Building Energy Monitor (BEM) Checklist

For additional information see AR 420-1, Section III, Para 22-12; Energy conservation and management guidelines for facilities and buildings.

Installation:_____Bldg. No._____Unit/Activity:_____

ITEM	CHECK POINTDESCRIPTION	YES	**NO**	CORRECTIVE ACTION
1	Are lights off in areas unoccupied for more than 5 minutes?			
2	Are exterior lights off during daytime hours?			
3	Is natural lighting or day lighting used in office areas near windows?			
4	Is lighting on setback and used on weekends only when needed?			
5	Are thermostats set for heating @ 72° F+/- 2° F and cooling @ 74° F +/- 2°F?			
6	Is heating/cooling turned off in unoccupied workspaces?			
7	Are doors and windows closed in heated/ cooled areas?			
8	Are exhaust fans run only when required?			
9	Are restroom fans and lights turned off when unoccupied and at the close of business?			
10	Are there any leaking faucets?			
11	Are there any leaking toilets/urinals?			
12	Are items consolidated to minimize number of refrigerators?			
13	Are personal refrigerators, microwaves, and coffee pots eliminated?			
14	Are personal heaters approved or eliminated?			
15	Are off ice machines Energy Star compliant?			
16	Is unused equipment turned off or in sleep mode during work hours?			
17	Is office equipment turned off at the close of business?			
18	Are peripheral office machines (scanners, faxes, copiers, printers, etc) turned off at close of business?			
19	Is building/ unit/ direct rate/ facility recycling office paper?			
20	Is building/unit/directorate/ facility using a paper shredding service to recycle and reduce waste?			

Inspected by_____Date_____

U.S. Army Fort Knox
Office Energy Checklist

The following is a simple checklist of energy conservation/efficiency measures to use at the office.

- ☐ Replace incandescent lights and compact fluorescent lights (CFLs) with light-emitting diodes (LEDs) for desk lamps and overhead lighting. Using LEDs instead of comparable incandescent bulbs can save about 90 percent on your lighting costs. LEDs use only one-fourth the energy and last up to 10 times longer.
- ☐ Switch off all unnecessary lights. Use dimmers, motion sensors, or occupancy sensors to automatically turn off lighting when not in use to reduce energy use and costs.
- ☐ Turn off lights when you leave the office, even when you intend to return immediately.
- ☐ Use natural lighting or daylighting. When feasible, turn off lights near windows
- ☐ Use task lighting; Instead of brightly lighting an entire room, focus the light where you need it, to directly illuminate work areas.
- ☐ Use energy efficient **ENERGY STAR® products**.
- ☐ Close or adjust window blinds to block direct sunlight to reduce cooling needs during warm months. Overhangs or exterior window covers are most effective to block sunlight on south-facing windows.
- ☐ In the winter months, open blinds on south-facing windows during the day to allow sunlight to naturally heat your workspace. At night, close the blinds to reduce heat loss at night.
- ☐ Unplug equipment that drains energy when not in use (i.e. cell phone chargers, fans, coffeemakers, desktop printers, radios, etc.).
- ☐ Turn off your computer monitors and peripherals at the end of the work day. If you leave your desk for an extended time, turn off your monitors/peripherals. Set them to sleep mode after 20 minutes of inactivity.
- ☐ Turn off office equipment, scanners, copiers, faxes at night. All equipment is required to be **ENERGY STAR®** compliant.
- ☐ Eliminate and remove all extra refrigerators, microwaves, coffee pots and other appliances per AR420-1, Chapter 22.
- ☐ Save paper. Photocopy only what you need. Always use the second side of paper, either by printing on both sides or using the blank side as scrap paper.
- ☐ Use coffee mugs instead of disposable cups.

YOU HAVE the POWER

ACC-Contracting Note - #16-04: Energy and Sustainability Procurements Follow-up Reminder

Purpose: To ensure the continued awareness and compliance with the Army's Energy and Sustainability Performance Plan (SSPP) and to reiterate the available resources and tools for ACC Contracting Professionals in this area.

Methodology:

The Office of the Deputy Assistant Secretary of the Army (Procurement) (ODASA(P)) has implemented a new, streamlined approach for recurring reports related to the compliance review for the DoD SSPP, Sub Goal 7.1 - 95% of Procurements Conducted Sustainably. Going forward, the evaluation, validation, verification and reporting will be completed using the ODASA(P) SharePoint template at: htt ps:// spcs3kc.army.mil/ asaalt/ZPTeam/taskers/SP.

In addition, the sub-goal requires that 95% of contract actions for applicable products and services, meeting DoD performance requirements, must adhere to the principles of sustainability by containing energy-efficient (Energy Star or Federal Energy Management Program-designated), water-efficient, bio-based, environmentally preferable, non-ozone depleting, containing recycled content, and/or are non-toxic or less-toxic alternatives.

Per recent FY 15 3 rd and 4th quarter contract reviews processed through the share-point application, ACC's compliance rate was 76%. Two of the most common reasons that contracts were deemed noncompliant were: failure to include appropriate FAR provisions and clauses in the solicitation and contracts and failure to include specific language in the performance work statement and or specifications.

As a reminder, revision 1 to PARC Tasker #16-12, outlined the new sustainable procurement review guidelines and the revised measure of compliance criteria. For details, please refer to the final review guide at https://spcs3.kc.army.mil/asaalt/ZPTeam/taskers/sp/lavouts/15/start.aspx#/.

Additional tools such as the Quick Guide to Ensure Contracts are in Compliance with Sustainable Procurement Requirements and a Sustainable/Green Procurement Checklist can be found on the ACC Mapping the Acquisition and Procurement Process Application (ACC MAP APP) at https:// acc.aep.armv.mil/accapps/ACCMAP/Pages/default.aspx .

The HQ ACC POC for this action is Mr. Keenan Sease, 256-955-5640, and Keenan.a.sease.civ@mail.mil.

Heating and Cooling
(Temperature Setpoint) Policy

Defining the Cooling and Heating Seasons

For the purpose of this policy, cooling season is from mid-April to early October and heating season is from mid-October to early May.

Defining Occupied and Unoccupied Hours

Schedules for buildings are assigned on a building by building basis. It is important for building owners and BEMs to communicate occupied hours to DPW Energy Office so that HVAC systems are not running unnecessarily. Building schedules are reviewed on a quarterly basis to ensure the optimum schedule is being used. Generally speaking, offices hold a Monday-Friday 7:00A M-5:00 PM occupancy schedule. Barracks and lodging facilities are considered occupied 24/7.

Space Temperature Setpoints during Occupied Hours

Space temperatures will be assigned based upon the following priority system

	Building Use	Heating Setpoint Range	Cooling Setpoint Range
Priority I	Guest Sleeping Quarters	70 F - 74 F	72 F - 76 F
Priority 2	Soldier Sleeping Quarters	70 F -74 F	72 F -76 F
Priority 3	Office and T raining Facilities	70 F-74 F	72 F -76 F
Priority 4	Heat-Only Warehouses	55 F High Limit	*NIA*

Priority I buildings also include simulator buildings and warriors in transit barracks.

Certain areas are required to be maintained at certain temperatures and are exempt from this policy, i.e. pool, medical, and computer server areas. The target temperatures are within the range that is acceptable and comfortable to 80 percent of the building occupants per ANSI/ASHRAE Standard 55-2004, *Thermal Environmental Conditions/or Human Occupancy.*

Space Temperature Setpoints during Unoccupied Hours

During off-hours and weekends, the temperatures will be adjusted to be as low as 50 ° during winter and as high as 85° during summer. The HVAC systems will be cycled on and off to maintain these adjusted setback temperatures and conserve energy. The systems will optimally start based on the outside air temperature to ensure that occupied setpoint is met at start of the day.

Use of Space Heaters, Portable AC Units and Fans

ASA policy, space heaters and portable A/C units are prohibited due to energy conservation mandates unless permission has been granted by DPW. DPW will permit approved space heaters/portable A/C units only in those limited instances where the building systems cannot provide temperatures within acceptable variation of the ranges stated above. All other space heaters/ portable A/C units in any other spaces are subject to confiscation by DPW. Energy efficient table or pedestal fans are permitted and considered acceptable solutions to increase your sense of comfort by improving air movement.

Questions/Concerns

If you have questions about the temperature setpoint policy implementation, please contact RJ Dyrdek at 624- 2604, robert.d.dyrdek.civ@mail.mil or Chuck Beach at 624-2779, charles.h.beach6.ctr@mail.mil. To report HVAC problems, please call the HVAC support desk at 502-942-5221.

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RJ Dyrdek – DPW Energy Manager

AEWRS Data supporting FEMP Home » Federal Laws & Requirements Search » Building Energy Use

AEWRS Areas of Challenge regarding Building Loads vs. Base Process Loads

Executive Summary

A correction to an anomaly in the Army Energy and Water Reporting System (AEWRS) should be considered as installations strive for energy efficiency and energy security.

The U.S. Army has been using AEWRS for many years. The original intent of AEWRS was to collect and compile energy data from installations and to demonstrate/ confirm compliance with Federal and Department of Defense energy usage reporting requirements. Energy reported via AEWRS was to be an accounting of all the related buildings at a base and their consumed utility and water consumption footprint(s). It was also required that the reporting facilities reduce their energy and water impacts.

In the earliest years of AEWRS and the related drive(s) to reduce energy consumption on all possible loads (non-core or mission related), Fort Knox and many other bases implemented multiple changes and programs to meet this challenge and which demonstrated successes. Modifying building energy usage and load parameters such as HVAC efficiency, facility component load profiles, lighting, domestic and landscape water consumption, occupancy schedules, etc. remain the primary targets for usage reductions.

Challenges in the current versions of AEWRS reporting methods as referenced above surround the program's handling of new process loads which can be associated with core missions or directives. At this time any new process loads are simply added to the base totals making it appear that the existing (and unrelated) building usage profiles have increased.

The portion of total energy used that represents new process loads may need to be mathematically deducted from the overall total load where modification of building energy usage is the target parameter. Without this change to the reporting process a mission related process can inaccurately reflect on the base energy building efficiency and reduction programs. In the case of Fort Knox there is also the energy security so attached. Specifically, any base with increasing process loads can be receiving less than satisfactory reported results in AEWRS.

Energy reductions do have a twofold benefit. The first impact is related to the consumption of energy/costs and the second are the environmental impacts (especially with fossil fuels). The first benefit (utility cost reduction) can be highly *favored* in our most current period's need for cost cutting measures.

The AEWRS reporting of purchased electricity also does not reflect an input associated with the BTUs for the utility's fuel fossil where used by the local utility in producing the electricity. An even handed environmental comparison may be also appropriate. Efforts to reduce the cost of electricity and to fulfill directives surrounding energy independence via self-generation have been successful. Improved environmental impacts for the region due to the cleaner production generation via natural methane and the greatly improved energy security posture for the installation have been achieved. The AEWRS report inaccurately depicts this as showing the base reports being less efficient on a BTU/SF basis because of how the process load is handled.

A modification of AEWRS to allow for process loads to be totaled separately from building loads seems necessary to accurately reflect the actual building use profile and performance. The AEWRS business rules may need to adjust for newest technologies and energy strategies.

To achieve current AEWRS efficiency targets and to also include energy independency capabilities could be at cross purposes and suggest a shutdown of any related on-post generation of electricity. This would result in increased utility bills and decreased energy security as the installation would have to continue to rely on the unsecured remote substation and local electric company power feed to the installation. This could in some instances not allow for environmental benefits of fuels used and electrical distribution loss gains associated with the local generation option.

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