

## Annex F: Energy & Water Efficiency and Security Action Plan

**Objective:** Create energy and water efficient installations by holding users accountable, modernizing facilities, installing new technologies, and leveraging partnerships that will provide an increased level of energy security leading to sustainable and resilient infrastructure and mission assurance.

This Annex outlines actions that must be taken to successfully meet the objectives detailed in LOE 6 of the IMCP. Development of a Garrison Energy and Water Management Program (GEWMP) elevates energy and water efficiency and security as key elements in supporting Installation readiness, in preserving our freedom of action and in being good stewards of the Nation's financial and natural resources.

1. To ensure success, all IMCOM Garrisons will implement a GEWMP that details their approach for identifying, developing, integrating and executing specific actions for managing and meeting the objectives outlined in LOE 6 of the IMCP. GEWMP will be supplemented by a Comprehensive Energy and Water Master Plan (CEWMP) by US Army Corps of Engineers Huntsville Center and or US Army Garrisons (USAG).
2. All IMCOM Garrisons must implement all actions in this Annex and develop a proactive Garrison GEWMP that monitors their progress against objectives detailed in LOE 6 of the IMCP. GEWMP will be validated and updated annually. All Garrison GEWMP and EAPs will include the following:
  - 1) Appoint, in writing, full time garrison energy managers in accordance with criteria in AR 420-1 and input and maintain contact information in the Army Energy and Water Reporting System (AEWRS). Garrison Commanders will ensure their energy managers are knowledgeable, trained, cleared and are capable of providing regular updates and implementing effective solutions.
  - 2) Include energy and water conservation responsibilities in position descriptions of Commanders and Directors and other key positions that impact energy management to ensure compliance with Federal Legislation, Executive Orders, AESIS, and IMCP LOE 6.
  - 3) Establish and chair a quarterly Garrison Energy Steering Committee (GESC), composed of energy managers and organizations/units from within the USAG's Area of Responsibility (AOR), to review energy/water consumption activities, evaluate goals and objectives, and to develop strategies for improvement.
  - 4) Implement a Building Energy Monitor (BEM) and Unit Energy Conservation Officer (UECO) Program IAW <https://www.us.army.mil/suite/doc/23967581> (example at <https://www.us.army.mil/suite/doc/23967333>).

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- 5) Develop an Energy Security Plan and update plans annually based on a review with local utility suppliers (example template is at <https://www.us.army.mil/suite/doc/23967335>).
- 6) Correctly enter energy data monthly and water data quarterly into the Army Energy and Water Reporting System (AWERS) and conduct quality-control checks on a monthly basis. Garrisons must provide a quarterly certification of data completeness to their Region energy manager.
- 7) Provide appropriate data to Region to support command reporting of Army Energy Security Implementation Strategy (AESIS) metrics.
- 8) Provide appropriate data to Region to support command reporting of Army Energy Security Implementation Strategy (AESIS) metrics, once promulgated.
- 9) Review all new construction and repair project plans and specifications for compliance with all appropriate energy policies. Projects must include all life cycle cost effective energy and water conservation measures.
- 10) All new construction must incorporate sustainable design principles to achieve a minimum of the Silver Level of the LEED Certification IAW AR 420-1, appendix H.
- 11) IAW EPA Act 05, all designs will reduce energy consumption by 30% below the levels established in 2004 by American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) Standard 90.1. All garrisons will follow the IMCOM design criteria for designing and programming all SRM and MILCON projects as required by HQ IMCOM Memorandum dated 11 January 2010, subject Energy and Water Conservation Design Guide for Sustainment, Restoration and Modernization (SRM) and MILCON Projects. The energy and Water Conservation Design Guide can be found at [http://www.wbdg.org/references/pa\\_dod\\_energy.php](http://www.wbdg.org/references/pa_dod_energy.php).
- 12) IAW EISA Sec 432, garrisons will perform annual energy audits of at least 25% of their facilities (total square feet of space) to evaluate energy usage and determine the best locations to incorporate energy savings measures. All audit recommendations with a simple payback of 10 years or less will be implemented no later than the following FY. Guidance for the conduct of energy audits can be found in the DOD Energy Manager's Handbook: <http://www.acq.osd.mil/ie/fim/library/DoDEnergyManagerHandbook.doc>.
- 13) Implement all cost effective no-cost/ low-cost measures as detailed in (<https://www.us.army.mil/suite/doc/23967336>). A completed worksheet will be included in the GEWMP.
- 14) Implement energy and water saving projects that are life cycle cost-effective (Energy Conservation Measures (ECM) with simple payback of 10 years or less) IAW EISA07. An ECM worksheet at (<https://www.us.army.mil/suite/doc/23967338>) will be completed and included in the GEWMP.
- 15) Annually, life cycle cost effective ECMs that cannot be self funded or through one of the other mechanisms will be identified and entered into the IMCOM Project Prioritization System for HQ funding consideration.
- 16) Annually, use alternate funding sources such as, Energy Savings Performance Contracts (ESPCs), Utility Energy Services Contracts (UESCs), and Energy

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Conservation Investment Program (ECIP) to help fund at least one project that cannot be self funded.

- 17) Submit at least one project annually for consideration of ECIP funding, concentrating on renewable energy. Nominations and DD Form 1391 are normally due in July of each fiscal year.
- 18) When tenant units deploy insure rear detachments consolidate into as few facilities as possible and mothball the remaining unused facilities; including turning off all lights, turning off non-essential electric equipment, and setting air conditioning to 85 Degrees Fahrenheit in summer and 55 Degrees Fahrenheit in winter.
- 19) Implement EPA's Water Use program once issued as Army policy.
- 20) IAW Executive Order 13514: Federal Leadership in Environmental, Energy, and Economic Performance, garrisons will reduce vehicle fleet petroleum use 30% by 2020, given a base year of 2005 (2% per year). Garrisons should develop a petroleum fuel reduction strategy which includes: a) replacing fossil fuel vehicles with alternative fuel vehicles (AFVs) and electric vehicles (EVs); b) maximizing use of mass transit and shuttle buses; and c) installing alternative/renewable refueling infrastructure (E85, compressed natural gas, electric outlets, charging stations etc.) to encourage utilization of AFVs and EVs.
- 21) Nominate worthy projects, individuals, and teams for energy awards, such as Secretary of the Army Energy awards and Federal Energy Management Energy and Water Conservation awards. Nomination deadlines are typically in February and March.
- 22) Submit a complete annual energy report on time, due in October of each year.
- 23) Garrison Energy Managers who have not attended the AEE (Association of Energy Engineers) Certified Energy Manager (CEM) training must attend the 5-Day CEM residence course and pass the CEM exam (subject to availability of funds), NLT 12 months after assuming the position. Registration and attendance will be coordinated thru HQ IMCOM, G4, Public Works, Energy/Utilities Branch.
- 24) Garrison Energy Managers will provide, as a minimum quarterly, energy training and awareness for installation and community personnel.
- 25) Garrison Energy Manager and Public Affairs Office and the Directorate of Community Activities will take every opportunity to promote energy conservation awareness throughout the USAG's AOR; command channels, community wide activities during annual Energy Awareness Month, and Earth Week.
- 26) Garrison energy Managers should work to become LEED accredited NLT 24 months after assuming the position.

### **Energy Related references:**

- Army Energy Security Implementation Strategy (2009).
- Army Sustainability Campaign Plan (2010)
- Energy Independence and Security Act of 2007 (EISA07), Section 432, 19 December 2007.
- Installation Management Campaign Plan, March 2010.
- Energy Policy Act of 2005, (EPAct05).

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- Executive Order 13423 “Strengthening Federal Environmental, Energy, and Transportation Management” (EO 13423).
- Executive Order 13514, Federal Leadership in Environmental, Energy and Economic Performance, 5 October 2009.
- AR 420-1, Army Facilities Management, chapter 22, Army Energy and Water Management Program.
- Installation Management Energy Portfolio
- U.S. Green Building Council (USGBC) Leadership in Energy and Environmental Design (LEED)