



ENERGY PROGRAM

Chief, Energy Division 256-895-1541

U.S. ARMY CORPS OF ENGINEERS

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Background

The Huntsville Center has provided support for Army energy programs for more than 20 years. This support includes, but is not limited to, Energy Savings Performance Contracting (ESPC), Energy Engineering Analysis Program (EEAP), Resource Efficiency Manager (REM) Program, Army Metering Program, Commercial Utility Program and Energy Conservation Investment Program (ECIP). The Office of the Assistant Chief of Staff for Installation Management, Installation Management Command and the U.S. Army Corps of Engineers recognize Huntsville Center as a valuable resource to help implement the Army Energy Campaign Plan's five goals for 2030. These goals are:

1. Eliminate energy waste in existing facilities
2. Increase energy efficiency in new construction and renovations
3. Reduce dependence on fossil fuels
4. Conserve water resources
5. Improve energy security

Purpose

Huntsville Center's Energy Branch supports the Army Energy Campaign Plan through specific programs and projects.



Installation of solar arrays like this one at Fort Bliss, Texas, is often part of a comprehensive energy project for our customers.

Commercial Utilities Program – Mission: To ensure the Army does not over pay for reliable utility services and that it resells those services to its tenants at fair rates. Methods include: a) Performing utility rate studies, b) Assisting Army Legal by supplying an expert witness for utility rate hearings, c) Taking advantage of deregulation when beneficial, d) Identifying which tenants on our garrisons should reimburse the Army and approving garrison's resale rates to them, and e) Assisting other energy programs to understand local utility rates so they can determine the most effective energy savings measures to use.

EEAP – The Energy Engineering Analysis program (EEAP) analyzes energy use at DoD facilities/installations and recommends energy conservation measures (ECMs) for reducing energy consumption. EEAP leverages expertise and capabilities of USACE, the Department of Energy labs and other organizations. The level of surveys conducted ranges from a Level I Energy Assessment, producing an average of 200 projects per installation, a Capital Investment Strategy, and ECIP DD Forms 1391, to Level II and III Assessments, resulting in investment grade DD Forms 1391.

This effort includes:

1. Energy consumption assessments for selected facilities/installations,
2. Evaluation, identification and recommendations of implementation options for energy conservation projects,
3. Overseeing implementation of selected options,

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4. Assistance in sustaining local energy programs,
5. Providing energy-related training and
6. Water conservation and waste water treatment.

ECIP Validation Program – In November 2010, the Department of Defense Office of the Assistant Chief of Staff for Installation Management (OACSIM) and the U.S. Army Engineering and Support Center, Huntsville jointly developed a program management plan for the Army, Army Reserve and National Guard Energy Conservation Investment Program (ECIP) Validation Program. The program is designed to complete a thorough project DD Form 1391 review and verification process that leverages expertise at Huntsville Center and elsewhere.

ECIP Execution – Huntsville Center has executed many different types of ECIP funded projects ranging in technical complexity. Last year, Huntsville Center successfully executed \$15 million in ECIP projects on time and within budget. All of these projects were awarded in accordance with ECIP and American Recovery and Reinvestment Act guidance. Huntsville Center awarded an Energy A-E contract in the amount of \$40 million and awarded a Design Build Multiple Award Task Order Contract (MATOC) with a five-year, \$210 million capacity. These contracts are available DOD-wide and are not restricted to just our Army customers. Huntsville Center is anticipating executing more than \$25 million in ECIP work in FY11.

ESPC – Energy Savings Performance Contracting (ESPC) is a partnership between the Army and an Energy Service Contractor (ESCO). In consultation with the garrison, the ESCO provides capital and expertise to make comprehensive energy and water efficiency improvements on facilities or implements new renewable energy capability and maintains them in exchange for a portion of the generated savings. With an ESPC task order: (a) savings guarantees are mandatory; (b) savings must exceed payments in each year; (c) measurement and verification (M&V) is mandatory; and (d) contract term cannot exceed 25 years. Garrisons use their J Account OMA funding which is available to implement this effort. ESPC task order is one of the acquisition vehicles an installation can use to meet the Army's 30 percent energy and 15 percent water reduction goals by 2015 without up-front capital costs.

REM – Huntsville Center contracts for, and provides oversight of, Resource Efficiency Managers (REMs) who increase the effectiveness of installations' energy programs by reducing energy and water costs by identifying cost-effective programs and practices. The program is designed to be self-sustaining in that the savings generated more than offset the cost of the REM. Huntsville Center has put in place an Indefinite Delivery Indefinite Quantity contract with a pool of five contractors to provide these services. Each task order is competed among the pool, thereby creating the most advantageous benefit to the government.

MDMS – The Army Meter Data Management System (MDMS) is an enterprise energy information system for the collection, analysis, and display of energy data at the installations, regional, and headquarters levels. MDMS will collect meter data (electric, gas, steam, and water) from all sources on an installation (production and consumption), energy projects, and

REM Success Stories:

— **Fort Sam Houston, Texas:** As a result the REM's and Energy Manager's efforts, CPS Energy delivered a check for more than \$2 million for 5 years of overpayment of electric bills at Camp Bullis.

— **Carlisle Barracks, Penn.:** REM found they were under-billing a tenant almost \$100,000 a year.

— **Presidio/Fort Ord, Calif.:** REM identified \$68,000 in utility rebates and developed/executed a lighting project that will save more than \$109,000 over the next 15 years and submitted a DD 1391 ECIP Solar Photovoltaic project that will save \$7 million over 15 years.

— **Fort Bragg, N.C.:** REM proposed a \$1.9 million project for HVAC repairs, control integration, steam-to-heat conversion, controls upgrade, integration and retro-commissioning of HVAC systems that has been awarded with a projected project savings of \$6 million over 20 years.

provide the energy manager with a comprehensive display of the installation's energy footprint using a website portal. The energy data will be used to develop energy baselines, energy projects to reduce consumption, validation of energy savings, utility rate review, tenant (reimbursable) billing, and energy reporting.

UESC – Utility Energy Services Contract (UESC) – These are contracts that allow utility companies to provide their federal customers agencies with comprehensive energy and water efficiency improvements and demand reduction services. In a UESC the utility fronts the capital costs, assesses the opportunities, designs and installs the equipment in the project and is paid from the resulting savings. Contract term cannot exceed 10 years.

Other Energy Programs within Huntsville Center

Metering

The Army Metering Program is installing advanced electric, gas, and steam meters to meet the requirements of EAct 2005 and EISA 2007. It is estimated that 12,200 electric meters will be required for the Army to meet the congressionally mandated requirements. To date, Huntsville Center's metering program has installed over 8,000 electric and 3,000 natural gas meters at 48 major installations.

Utility Monitoring and Control Systems

The U.S. Army Corps of Engineers maintains a Center of Expertise for UMCS at Huntsville Center, to provide quality oversight and technical expertise in the design and installation of utility monitoring and control systems. The UMCS Center can provide customers with consistent, high quality, reliable, cost-effective products and services. The UMCS Center provides the expertise necessary for the government to take full advantage of modern technology to reduce energy and labor costs by applying sophisticated hardware and software solutions.

Facilities Reduction Program

The Facilities Reduction Program (FRP) eliminates excess facilities and structures to reduce fixed installation costs and achieve energy savings. Huntsville Center centrally manages these programs with execution accomplished through installations, Corps districts and Huntsville Center product delivery teams. Huntsville Center assists installations and regions in developing lists of removal candidates and preparing statutorily required documentation, in addition to removing excess inventory. FRP has saved \$8.3 million that was reinvested to remove more facilities. Crushing concrete and brick and using it on site as backfill substantially reduces execution costs. A new FRP IDIQ contract will be available by the end of the first quarter FY 2010. Based on Army Energy and Water Reporting System (AEWRS) data, the FRP provides an average energy savings of \$1.50 per square foot for each excess facility taken off the grid. The results — an average 2 million square feet removed which equals \$3 million in energy savings per year.

Comprehensive Energy and Water Master Plan

The Comprehensive Energy and Water Master Plan (CEWMP) is a roadmap that envisions secure, reliable and sustainable energy and water services for the installation. The plan acts as a framework to achieve at a minimum the mandates outlined in EAct 2005, E013423 and EISA 2007 through awareness, measurement, efficiency and the control of supply and distribution, while establishing stewardship of the environment as a fundamental principle to sound energy and water management.