



# Energy Savings Performance Contracting

Program Manager 256-895-1514

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 Contracting (ESPC). In close coordination with the garrison and Huntsville Center, the Energy Service Contractor (ESCO) provides the capital and expertise to make comprehensive energy and water efficiency improvements on facilities or implements new renewable energy capabilities and maintains them in exchange for a portion of the generated savings.

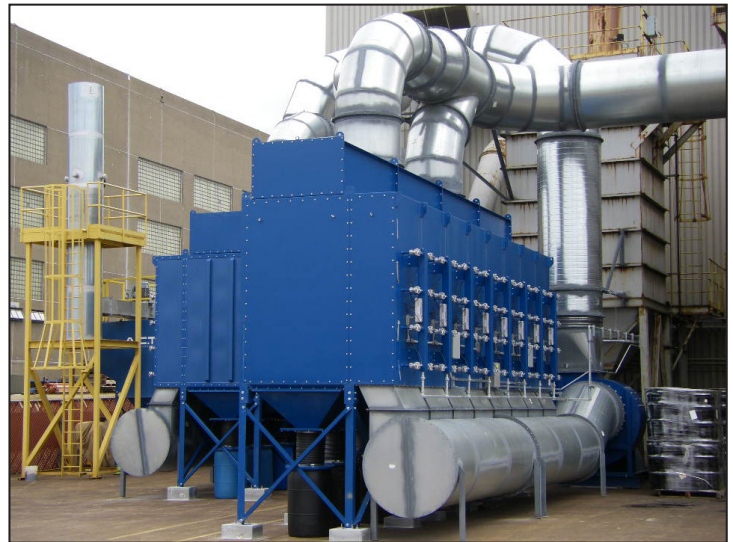
## Benefits

An ESPC is one of the acquisition vehicles 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 task order provides four key benefits to the installation:

1. Savings guarantees are mandatory
2. Savings must exceed payment each year
3. Measurement and verification are mandatory
4. Allows for the replacement of older systems with newer more efficient systems

The ESCO performs operations and maintenance on major systems, allowing limited Department of Public Works maintenance resources to be spent on other activities. Implementation and development costs are financed for up to 25 years. These third party financed agreements allow the garrison to focus appropriated funds on mission critical requirements.

Huntsville Center has a nationwide ESPC Indefinite Delivery/Indefinite Quantity (IDIQ) Multiple Award Task Order Contract (MATOC) with 13 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.



A new Foundry Air Exchange System and controls are part of the \$39 million infrastructure modernization project at Joint Manufacturing and Technology Center (JMTC) Rock Island Arsenal, Illinois. As part of the 20-year Energy Savings Performance Contract managed by Huntsville Center, Honeywell is implementing a variety of facility improvements to include installing high-efficiency HVAC systems, such as on-premise natural-gas heating that will allow the facility to disconnect from the garrison's central coal-fired steam plant. Another major upgrade is new plating and paint systems for the technology center.

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

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## Customer Savings

ESPC payments are derived from the savings generated by the improvements. ESPC project savings are ensured by mandatory measurement and verification performed each year. Savings must occur or the contractor does not get paid.

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.

ESPC Annual Savings

Fiscal Year	Annual Project Savings	Water Savings (kgal)	Energy Savings (MBTUs)	Average Energy Reduction
2009	\$1,246,870	0	54,488	
2010	\$3,369,945	0	64,530	8.4%
2011	\$5,768,690	2,481	1,111,197	9.5%
2012	\$22,700,990	190,389	705,216	7.7%
2013	\$5,872,628	2,470,795	455,119	5.9%
2014	\$39,016,243	73,160	356,285	11.6%
2015	\$8,448,278	184,743	333,874	9.4%
2016	\$6,220,677	10,944	327,123	12%
2017	\$15,046,905	135,018	822,289	18%
<b>Totals</b>	<b>\$107,697,226</b>	<b>3,067,530</b>	<b>4,234,121</b>	<b>10%</b>

## 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> </ul> |
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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 256-895-1514.