



DEPARTMENT OF THE ARMY
U.S. ARMY INSTALLATION MANAGEMENT COMMAND
HEADQUARTERS, UNITED STATES ARMY GARRISON WEST POINT
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WEST POINT, NEW YORK 10996-1514

AMIM-MLG-ZA (420-1b)

15 November 2023

U.S. ARMY GARRISON WEST POINT POLICY #35

SUBJECT: Army Energy and Water Management

1. REFERENCES:

- a. AR 420-1 Chapter 22, Army Energy and Water Management Program, dated 12 February 2008.
- b. Energy Policy Act of 2005 (EPACT 2005).
- c. Energy Independence and Security Act of 2007 (EISA 2007).
- d. Executive Order 13693 Planning for Federal Sustainability in the Next Decade, dated 19 March 2015.
- e. Executive Order 13834, Efficient Federal Operations, dated 17 May 2018.
- f. Executive Order 14057, Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability, dated 8 December 2021.
- g. OSAD(E) Memorandum on Electric Vehicle Supply Equipment and Zero-Emission Vehicle Implementation, dated March 2022.

2. PURPOSE: This memorandum establishes policy regarding Energy and Water Conservation and Management guidelines for facilities and buildings including electrical plug-in appliances. The measures outlined in this memorandum also support West Point's Electrical Load Reduction Program to reduce peak demand on our electrical utility's constrained system. This policy emphasizes energy saving measures which can be controlled by West Point Soldiers, Family members, employees, contractors and all Department of Defense (DoD) and Non-DoD Organizations, Activities, Agencies, Tenants and partners without decreasing comfort, safety, health and quality of life standards.

3. GENERAL: Department of the Army, Installation Management Command (IMCOM) and United States Army Garrison West Point (USAG WP) support the EPACT 2005, the EISA 2007, EO 13693 and EO 13834. These mandates emphasize Command responsibilities within the Energy Management Program and set goals to be reached by all DoD organizations. Department of the Army, Installation Management Command

(IMCOM) and USAG WP also support EO 14057 which requires developing climate adaptation plans (CAPs) and annual progress reports to communicate the actions taken to bolster climate adaptation and resilience. The Garrison supports OSAD(E) Memorandum on Electric Vehicle Supply Equipment and Zero-Emission Vehicle Implementation.

This Command must, where life-cycle cost-effective, beginning in fiscal year 2016, unless otherwise specified, promote building energy conservation, efficiency, and management by reducing Garrison building energy intensity measured in British Thermal Units (BTU's) per gross foot by 2.5% annually through the end of fiscal year 2025, relative to the baseline of the Garrison's building energy use in Fiscal Year 2015 and taking into account the Garrison's progress to date.

The Garrison must, where life-cycle cost-effective, beginning in Fiscal Year 2016, unless otherwise specified, improve data center energy efficiency at Garrison facilities by:

- a. Ensuring the Garrison Chief Information Officer promotes data center energy optimization, efficiency and performance;
- b. Installing and monitoring advanced energy meters in all data centers by Fiscal Year 2016; and
- c. Establishing a power usage effectiveness target of 1.2 to 1.4 for new data centers and less than 1.5 for existing data centers ($PUE = \frac{\text{Total Facility Energy}}{\text{IT Equipment Energy}}$).

4. The Garrison must, where life-cycle cost-effective, beginning in Fiscal Year 2016, unless otherwise specified, ensure that at a minimum, the following percentage of the total amount of building electrical energy and thermal energy shall be clean energy accounted for by renewable electrical and alternative energy;

- a. not less than 10 percent in Fiscal Years 2016 and 2017;
- b. not less than 13 percent in Fiscal Years 2018 and 2019;
- c. not less than 16 percent in Fiscal Years 2020 and 2021;
- d. not less than 20 percent in Fiscal Years 2022 and 2023;
- e. not less than 25 percent in Fiscal Years 2025 and each year thereafter; The Garrison must, where life-cycle cost-effective, beginning in Fiscal Year 2016, unless otherwise specified, improve agency water use efficiency and management, including stormwater management by:

f. Reducing Garrison potable water consumption intensity measured in gallons per gross square foot by 36 percent by Fiscal Year 2025 through reductions of 2 percent annually through Fiscal Year 2025 relative to a baseline of the agency's water consumption in Fiscal Year 2007;

g. Installing water meters and collecting and utilizing building and facility water balance data to improve water conservation and management;

h. Reducing Garrison industrial, landscaping, and agricultural (ILA) water consumption measured in gallons by 2 percent annually through Fiscal Year 2025 relative to a baseline of the Garrison's ILA water consumption in Fiscal Year 2010; and installing appropriate green infrastructure features on federally owned property to help with stormwater and wastewater management.

5. The Garrison must improve agency fleet and vehicle efficiency and management by taking actions that reduce fleet-wide per-mile greenhouse gas emissions from Garrison fleet vehicles, relative to a baseline of emissions in Fiscal Year 2014, to achieve the following percentage reductions:

a. less than 4 percent by the end of Fiscal Year 2017;

b. not less than 15 percent by the end of Fiscal Year 2021;

c. not less than 30 percent by the end of Fiscal Year 2025.

Implementation of this program will reduce energy and water usage, conserve utility dollars and help West Point meet its sustainability goals.

6. POLICY/PROCEDURES: West Point is currently not achieving the annual energy and water reduction goal mandates, so efficient use of energy and water resources is a strategic Command priority. Commanders/Directors are expected to implement an effective Energy and Water Conservation Program In Accordance With (IAW) the current USMA Regulation 11-27, Energy Management Program. The following are some best management practices to help achieve energy and water reduction goals:

a. Commanders/Directors will ensure Building Energy Monitors (BEM) are appointed for each activity's area of responsibility within their location/building. Ensure regular area inspections are conducted in order to eliminate waste during both duty and non-duty hours.

b. The Directorate of Public Works (DPW) and the Installation Energy Manager will continue to assist units through energy use reduction projects and education initiatives.

7. APPLICABILITY: This policy applies to all personnel residing and working at West Point.

8. RESPONSIBILITIES: Commanders/Directors will ensure the following are accomplished:

a. Building Energy Monitor: Ensure that a BEM has been appointed for all buildings the Unit or Organization occupies and for each Activity's area of responsibility within their location/building to include shared common areas with other activities. USMA Energy Regulation 11-27, section I General, paragraph 1-4, b, outlines that building commandants are Building Energy & Water Monitors (BEWM). BEM and BEWM are identical. Activity directors can appoint others within the activity as BEM's to balance workload.

b. Energy Checklists: Ensure that all BEM's in their organization receive and utilize the Energy Checklists IAW USMA Regulation 11-27. Report all BEM's that are in addition to the building commandant to the DPW Real Property Office.

c. Annual Refresher Training: Ensure all BEM's attend the building commandant training.

d. ENERGY STAR™: Ensure that BEM's enforce procurement and use of only ENERGY STAR™ rated equipment. ENERGY STAR™ compliance is mandated by the Energy Policy Act of 2005 (EA 2005), Energy Independence Security Act of 2007 (EISA 2007) and AR 420-1, Army Facilities Management, dated 12 February 2008. Activity Directors via the BEM, shall ensure that all equipment purchases are ENERGY STAR™ compliant.

e. Computers, Monitors and Peripheral Devices: BEM's shall ensure that users log off and/or re-start their computers and turn monitors and peripheral devices off at the end of each day. Peripheral devices shall be turned off during normal duty hours when not in use. Computers are to be left powered on (hibernated state), as directed by Network Enterprise Center.

f. Classrooms and Conference Rooms: Ensure all unnecessary equipment (Smart Boards, TVs, LCD projectors, etc.) are turned off when not in use. Equipment left on uses electricity and generate heat that results in increased air conditioning loads. Electronics on "standby" mode continue to consume energy; shut them down when not in use.

g. Lighting: Eliminate off-hour and exterior lighting unless necessary for safety and security (AR 190-11), and turn off lights in offices and common areas during off-duty and unoccupied hours. Until occupancy sensors are installed, have procedures in place to ensure lights and equipment get turned off. BEM's and Building Commandants to submit Demand Maintenance Order (DMO) to install light switches if circuit breakers are currently used to turn lights off. Identify all DMO's as "energy savings".

h. Incandescent Lights: Prohibit lamps and fixtures that have incandescent bulbs from offices, maintenance areas, boiler rooms, closets, etc. Require existing

incandescent bulbs to be replaced with Compact Florescent Lamps (CFLs), LED or other Energy Star™-rated lights. Remove all incandescent lights from supply inventories and prohibit the purchase of incandescent replacement bulbs. CFL's and LED's are available by department procurement.

i. Water Consumption: Direct reduction of water consumption in and outside of buildings. BEM or Building Commandants shall submit DMO's for all leaking fixtures, toilets, urinals, showers, etc. Identify all DMO's as "water saving".

j. Hot Water Temperatures: Ensure hot water temperatures for general domestic uses, administrative areas, or general cleaning do not exceed 110° F at the destination. BEM's and Building Commandants shall submit DMO's for all domestic water systems that do not comply with this requirement that are not locally controlled. Exceptions to the 110° F destination of the following:

(1) Food Handling and Automatic Dish Washing in Food Service Facilities: 140°F. Final rinse for dishes and utensils in all food service applications: 180°F.

(2) Child Care Centers: Hot water temperature in plumbing fixtures used by children in centers must not exceed 110°F with an appropriate range of 80–95°F.

(3) Commercial Type Laundries: 180°F.

(4) Medical: Reference Unified Facility Criteria (UFC) 4–510–01.

k. Windows and Doors: Ensure windows and doors are closed during the heating and cooling seasons. Doors and windows between conditioned spaces and non-conditioned spaces are not to be propped or left open. Remove all door stops from exterior and vestibule doors to prevent them from being open portals during the heating and cooling season. Active management of doors and windows that control conditioned spaces is critical to reducing energy waste. BEM and Building Commandants to submit DMO for all failing doors and windows, including weather-stripping. Identify all DMO's as "energy savings."

l. Supplemental Cooling Devices: Prevent the operation of supplemental cooling devices where the intent is to circumvent the cooling standards outlined below as well as provide cooling to areas not authorized.

| Occupied Facilities | | |
|---|-------------------|---------------------|
| | Occupied Settings | Unoccupied Settings |
| Heating | 68°F | 55°F |
| Cooling | 78°F | 85°F |
| Warehouses, Active Working Spaces, Maintenance Bays, etc. | | |
| | Occupied Settings | Unoccupied Settings |
| Heating | 60°F | 45°F |
| Cooling | N/A | N/A |

Window air conditioners are considered supplemental cooling devices. Supplemental cooling devices may be approved for use when the cooling standards cannot be achieved by reasonable adjustments of the primary systems. Supplemental cooling devices may be approved for use if cost-effective energy reductions can be achieved in areas where only a few people occupy a portion of a large building and conditioning is only required in a small section of the facility. Supplemental cooling devices may be approved for temporary use by DPW during cooling system failures or when unconditioned spaces become authorized for cooling as a temporary measure until a permanent system can be designed and installed. All temporary equipment must be removed from service when the cooling system is restored to proper working order. Any requests for supplemental cooling devices shall be submitted through a BEM or building commandant to DPW service desk for approval and shall only be used when the area is occupied. The BEM or building commandant must maintain an inventory of supplemental cooling devices and provide to DPW upon request. All new equipment purchased for supplemental cooling must be Energy Star™ rated.

m. Personal Space Heaters: Prevent the use and authorization of personal space heaters. If the facility heating system is not adequate, the BEM or Building Commandants shall submit a DMO for repairs and or modifications. Per Army Regulations, space heaters are not authorized for use, unless approved by the Fire Department. Space heaters are very inefficient and can be dangerous if not used properly. An approved space heater must be UL or FM approved, contain a tip over switch and not be set on or near combustible materials. Electrical extension cords may not be used with an electric space heater. Remove existing space heaters.

n. Personal Electrical Equipment: Ensure personal electrical equipment and appliances (i.e., fans, coffee pots, tea pots, toaster ovens, etc.) are turned off when not being used and during non-duty hours. Ensure that all personal electrical equipment and appliances meet Energy Star™. Consider replacing all coffee machines with single cup brew systems. All coffee and tea appliances shall be turned off between the hours of 1300 and 1800 during the months of May, June, July, August and September. Encourage shared use of appliances to reduce energy consumption; eliminate where possible.

o. Refrigerators: Prevent the use of personal refrigerators. The use of a personal refrigerator is not authorized for individual work areas. Refrigerators are authorized in work and office areas for shared use with sizing based on number of personnel supported. Use one cubic foot per person as an average to determine size and quantity of refrigerators that are appropriate. Exceptions allowed for General Officers and Commanders who have conference room meeting requirements that justify the single use.

p. Load Shedding: Assist with load shedding. West Point has instituted an Electric Demand Reduction Program that reduces or shuts down a majority of heating, ventilation and cooling equipment use during electric utility emergency or contingency

scenarios. The following list of actions should be followed as a minimum when an alert is received to reduce the electric load:

- (1) Ensure all coffee and tea appliances are turned off.
 - (2) Turn all window air conditioners off.
 - (3) Thermostats to be reset to 80°F.
 - (4) Unnecessary building lighting to be turned off.
 - (5) All indoor/outdoor field lighting to be turned off.
 - (6) Ensure all unused office equipment (copiers, printers, monitors, etc.) are turned off.
 - (7) Perform building walk-through to ensure unoccupied areas are secured.
 - (8) For any questions regarding load shedding or the Electric Demand Reduction Program, please contact the DPW Customer Relations Department, at (845) 938-8508.
9. POLICY EXCEPTIONS: Facilities with unique lighting, humidity, heating and cooling requirements may submit requests to the DPW Utilities and Energy Branch.
10. PROPONENT: The proponent for this Policy is the USAG WP and the DPW, Energy and Utilities Branch. This policy memorandum will remain in effect until superseded or rescinded.



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Commanding