Federal Performance Contracting Coalition

Examples of ESPCs for Critical Facilities

- **Fort Buchanan, Puerto Rico** -- The U.S. Army Engineering and Support Center, Huntsville, awarded a $34.5 million Energy Savings Performance Contract (ESPC) to install solar photovoltaic power generation, solar thermal applications, wind power generation new indoor and exterior LED lighting, a post-wide building automation and control systems to manage energy at 73 buildings, as well as other energy efficiency improvements. The project, using private sector financing with no upfront cost to the federal government, is expected to save more than $61 million in energy and operation costs over the next 16 years.

- **U.S. Penitentiary, Atlanta, Georgia** -- This ESPC will provide $50 million in infrastructure improvements, provide $3.2 million in energy and water savings and 43% reduction in energy consumption after the project is completed. A new hybrid geothermal chiller will be installed as well as a new high efficiency boiler for heating and site wide energy management control systems.

- **U.S. Capitol Buildings, Washington, DC --** The Office of the Architect of the Capitol (AOC) awarded an ESPC for work in the office buildings of the U.S. House of Representatives. The project includes $34 million in facility infrastructure upgrades in the Rayburn, Longworth, Cannon, and Ford House Office Buildings, and the House Page Dormitory. The infrastructure upgrades will pay for themselves through more than $67 million in reduced energy and water consumption costs over the project term. After completion of construction, the House Office Buildings are expected to reduce energy consumption by 23 percent and total water consumption by 32 percent.

- **Tinker Air Force Base, Oklahoma** -- In July 2012, Tinker Air Force Base, OK, as part of the U.S. Air Force Material Command, awarded an $80.6 million ESPC to upgrade and optimize heating technology and controls for 71 buildings. This is the largest energy-focused retrofit project undertaken at any U.S. Department of Defense (DOD) site. The project is expected to save the service $6.4 million the first year after the work is complete and more than $170 million over 20 years.

- **NASA Wallops Flight Facility, Wallops Island, VA --** A second phase to the original ESPC at the NASA Wallops Flight Facility was awarded on May 30, 2012 and includes the installation of geothermal heat pumps which will save $267,776 in year one and 11,576 MMBtu annually. Implementation of this measure will provide a valuable renewable energy resource and will reduce extensive maintenance requirements for the existing HVAC equipment due to the corrosive environment on Wallops Island. With this additional phase, the overall ESPC project value at Wallops increased from $15M to $28M. During the first phase of the ESPC, the ESCO replaced over 9,500 lighting fixtures with high efficiency lighting technologies, decentralized an antiquated steam plant by installing a propane distribution system with over 60 building-level condensing boilers, and upgraded and expanded an existing energy management control system. The first phase is projected to reduce energy intensity by 35 percent**.**

- **United States Military Academy, West Point, New York --** $35.8 million private sector ESPC investment. The project provides substantial upgrades to lighting and HVAC systems, complete modernization of the facility control system, water conservation and a solar photovoltaic power generation. Available SRM funding was leveraged in this project, doubling its value. Long term operations and maintenance will augment West Point's existing staff. This project helped West Point meet its energy reduction goals two years earlier than required.

- **Ft. Bliss, Texas** -- The $16 million ESPC project, which includes a solar installation, energy management control system upgrades and other energy efficiency improvements, is expected to save $39 million in energy costs over the next 24 years. This project is the first ESPC project awarded after the Presidential Directive to count for the $2B ESPC goal and it includes the Army's first Power Purchase Agreement of purchasing renewable energy under an ESPC contract through Energy Services Agreement (ESA).

- **Federal Corrections Institute, Beckley, West Virginia** -- The $21 million ESPC includes lighting retrofits, water conservation measures, central plant renovations, and a new building automation system. Combined, the energy conservation measures guarantee $1.1 million in savings annually over the 15-year contract.

- **United States Coast Guard, Puerto Rico** -- This $50 million energy savings performance contract (ESPC) for the United States Coast Guard (USCG) includes 960,000 square feet in over 300 buildings across the island of Puerto Rico. Energy conservation measures include building automation system upgrades and optimization, HVAC replacement, lighting retrofits and sensor installation, building envelop improvements, water conservation and solar photovoltaic power generation. The ESPC allowed the Coast Guard to redirect $1M of their annual energy spend from brown power to green power sources and save another $1.1M in energy spend annually, which is a 53% savings. Additionally, the project is the first of its kind to combine the Renewable Energy Services Agreement (RESA) financing structure within an ESPC financing vehicle, thus maximizing the incentives and overall value to USGC and enabling extension of the renewable energy financing term beyond 10 years.

- **General Services Administration, North Texas** -- The General Services Administration ESPC propelled energy savings of $1M annually and reduced carbon emissions by 7,109 tons per year at 16 of their federal buildings in North Texas. Energy conservation measures include 900+ KW of photovoltaic solar panels, boiler replacement, optimized chilled water system, building automation system upgrade, data center controls upgrade, interior lighting fixtures and controls retrofit, upgrades to irrigation system controls and integration of existing disparate building automation systems onto one platform. The benefits included $940k in guaranteed savings, compliance with legislation and executive orders, reduced building operating costs and improved occupant comfort.

- **Pantex, Amarillo, Texas** - Using an ESPC, the National Nuclear Security Administration (NNSA) is constructing the federal government's largest wind farm and it is expected to save an average of $2.9 million annually over the 20-year contract term. The installation will consist of five 2.3 megawatt turbines located on 1,500 acres of government-owned property. The wind farm is expected to generate roughly 47 million kilowatt hours of clean energy annually, which is more than 60 percent of the electricity required annually for the Pantex facility. This is enough electricity to power nearly 3,500 homes and will reduce CO2 emissions by over 35,000 metric tons per year, which equates to removing over 7,200 cars from the road each year or planting over 850,000 trees.