

Energy Engineering Analysis Program (EEAP)

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Energy Engineering Analysis Program
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US Army Corps of Engineers
BUILDING STRONG[®]



Energy Engineering Analysis Program (EEAP)

An EEAP audit;

- Assists Army & all Federal agencies achieve federally mandated energy and water reduction goals.
- Reports provide cost savings \$, simple pay back in years and savings to investment ratios (SIR).
- $SIR > 1.0$ and $ROR < 10$ years identified in the audit report is candidate for implementation of the identified energy conservation measures (ECMs)



Energy Engineering Analysis Program (EEAP)

An EEAP audit;

- Provides a path toward Net Zero by incorporating a Capital Investment Strategy (CIS) that prioritizes projects over time, identifying funding streams on a year by year basis.
- Assesses renewable opportunities and energy security.
- Supports project development of an RFP-ready preliminary design package to be issued to a Design Build contractor.



Energy Engineering Analysis Program (EEAP)

- There are three levels of EEAP energy audits: * ASHRAE Level 1, 2 and 3.
- Huntsville Center can help customers achieve the Energy Independence and Security Act of 2007 Section 432 requirement for facilities that constitute 75 percent of the total energy use (also known as covered facilities).

** ASHRAE - American Society of Heating, Refrigerating and Air Conditioning Engineers*



Energy Policies & EO

Energy Independence and Security Act of 2007

Sec 432- Management of Energy and Water Efficiency in Federal Buildings

Conduct energy and water evaluations for approximately 25% of facilities of each agency annually, so all appropriate facilities have been evaluated in a 4 year cycle.

Allows appropriations and private financing to be combined to fund these activities



Energy Policies & EO

Executive Order 13693 (Mar15)

- Reduce bldg energy intensity 2.5%/yr or 25% by EOFY25 (2015baseline) & improve data center energy
- Ensure that by FY25 (and each year thereafter) not less than 25% Electric AND Thermal energy accounted by renewable electric and alternative energy (10% - FY16 & FY17, 13% - FY18 & FY19, 16%- FY20 & FY21, 20% - FY22 & FY13, 25% FY25)



The EEAP Process

For Small sites (1 to 10 facilities)

Example: Reserve Centers or USACE Civil Works Facilities.
Cost ranges from \$20k to \$55k. Total Duration 14 to 16 weeks.

For Large sites (30 to 80 facilities)

Example: Military Installations. Cost ranges from \$260K - \$300K. Total duration 15 to 22 weeks.

Pricing range above due to the variance in the number of, the complexity of buildings, mission, & location to be surveyed



The EEAP Process (cont.)

For all size sites that request assistance with **Capital Investment Strategy (CIS) & Design Build/RFP project development.**

Total Duration 12 to 20 weeks.



Questions on EEAP?

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BACKUP



Energy Engineering Analysis **Program (EEAP)**

ASHRAE Level I

(Walk-through Analysis)

- Preliminary energy use analysis, includes a site visit by a mechanical, water and energy efficiency engineer and a report detailing low-cost/no-cost measures and potential capital improvements for further study. ASHRAE Level I audit satisfies pre-requisite requirements for the U.S. Green Building Council's Leadership in Energy & Environmental Design (LEED) for Existing Buildings



Energy Engineering Analysis **Program (EEAP)**

ASHRAE Level II

Energy Survey and Analysis

- ASHRAE Level I analysis + detailed energy calculations and financial analysis of proposed energy efficiency measures. The financial analysis or life cycle analysis allows the facility owner to truly understand the financial benefits of installing energy efficient measures. An ASHRAE Level II audit can also earn additional points for LEED for existing buildings.



Energy Engineering Analysis Program (EEAP)

ASHRAE Level III

(Detailed Analysis of Capital-Intensive Modifications)

- Further expansion from the previous levels of effort and is based on the facility representative's selection of measures to analyze further. This may include further refinement of an energy model or more extensive data collection. The product of this level of survey is typically *investment-grade projects* with well-defined scopes and performance work statements including economic analyses and cost estimates.

