenance Area	50 – 75
Retail Spaces	10 – 50
Food Service Area	10 – 50
Classrooms	20 – 50

**6. Equipment Energy Conservation Policy.**

6.1. Installed equipment will be operated only as necessary to meet mission requirements. To the extent practical, so as not to interfere with product output, large high demand equipment will be operated during off peak hours (typically 1100 to 1500).

6.2. All installed equipment will be turned off when not in use. Equipment that is not practical to power down or turn off such as electronic or computer equipment will be operated as required.

**7. Facility Inspections.**

7.1. The organization energy manager and/or building manager will conduct quarterly inspections of each facility assigned. At the completion of the facility energy inspection, all deficiencies will be noted and reviewed by the building manager and organization energy manager. Deficiencies identified during the inspection will be corrected as funding becomes available.

7.2. The Base Energy Program Manager along with individual organization energy managers will conduct random inspections of facilities. No-notice inspections will be made to ensure compliance with energy conservation policies.

**8. Energy Reporting.**

8.1. The Base Energy Program Manager will report energy consumption and costs to Headquarters Air Force Materiel Command by means of the Defense Utility Energy Reporting System (DUERS). Utility information will include heating degree-days, cooling degree-days, base population, and square footage. Information will be transmitted by the 25th day following the reporting month.

**9. Forms Adopted. AF Form 1768, Staff Summary Sheet.**

SEBASTIAN V. ROMANO III, Col, USAF  
Commander, 75 Air Base Wing

Attachment  
Glossary of References and Supporting Information

## Attachment 1

### GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

#### *References*

AFPD 23-3, *Energy Management*

Executive Order (E.O.) 13123, *Greening the Government Through Efficient Energy Management*

#### *Abbreviations and Acronyms*

**AFGE**—American Federation of Government Employees

**ASEM**—A Simplified Energy Analysis Method

**BLCC**—Basic Life cycle Cost

**DUERS**—Defense Utility Energy Reporting System

**ECIP**—Energy Conservation Investment Program

**EMSG**—Energy Management Steering Group

**FEMP**—Federal Energy Management Program

**IES**—Illuminating Engineering Society

**OO-ALC/CV**—OO-ALC Vice-Commander

**75 ABW/CC**—75 Air Base Wing Commander

**75 AMDS/SGP**—Aerospace Medicine

**75 CEG/CC**—75 Civil Engineer Group Commander

**775 CES/CEF**—Fire Protection