

**BY ORDER OF THE COMMANDER
51ST FIGHTER WING**

**51ST FIGHTER WING INSTRUCTION
90-1702**



13 FEBRUARY 2014

Special Management

**ENERGY MANAGEMENT
AND CONSERVATION POLICY**

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

ACCESSIBILITY: Publications and forms are available for downloading or ordering on the e-Publishing web site at www.e-Publishing.af.mil

RELEASABILITY: There are no releasability restrictions on this publication

OPR: 51 CES/CENP

Certified by: 51 MSG/CC
(Col Michael S. Strunk)

Pages: 13

This instruction implements Air Force Policy Directive (AFPD) 90-17, *Energy Management*. It establishes responsibilities and procedures outlining energy management policies for the 51st Fighter Wing (51 FW), Osan Air Base, Republic of Korea. It defines the responsibilities of the Energy Management Steering Group (EMSG), Energy Management Working Group (EMWG), Base Energy Manager, Functional Area Energy Managers, Facility Managers, and general base populace with regards to energy management. It applies to all assigned, attached or associated units to the 51 FW. Refer recommended changes and questions about this publication to the Office of Primary Responsibility (OPR) using the AF Form 847, *Recommendation for Change of Publication*; route AF Forms 847 from the field through the appropriate functional chain of command. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with (IAW) Air Force Manual (AFMAN) 33-363, *Management of Records*, and disposed of IAW Air Force Records Disposition Schedule (RDS) located in the Air Force Records Information Management System (AFRIMS).

1. Overview: The purpose of this instruction is to provide specific guidance for the 51 FW Energy Management Program to ensure wing compliance with applicable federal, Department of Defense and Air Force energy management and conservation directives. Applicable directives include, but are not limited to, The Energy Independence and Security Act (EISA) of 2007, The Energy Policy Act (EPA) of 2005, Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, AFI 90-1701, *Energy Management*, AFI 32-1023, *Designing and Constructing Military Construction Projects*, and the AFD 091208-027, *Air Force Energy Plan 2010*.

2. Energy Management Steering Group (EMSG) & Energy Management Working Group (EMWG):

2.1. The EMSG. The EMSG will serve as an installation-level forum on all energy related matters. The EMSG will meet as directed by the EMSG Chairperson, but no less than once per fiscal year quarter.

2.1.1. The 51st Fighter Wing Commander (51 FW/CC) or Vice Commander chairs the EMSG.

2.1.2. EMSG will review status of ongoing projects and initiatives towards achieving federal, Department of Defense (DoD) and USAF energy, water and greenhouse gas emission goals and metrics.

2.1.3. EMSG will review functional area performance versus federal, DoD and USAF directed goals.

2.1.4. EMSG will prepare the annual briefing for the PACAF EMSG that is presented by the 51st Fighter Wing Commander or Vice Commander.

2.1.5. EMSG will review and implement initiatives developed by the EMWG.

2.1.6. EMSG will promote a culture of energy awareness.

2.1.7. EMSG membership will be composed of, but not limited to, the members listed in the Charter (see Attachment 2) or their designated representatives.

2.2. The EMWG. The EMWG is a cross-functional team with representatives from each of the base's major energy users and Functional Area Energy Managers. The EMWG will be chaired by the Base Energy Manager and meet quarterly, no later than 15 days prior to schedule quarterly EMSG meetings. The EMWG Charter is provided in Attachment 2.

2.2.1. EMWG will provide a cross-functional forum for discussing energy conservation initiatives and issues.

2.2.2. EMWG will monitor functional area performance versus federal, DoD, and USAF directed goals.

2.2.3. EMWG will discuss and coordinate functional area short term (<1yr) medium term (1-5yr) and long term (>5yr) energy savings initiatives for approval by the EMSG.

2.2.4. EMWG will ensure facility managers are trained on energy conservation procedures applicable to their facilities.

3. Key Roles and Responsibilities:

3.1. Base Energy Manager (BEM). The Base Energy Manager has the primary responsibility of leading and managing the 51st Fighter Wing Energy Management Program. The BEM will be designated by the Base Civil Engineer (Note: the contracted Resource Efficiency Manager (REM) may be asked to perform the duties of the BEM within contract limitations)

3.1.1. BEM will schedule and develop agendas for EMSG meetings.

3.1.2. BEM will lead and organize the EMWG.

3.1.3. BEM will update the EMSG and EMWG on any changes in federal, DoD, or USAF energy policy, guidance, or directives.

3.1.4. BEM will develop plans to support or supplement Air Force and Major Command (MAJCOM) energy conservation goals/strategies.

3.1.5. BEM will evaluate energy conservation requirements, summarize all energy-related statistical data for progress reporting and planning purposes, and initiate energy-awareness programs.

3.1.6. BEM will serve as the EMWG functional area representative for all matters relating to facility and infrastructure energy and utility usage.

3.1.7. BEM will participate in construction project design reviews to ensure that energy security, energy efficiency, energy conservation, energy budget figures, and life-cycle cost criteria are considered during design and construction.

3.1.8. BEM is responsible for completing facility energy audits and will identify and develop facility energy conservation opportunities.

3.1.9. BEM will plan, program, and design energy conservation projects.

3.1.10. BEM will measure, evaluate, and report base energy usage through the Air Force Energy Reporting System (AFERS).

3.1.11. BEM will ensure energy conservation and awareness training is presented to facility managers.

3.1.12. BEM will promote energy awareness through available television, print, and radio outlets.

3.1.13. BEM will lead the base energy awareness program.

3.1.14. BEM will serve as the focal point for all energy related reports, requests for information and data calls.

3.2. Functional Area Energy Managers. Functional Area Energy Managers are selected as representatives of each of the wing's major energy consumer organizations, with particular focus on the major energy consuming activities not under the direct scope of the Base Energy Manager, such as vehicle and aircraft operations. Functional Area Energy Managers will be selected by their respective squadron or group commanders with a minimum grade of E-6 or above. Additionally, upon assignment, they will have a minimum of six months prior to DEROS. Responsibilities will include the following:

3.2.1. Participate in the EMWG.

3.2.2. Brief the EMSG and EMWG on energy conservation initiatives and progress versus directed goals for their functional area.

3.2.3. Develop plans and programs to reduce energy consumption in the functional area as per federal, DoD, and USAF guidance.

3.2.4. Promote energy awareness through unit-level energy initiatives and training.

3.2.5. Functional Area Energy Managers will, at a minimum, be assigned for 51 FW organizations having the largest energy consumption, including:

- 3.2.5.1. 51st Logistics Readiness Squadron
- 3.2.5.2. 51st Communications Squadron
- 3.2.5.3. 51st Operations Group
- 3.2.5.4. 51st Medical Group
- 3.2.5.5. 51st Maintenance Group

3.3. Facility Managers. Primary and Alternate Facility Managers have a critical role in ensuring buildings are operated in an efficient manner and energy conservation is practiced. Facility Manager responsibilities include, but are not limited to the following:

3.3.1. Compile and report monthly facility electric and fuel consumption data by the 5th of the following month as indicated below:

3.3.1.1. Facility Electric Meter: Facility Managers will record electric meter readings on or within 2 days of the 20th of each month and enter them into the data table at:
https://osws1.area52.afnoapps.usaf.mil/table_editor/vbscript/table.asp?site=EMS.

3.3.1.2. Organizational Fuel Tanks: Facility Managers will work with Facility Tank Custodians to report the quantity of diesel fuel (for heating and generators) consumed monthly to the Base Energy Office. Tank levels at the beginning and end of the month, and the quantity of fuel added to the tank during the month, need to be reported. The Base Energy Office (784-3408) and 51 LRS Fuels Management Office (784-5631) will provide assistance and notify facility managers of any changes to the reporting procedures.

3.3.2. Ensure all building occupants practice energy conservation, including proper thermostat temperature settings (see Table 4.1), decreasing hall lighting during daylight hours, and turning off or unplugging unnecessary energy-using devices whenever possible.

3.3.3. Perform weekly walk-through inspections of the facility to identify wasteful energy practices and make on-the-spot corrections including turning-off unnecessary interior and exterior lighting at building entrances, bike racks, and adequately lit stairwells during daylight hours.

3.3.4. Upon request, escort the Base Energy Manager or their designated representative on energy conservation inspections of the facility.

3.3.5. Identify energy saving opportunities to the Base Energy Manager and submit work orders to 51 CES Customer Service for issues beyond the scope of spot corrections (Examples include: leaking faucets, defective flush valves and malfunctioning HVAC equipment).

3.3.6. Ensure the Osan AB Real Property Office (784-6955) is notified when a facility is vacated and turned over to the 51 CES Installation Management Flight. A building turnover inspection checklist, including energy conservation requirements, must be signed by the facility manager or another person in the organization's leadership and submitted to the Real Property Office.

4. General Base Utility Conservation Initiatives

4.1. Heating Ventilation and Air Conditioning (HVAC). Efficient and appropriate use of air conditioning and heating systems is critical to the base's energy conservation goals. Implementing the following procedures will maintain quality of life while reducing energy costs by providing "No Heat/No Cool" periods that minimize annual electricity and fuel consumption, and prepare equipment for peak operational efficiency.

4.1.1. Cooling. Air conditioning systems used for comfort cooling will be turned on when directed by the 51 FW/CC, or when daily high temperatures reach or exceed 80 degrees Fahrenheit for five consecutive days. Facility and stand-alone indoor air conditioning systems, will be turned off after 15 September each year, if daily high temperatures are below 80 degrees Fahrenheit for five consecutive days. This effort will mark the beginning of the "No Heat/No Cool" period during the fall season. Facilities utilizing window air conditioners and indoor tower air conditioners, will follow operation criteria as stated for facility air conditioning. The cooling temperature setting limits in Table 4.1 will apply to all base activities.

Table 1. Heating and Cooling Temperature Settings

Facility Classification	Lowest Air Conditioning Temp Setting	Highest Heating Temp Setting
Offices, classrooms, DODDS laboratories, recreational facilities, dining facilities, chapels, and other work facilities not mentioned below.	78°F/25.6°C	68°F/20°C
BOQs, VOQs, VAQs, and MFH	76°F/24.4°C	68°F/20°C
Shops, hangars, warehouses, and other facilities where climate control is difficult to achieve. *Mission directed exceptions will be coordinated through 51 CES	No A/C	55°F/12.8°C
Supply buildings and mechanical rooms – heat required to protect material and installed equipment from freezing. No heat will be permitted where stocking and withdrawal is the only operation. Heat equipment spaces as specified in manufacturer's warranty, service manual, or equipment service contract.	No A/C	40°F/4.4°C

4.1.1.1. With the exception of areas requiring mold control and 24 hour operation, air conditioning systems will be set no lower than 85°F on weekends and holidays as well as during the hours of 1600-0700 on duty days as practicable.

4.1.1.2. Air conditioning systems servicing facilities with critical equipment (main-frame computers, navigation aids, temperature-sensitive calibration equipment, etc.) or special use (medical patient treatment, etc.) will be operated year round on an as-

needed basis. Users are responsible for coordinating specific facility needs with 51 CES and provide applicable Air Force Instructions, Technical Orders, and/or Manufacturer's Manuals to support.

4.1.1.3. Window and split air conditioning units. The use and/or installation of window and split air conditioning units are strongly discouraged. Window and split air conditioning units are not real property equipment items and will not be maintained by 51 CES.

4.1.2. Heating. Facility heating systems will be turned on, when directed by the 51 FW/CC, no sooner than 15 October and usually only after daily low temperatures are below 40 degrees Fahrenheit for five consecutive days. Facility heating systems will be turned off after 1 April each year, if daily low temperatures are above 40 degrees Fahrenheit for five consecutive days. This effort will mark the beginning of the "No Heat/No Cool" period during the spring season. The heating temperature setting limits in Table 4.1 will apply to all base activities.

4.1.2.1. With the exception of areas requiring 24 hour operation, heating systems will be set no higher than 55°F on weekends, holidays, and during non-business hours on duty days as practicable.

4.1.3. Exceptions to HVAC Policy. The 51 CES Operations Flight Superintendent or delegate will coordinate with the 51 FSS prior to turning air conditioning off each year to evaluate extending air conditioning operation in community facilities (clubs, base theater, etc.) scheduled for near-term special events with large attendance, such as the annual Air Force Ball, DV mass briefings, and Dining-Ins. Other organizations requiring extended air conditioning operation will work through their chain of command to submit requests to 51 CES/CC with justification. Requests must be endorsed by a Squadron Commander or higher.

4.2. Lighting. Interior lighting will be turned off while the area is unoccupied with the exception of lighting required for safety or security.

4.2.1. Incandescent bulbs are prohibited. Compact Fluorescent Light (CFL) bulbs, used in the dorms and Military Family Housing Units, are available to facility managers at the 51 CES Self Help Office (Bldg 657).

4.2.2. Exterior lighting will be turned off during daylight hours. Exceptions will be granted for critical operations requiring additional exterior lighting or safety concerns.

4.2.3. Exterior lighting circuits and fixtures will be adjusted (with timers, photocells, etc.) to provide minimal safe lighting dusk to dawn.

4.2.4. Exterior lighting with malfunctioning automatic photo-sensors will be reported to 51 CES Customer Service.

4.3. Fuel Oil Conservation. Fuel oil will be conserved in mechanical rooms servicing administrative buildings and other buildings that do not have showers, by discontinuing the availability of hot water in the sinks for washing hands from May thru October.

4.4. Water Conservation. Malfunctioning water fixtures will be reported by facility managers. This may include, but is not limited to, leaking faucets, toilets continuously flowing or leaking, broken spigots, and leaking interior or exterior water lines.

4.5. Space Heaters. The use of space heaters for personal use is prohibited; however, space heaters can be used in common areas provided they are plugged into a wall outlet and unplugged when not in use. Refer to additional requirements for heat producing appliances in Sec 6.2.10 of AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*. Facilities with heating systems not capable of providing suitable heat to occupied areas will be reported to facility managers. Exceptions to this policy can be granted and must be documented by the first O-5 in the chain of command or higher.

4.6. Appliances. When acquiring appliances, organizations will purchase ENERGY STAR® or Federal Energy Management Program (FEMP) designated, water efficient, bio-based, environmentally preferable, and non-ozone depleting appliances, in accordance with E.O. 13514. Appliances include, but are not limited to, vending machines, refrigerators, freezers, clothes washers, dryers, dishwashers, and water coolers.

4.6.1. Organizations will phase out all existing non-ENERGY STAR® rated appliances at the end of their manufactured lifespan or earlier.

4.6.2. Personal refrigerators. The use of personal refrigerators at Osan AB is prohibited. Refrigerators are permissible only when shared and located in a common use area. A standard rule-of-thumb that should be used is one full size refrigerator per 20 personnel working on a single shift in a given area.

4.6.2.1. All existing personal refrigerators should be removed from the base or disposed. When disposing a refrigerator, owners/users will use their own funds to ensure the proper drainage and disposal of refrigerants.

4.6.2.2. Exception to this policy can be granted and must be documented by the first O-5 in the chain of command or higher.

4.6.3. Energy efficiency will be a consideration in all appliance procurements.

4.7. Miscellaneous.

4.7.1. All permissible electronic items and/or office equipment will be turned off while areas are unoccupied during work breaks or end of shifts. This includes but is not limited to computer monitors, speakers, TVs, radios, rechargeable portable devices, paper shredders, and fans.

4.7.2. Before weekends, Temporary Duties (TDYs), leave or other reasons for extended absence, all permissible electronic items and/or office equipment will be unplugged from wall outlets in work areas as practicable. This is to eliminate or severely reduce the amount of phantom loads or “electrical leakage”.

4.7.3. Public and private holiday lighting displays will be turned off from 2300 – 1700 hours, except for light-emitting diode (LED) lighting displays, which may remain on during non-daylight hours.

4.7.4. No additional electronic marquees are permitted at Osan AB. All current electronic marquees or billboards will be turned off at a minimum from 2300 – 0600 hours.

BROOK J. LEONARD, Colonel, USAF
Commander

Attachment 1

GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION

References

AFPD 90-17, *Energy Management*, 29 November 2011

AFI 32-1023, *Designing and Constructing Military Construction Projects*, 21 April 2010

AFI 90-1701, *Energy Management*, 16 July 2009

AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*, 15 June 2012

AFMAN 33-363, *Management of Records*, 1 March 2008

AFD 091208-027, *Air Force Energy Plan 2010*

The Energy Independence and Security Act (EISA) of 2007

The Energy Policy Act (EPAct) of 2005

Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, 26 January 2007

Executive Order 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, 8 October 2009

FAR 23, *Environment, Energy and Water Efficiency, Renewable Energy Technologies, Occupational Safety, and Drug-Free Workplace*

Adopted Forms

AF Form 847, *Recommendation for Change of Publication*

Abbreviations and Acronyms

AFERS—Air Force Energy Reporting System

AFI—Air Force Instruction

AFMAN—Air Force Manual

AFPD—Air Force Policy Directive

AFRIMS—Air Force Records Information Management System

BEM—Base Energy Manager

CFL—Compact Fluorescent Light

DoD—Department of Defense

EISA—Energy Independence and Security Act

EMSG—Energy Management Steering Group

EMWG—Energy Management Working Group

EPAct—Energy Policy Act

FEMP—Federal Energy Management Program

HVAC—Heating, Ventilation, Air-Conditioning

IAW—in accordance with

LED—Light-Emitting Diode

MAJCOM—Major Command

OPR—Office of Primary Responsibility

RDS—Records Disposition Schedule

REM—Resource Efficiency Manager

TDY—Temporary Duty

Attachment 2

ENERGY MANAGEMENT STEERING GROUP (EMSG) & ENERGY MANAGEMENT WORKING GROUP CHARTER

Figure A2.1. Energy Management Steering Group (EMSG) & Energy Management Working Group Charter



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 51ST FIGHTER WING (PACAF)
 UNIT 2067
 APO AP 96278-2067

30 SEP 2013

MEMORANDUM FOR RECORD

FROM: 51 FW/CC

SUBJECT: Energy Management Steering Group & Energy Management Working Group Charter

1. The Osan AB Energy Management Program shall reduce fuel, water, and electrical energy usage through energy conservation programs, projects, and awareness. This will be accomplished via the Energy Management Steering Group and the Energy Management Working Group described in paragraphs 2 through 5.
2. ENERGY MANAGEMENT STEERING GROUP (EMSG): The EMSG shall be composed of, but not limited to, the following members or their designated representatives from all major energy-managing activities. Additional members may be added at any time through approval of the EMSG.

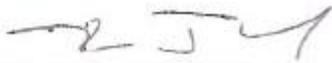
Voting Members	
Commander, 51st Fighter Wing (Chairman)	51 FW/CC
Vice Commander, 51st Fighter Wing (Chairman)	51 FW/CV
Commander, 51st Mission Support Group	51 MSG/CC
Commander, 51st Operations Group	51 OG/CC
Commander, 51st Maintenance Group	51 MXG/CC
Commander, 51st Medical Group	51 MDG/CC
Commander, 51st Civil Engineer Squadron	51 CES/CC
Associate Members	
7th Air Force Civil Engineer	7 AF/A7
731st Air Mobility Squadron	731 AMS/CC
51st Logistics Readiness Squadron	51 LRS/CC
51st Communications Squadron	51 CS/CC
51st Fighter Wing Public Affairs	51 FW/PA
51st Fighter Wing Comptroller Squadron	51 CPTS/CC
3d Battle Coordination Detachment - Korea	3 BCD-K
Department of Defense Dependents Schools	DoDDS
Army Air Force Exchange Service	AAFES
Defense Commissary Agency	DeCA
All Unit Energy Officers	Multi
Base Energy Manager	51 CES/CENPE

3. Objectives of EMSG:
 - a. Meet quarterly to discuss Osan AB's Energy Management Program in an open forum.

- b. Keep wing leadership informed and involved in energy management issues.
 - c. Develop and implement local energy conservation policies and meet mandated goals.
 - d. Report quarterly and annual data and status of energy conservation efforts.
 - e. Brief MAJCOM EMSG as required.
4. ENERGY MANAGEMENT WORKING GROUP (EMWG): The EMWG shall be composed of, but not limited to, the following members from all major energy-managing activities. Additional members may be added at any time through approval of the EMSG.

Members	
Base Energy Manager (Chairman)	51 CES/CENPE
51st Logistics Readiness Squadron Energy Officer	51 LRS
51st Communications Squadron Energy Officer	51 CS
51st Operations Group Energy Officer	51 OG
51st Maintenance Group Energy Officer	51 MXG
51st Fighter Wing Public Affairs	51 FW/PA
Department of Defense Dependents Schools	DoDDS
Army Air Force Exchange Service	AAFES
Defense Commissary Agency	DeCA
All Additional Unit Energy Officers	Multi
Resource Efficiency Manager	51 CES/CENPE

5. Objectives of EMWG:
- a. Meet before quarterly EMSG meeting to discuss Osan AB's Energy Management Program.
 - b. Determine energy management issues to bring before leadership during EMSG meeting.
 - c. Develop ideas for local energy conservation awareness, goals and policies.
 - d. Develop and discuss quarterly and annual reports on the status of energy conservation efforts.
6. For any questions or concerns please contact the Base Energy Manager, 51st Civil Engineer Squadron (51 CES/CENPE) at 784-1880.


 BROOK J. LEONARD, Colonel, USAF
 Commander

