



# Energy Savings Performance Contracting

Program Manager 256-895-7421

## 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). ESPCs utilize private capital to make infrastructure improvements and new efficiencies without tapping into the capital budget to support and enable the war-fighter and meet energy and environmental mandates. 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 contract term. The long-term partnership between the garrison, ESCO, CEHNC and Army stakeholders requires a high degree of commitment and work in good faith to enable successful outcomes.



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

ESPCs assist installations in providing energy resilience and energy cybersecurity; supporting the Army Climate Strategy; reducing energy and water use, as well as carbon and greenhouse gas emissions; and improving readiness and quality of life. 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. Mandatory savings guarantee that ensures savings must exceed payments each year
2. Mandatory Measurement and Verification (M&V) of savings, and of equipment performance
3. Infrastructure system upgrades (more efficient systems)
4. Infrastructure improvements that pay for themselves over time (no up-front funding is required for capital improvements)
5. Ability to purchase long-payback equipment by bundling with short-payback Energy Conservation Measures (ECMs)
6. ESCO-guaranteed equipment performance, maintenance, repair, and replacement

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

1. Greater breadth and depth of experience with ESPC project execution than any other acquisition organization
2. Centralized project management, which enables a standardized and streamlined process. We are a "one-stop shop."
3. Dedicated and experienced project development team to provide comprehensive program support including engineering technical expertise, project management expertise, cost analysis, legal review, and M&V services through a third-party for CONUS projects and through PMs for OCONUS projects.
4. Easier to monitor a portfolio of projects vs a single project at garrison level
5. Third-party M&V contract support
6. Ensures DoD compliance with all policies and regulations of third-party financing

**U.S. Army Corps of Engineers – Engineering and Support Center, Huntsville**

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The ESPC is a relatively large program within Huntsville Center with 114 active projects and \$2 billion in capital investments. The FY21 ESPC verified savings was \$133 million, which is 115% above the ESCO guaranteed amount. The average ESPC project capital investment amount — approximately \$20 million — has been increasing over the years.

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 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 worldwide ESPC Multiple Award Task Order Contract (MATOC) with 17 ESCOs including small businesses. Task orders are competed among the MATOC vendors using the center's streamlined procurement process. HNC can also use the MATOC contract to award ENABLE-like projects to its pool of contractors or a hybrid process which blends the Enable-like and standard processes to incorporate resilience or more complex ECMs. The ENABLE-like process can reduce project development time by removing the preliminary analysis step and using standardized DOE templates. The ESPC program has a proven streamlined business model, which solidifies its place as a subject matter expert in third party financing. Successes include task orders awarded to Ft. Carson, Ft. Riley, Ft. Knox, and Kwajalein Atoll, Marshall Islands. 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"><li>• Boiler Improvements</li><li>• Air Handling Equipment</li><li>• High Efficiency Motors</li><li>• Lighting Retrofits<ul style="list-style-type: none"><li>• T5</li><li>• T8</li><li>• LED</li></ul></li><li>• Building Envelopes<ul style="list-style-type: none"><li>• Windows</li><li>• Doors</li><li>• Weather Proofing</li><li>• Spray-On Insulation</li></ul></li><li>• Water and Steam Distribution<ul style="list-style-type: none"><li>• Water Wells</li><li>• Retention Ponds</li></ul></li><li>• Ground Source Heat Pumps</li><li>• Variable Frequency Drives</li><li>• Metering and Energy Information Systems</li></ul> | <ul style="list-style-type: none"><li>• Primary/Secondary Pumping Systems</li><li>• Decentralization of Power Plants</li><li>• Chiller Plant Improvements</li><li>• Controls</li><li>• Upgrade to HVAC Systems</li><li>• Renewable Energy Systems</li><li>• Solar, Photovoltaic<ul style="list-style-type: none"><li>• Water Heaters</li><li>• Swimming Pools</li></ul></li><li>• Power Generation</li><li>• Electrical Peak Sharing<ul style="list-style-type: none"><li>• Combined Heat &amp; Power Generators</li></ul></li><li>• Generators</li><li>• Upgrade of Central Power Plants</li><li>• Gas-fired Infrared Heaters</li><li>• Decentralization of domestic hot water systems</li><li>• Propane to Natural Gas Conversions</li><li>• Energy Storage Systems</li></ul> |
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**ESPC's documented performance, validated through our robust annual M&V process, continues to provide verified annual savings that are 15% or greater over the contract guaranteed savings. These energy projects will continue to produce cost savings far into the future.**

**ESPC Hotline** — For more information about ESPC services, call (256) 895-7421 or (256) 895-1349.

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