



Energy Savings Performance Contracting

Program Manager 256-895-1349

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

The U.S. Army Engineering and Support Center, Huntsville, is considered the Army's expert in Energy Savings Performance Contracts (ESPC). In consultation with the garrison, the Energy Service Company (ESCO) provides capital and expertise to make comprehensive energy and water reduction, energy resilience and security efficiency improvements on facilities, and maintains them in exchange for a portion of the generated savings. ESPC is a tool used to support the Army's Installation Energy and Water Resilience Policy as reflected in Army Directive 2020-03. ESPCs can be implemented and paid for from energy savings within the maximum 25-year contact length. The partnership between the garrison, ESCO, CEHNC and Army stakeholders requires a high degree of commitment and work in good faith from the partners to enable successful outcomes as an ESPC is a long-term relationship.



The Energy Conservation Measure (ECM) shown above includes 2,380 kWdc of solar Photovoltaic (PV) electricity generation, a 2 MW / 3 MWh lithium-ion battery Energy Storage System (ESS), and microgrid control system on the island of Meck, in the Marshall Islands. This reduces the island's dependence on diesel fuel electricity generation by an average of 55% throughout the ESPC performance period and provides energy resilience to critical missions located in the region.

ESPC Benefits

An ESPC is one of the acquisition tools an installation can use to meet the goals set out by Executive Order 13834 to reduce energy and water consumption. Actual energy cost savings pay for the ESPC efforts on a yearly basis. An ESPC project provides many key benefits to the installation including the following:

1. Mission resiliency by ensuring installations can continue to operate when energy supplies are disrupted
2. Mandatory savings guarantees savings must exceed payments each year
3. Mandatory Measurement and Verification (M&V) of savings, and of equipment performance
4. Infrastructure system upgrades (more efficient systems)
5. Infrastructure improvements that pay for themselves over time (no up-front funding is required for capital improvements)
6. Ability to purchase long-payback equipment by bundling with short-payback Energy Conservation Measures (ECMs)
7. Reduced vulnerability to budget impacts from utility rate hikes and extreme weather
8. Guaranteed equipment performance

Advantages of implementing ESPC projects through Huntsville Center include the following:

1. Standardized and streamlined processes
2. Centralized project management -- We are a "one-stop shop."
3. Dedicated and experienced project development team to award, manage projects, provide technical engineering and legal support
4. Easier to monitor a portfolio of projects vs a single project at garrison level
5. Third-party M&V contract support

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The ESPC is a relatively large program within Huntsville Center with 120 active projects, \$2.5 billion in capital investments, and an average of 13% in excess energy savings above the guaranteed amount in FY2019. The average ESPC project capital investment amount has been increasing over the years and in FY2020 stands at about \$22 million.

The ESCO performs operations and maintenance on major systems, allowing limited Department of Public Works maintenance resources to be spent on other activities. These third-party financed agreements allow the garrison to focus appropriated funds on mission critical requirements.

ESPC project savings are cumulative, creating savings for the installation year after year throughout the project contract period and often replacing equipment near the end of its service life with higher efficiency energy solutions.

Huntsville Center has a nationwide ESPC Indefinite Delivery/Indefinite Quantity (IDIQ) Multiple Award Task Order Contract (MATOC) with 17 ESCOs. Task orders are competed among the MATOC vendors using the center's streamlined procurement process. This proven business model is considered one of the leaders in the Department of Defense. Successes associated with this program include task orders awarded to Kwajalein Atoll, Marshall Islands, and Fort Huachuca, Arizona. Huntsville Center is also working overseas with efforts in Korea and Germany.

ESPC Services

ESPC provides several types of Energy Conservation Measures (ECMs) for government facilities.

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| <ul style="list-style-type: none">• Boiler Improvements• Air Handling Equipment• High Efficiency Motors• Lighting Retrofits<ul style="list-style-type: none">• T5• T8• LED• Building Envelopes<ul style="list-style-type: none">• Windows• Doors• Weather Proofing• Spray-On Insulation• Water and Steam Distribution<ul style="list-style-type: none">• Water Wells• Retention Ponds• Ground Source Heat Pumps• Variable Frequency Drives• Metering and Energy Information Systems | <ul style="list-style-type: none">• Primary/Secondary Pumping Systems• Decentralization of Power Plants• Chiller Plant Improvements• Controls• Upgrade to HVAC Systems• Renewable Energy Systems• Solar, Photovoltaic<ul style="list-style-type: none">• Water Heaters• Swimming Pools• Power Generation• Electrical Peak Sharing<ul style="list-style-type: none">• Combined Heat & Power Generators• Generators• Upgrade of Central Power Plants• Gas-fired Infrared Heaters• Decentralization of domestic hot water systems• Propane to Natural Gas Conversions |
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Installation Hotline – Assistance is available to Army installation energy managers and Directorate of Public Works personnel for all ESPC services. Call 256-895-1349.