ESCO Qualification Sheet

ESG's ESPC Snapshot

Picatinny Arsenal Projects: $56.3M

Marine Corps Logistics Base, Albany Projects: $34.7M

Detroit Arsenal Projects: $20.7M

U.S. Coast Guard Elizabeth City Projects: $3M

U.S. Department of Agriculture Project: $1.8M

> "All aspects of ESG's work, from project development through implementation, is of the highest quality."
>
> **Thomas E. Struble,**
> *Contracting Liaison*
> *Picatinny Arsenal*

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Introduction to Energy Systems Group

Since 1998, Energy Systems Group (ESG) has successfully developed, implemented, and operated energy efficiency and reliability-focused infrastructure modernization projects for Federal installations under the DoE ESPC IDIQ. Project scopes have included administration buildings, laboratories, industrial operations, data centers, communication operations, and many others. **ESG's comprehensive self-funding energy programs provide the greatest value in terms of savings, sustainability, and mission resiliency.**

ESG joins our Federal clients in aiming high to achieve complex, design-build projects which maximize benefit to the customer and their ongoing mission. Our experience includes addressing emerging challenges and requirements such as cybersecurity, energy surety, industrial controls, data center consolidation, and enterprise energy management. ESG has experience in preparing site surveys, feasibility designs, and engineering studies for energy infrastructure projects, including those in logistically challenging locations ranging from Fairbanks, AK (Eielson AFB – ESPC), the Caribbean (US Virgin Islands and Puerto Rico), and remote Pacific DoD installations (Guam). Without shying away from low energy rates, our award winning projects ESPC projects have exceeded guaranteed savings by 16.7% on average compared to the current average of 7% among the 16 DoE ESPC IDIQ contract holders.

ESG's ESPC Approach

Our past performance at mission-critical Federal facilities illustrates our refined management processes and procedures, cultivating a reputation of excellence. Our dedicated project teams collaborate with Federal customers to assess buildings, equipment, and systems, create a project concept, develop a proposal, procure construction resources, and deliver a constructed ESPC project in conjunction with mission requirements and facility operations. From start to finish, Federal clients benefit from our project team's consistent assessment and incorporation of customer requirements, mitigation of risks, and maintenance of clear, frequent communication with project stakeholders. This allows for seamless transitions from phase-to-phase as projects progress.

Small business goals are important to Federal clients, and they are important to us too. ESG strives to identify and partner with local small businesses and veteran-owned companies throughout the project process. Further, in ensuring maximum project value for the customer, we firmly believe in exercising product neutrality as a principle of best practice and customer satisfaction to ensure every solution delivers in a uniquely tailored and cost effective manner.

ESG ENERGY SYSTEMS GROUP

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ESG's Performance Contracting Experience Matrix

Energy Systems Group has executed complex energy projects under both DoE and DoD ESPC with the precision and dedication required to support some of our nation's most critical missions. The matrix below illustrates our extensive project experience, and illustrates the breadth of our contracting expertise.

Project Name / Solution / Technology Category	Boiler Plant Improvements /	Chiller Plant Improvements	Building Automation / EMCS	Other HVAC Improvements	Lighting (Indoor,Outdoor, LED) Improvements	Building Envelope Modifications	Chilled/Hot Water & Steam Distribution Systems	Electric Motors & Drives and Refrigeration	Distributed Generation	Renewable Energy Systems	Energy/Utility Distribution Systems	Water and Sewer Conservation Systems	Electrical Peak Shaving / Load Shifting	Process Improvements and/or Rate Changes	Commissioning / Retrocommissioning	Advanced Metering Systems
Pope AFB (UESC)	x	x	x	x	x	x	x	x			x				x	x
Seymour Johnson AFB (UESC)	x	x	x	x	x		x	x		x			x	x	x	
Shaw AFB (UESC)	x	x	x	x	x		x	x			x		x		x	
Eielson AFB (ESPC)				x	x	x						x				
Barksdale AFB (UESC)				x	x											
Beale AFB (ESPC)		x		x	x						x					
Tinker AFB (UESC)		x	x	x	x	x			x			x				
Eglin AFB (UESC)	x	x	x	x	x					x					x	
Detroit Arsenal (ESPC)	x	x		x	x		x	x								
Picatinny Arsenal (ESPC)	x	x	x	x	x							x				
Fort Detrick (EUL)	x	x	x	x	x	x	x	x	x		x	x		x	x	x
Corpus Christi Army Depot (ESPC)	x	x		x	x											
Fort Rucker (UESC)	x	x	x	x	x	x	x		x	x					x	x
Joint Base Myer-Henderson Hall (UESC)	x	x	x	x	x			x				x			x	
Fort Gordon (UESC)				x	x											
MCLB Albany (ESPC)			x	x	x		x		x	x	x				x	
MCB Camp Lejeune (UESC)	x	x	x	x	x		x	x	x	x	x				x	x
MCAS Cherry Point (UESC)	x		x	x	x		x	x		x	x		x		x	x
MCSF Blount Island (UESC)		x	x	x	x	x		x		x	x	x			x	
NSB Kings Bay (UESC)			x	x	x		x	x				x			x	
NAS Pensacola (UESC)		x	x	x	x	x						x			x	
NAS Kingsville (ESPC & Design-Build)		x			x				x	x			x		x	x
NS Ingleside (ESPC)		x	x		x		x				x	x		x	x	
NAS PAX River (UESC)				x		x						x				
NSA Panama City (UESC)			x	x	x		x	x		x		x				
USN Fleet Readiness Center Southeast (UESC)				x	x											
NAS Jacksonville (UESC)	x	x	x	x	x		x	x		x	x	x	x		x	x
NAS JRB New Orleans (UESC)		x	x	x	x			x				x			x	
NAS Meridian (UESC)	x		x	x	x			x				x			x	
NCBC Gulfport (UESC)			x	x	x							x				
NSA Orlando (UESC)			x	x	x							x				
NS Great Lakes (MilCon)	x		x	x											x	
NS Mayport (UESC)	x	x	x	x	x		x	x		x		x			x	x
NS Norfolk (UESC)	x	x	x	x	x		x	x		x		x			x	
Jesse Brown VA Medical Center (EUL)		x	x				x		x		x	x	x		x	x
James A. Lovell Federal Health Care Center (EUL)	x	x	x	x			x		x		x		x		x	x
Mountain Home VA Medical Center (EUL)	x	x	x	x	x		x			x	x	x			x	x
VA VISN 12 ESI / ESPC (ESPC)		x			x							x				
VA Palo Alto Health Care System (ESPC)		x			x	x	x								x	x
Hampton VA Medical Center (UESC)	x		x	x	x	x	x	x		x	x	x			x	
Tampa Bay VA Medical Center IGA (UESC)	x	x	x	x	x	x	x			x		x			x	x
USCG Base Elizabeth City (ESPC)		x	x	x	x				x				x	x		
USCG Base Portsmouth IGA (UESC)	x		x	x	x			x			x	x	x		x	x
NASA Langley Research Center (UESC)	x	x	x	x	x			x		x					x	x
NASA JSC (ESPC)		x	x						x		x		x		x	x

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ESG DoD ESPC Project Highlights

Picatinny Arsenal, ECM 5, Steam Decentralization

ESG reconfigured the Arsenal's central heating system by installing new steam boilers, hot water boilers, furnaces, and unit heaters to serve the facility's 250+ existing buildings. An industrial grade monitoring and control system was installed to support future operation and maintenance requirements. The 18-month construction schedule required detailed coordination between several subcontractors, the local gas utility, numerous Arsenal employees and decision makers, and ESG employees.

ESG operates and maintains the system under the operations portion of the contract allowing the Arsenal to focus greater resources on its core missions. Over the contract term, the project will reduce Picatinny's long-term operating costs by over $100 million and reduce harmful carbon, sulfur, and nitrogen dioxide emissions by an estimated 1 million tons.

Detroit Arsenal, ECM 2, Steam Decentralization and Heating System Upgrade

ECM 2 accomplished Detroit Arsenal's goals of decentralizing and upgrading its aging and inefficient heating system, and eliminating an expensive chiller leased each cooling season. ESG installed three containerized, modular boiler plants to serve seven buildings throughout the Arsenal. Upon completion, this ECM immediately improved steam delivery to the facility's headquarters and mission-critical test cells building, and it reduced susceptibility to a steam system failure. ESG also installed a permanent air-cooled chiller and chilled water pumps, enabling the Arsenal to discontinue the annual lease for a chiller that conditioned the building. Additionally, a small cogeneration project was implemented to provide standby electrical power and peak shaving capability in the form of heat recovery. Finally, ESG installed a gas-fired radiant infrared heating system in the shipping warehouse.

Beale AFB, ECM 1, Lighting Retrofits and High Efficiency Motor Upgrades

ECM 1 work at Beale AFB included lighting retrofits and high efficiency motor upgrades. ESG replaced inefficient T-12 fluorescent and incandescent lighting fixtures with new T-8 fluorescent lighting and LED exit signs. ESG rebuilt the chilled water pump and realigned its motor. In total, ESG replaced eight motors with energy-efficient models. New drive sheaves were installed on the motors and sized to match the existing fan speed. Upon alignment and commissioning, motor efficiency increased between three and seven percent, which translates to significant energy savings, particularly when the system operates 24/7.

ESG Project Award Highlights

Picatinny Arsenal, NJ

2001, 2003, 2006, 2009, & 2010 - Annual Secretary of the Army Energy and Water Management Award

2002 - AMC 2nd Place Energy Award Winner in Energy Efficiency/Energy Management

Detroit Arsenal, MI

2009 - Annual Secretary of the Army Energy and Water Management Award

Fort Detrick, MD

2008 - Infrastructure Award – National Council for Public-Private Partnerships

Corpus Christi Army Depot, TX

2004 - Annual Secretary of the Army Energy and Water Management Award

Eglin Air Force Base, FL

2008 - Federal Energy and Water Management Award

Marine Corps Logistics Base, Albany

2005 & 2010 - Gold Level Achievement Winner of the Secretary of the Navy Energy Conservation Program

2011 - Winner of the Secretary of the Navy Energy Conservation Program

2012 - Association of Energy Engineers' Region 2 Renewable Energy Project Award

2012 - FEMP Federal Energy and Water Management Award

2013 - Society of American Military Engineers Net Zero Sustainability Award

2013 - EPA ENERGY STAR Combined Heat and Power (CHP) Award

NAS Pensacola, FL

NAVFAC SE Contractor Safety Letter of Recognition

2013 - NAVFAC SE and the NAS Pensacola Public Works Department presented a STAR program award to Gulf Power and its on-site provider, ESG, for achievements in safety.

Fort Rucker, AL

2014 - Defense Community Installation Excellence Award

NSB Kings Bay, GA

2013 - Secretary of Navy's Energy Platinum Award

MCSF Blount Island, FL

2012 - Platinum Certification from the US Navy Energy Program

NAS Jacksonville, FL

2011 - SECNAV Energy and Water Management Award, in the Navy Large Shore Category

2012 - Presidential Installation Excellence Award

2012 - FEMP Federal Energy and Water Management Award

Seymour Johnson AFB, NC

2005 - USAF REAP Award

2004 - DoE Energy Efficiency / Energy Program Management Award to Small Groups

Shaw AFB, SC

2003 - FEMP Federal Energy & Water Conservation Award – Individual Category

Pope AFB, NC

2003 - Air Mobility Command Energy Award in the Industrial Category

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DoE ESPC Highlight - MCLB Albany, P4 Microgrid / Renewable CHP

In order to assist MCLB Albany in exceeding the renewable energy mandates outlined in Executive Order 13423 and the Energy Policy Act of 2005 (EPAct), ESG developed, designed, and constructed the Navy's first landfill gas-to-energy (LFGE) project.

Winner of the 2013 Energy Star CHP Award, this project was the result of a cooperative effort between MCLB Albany, ESG, and Dougherty County, Georgia. The LFGE plant produces 1.9 MW of renewable electric power and up to 13.3 MMBtu/h of steam. As a result, 19% of the Base's annual energy now comes from renewable energy. This project also reduced the Base's energy intensity by 16% from its 2003 baseline, which greatly assists in meeting EPAct goals. The project also included installation and operation of a landfill gas (LFG) compression-and-dehydration station, and LFG and condensate pipelines.

EUL Highlight - Fort Detrick, NIBC Advanced Energy Microgrid

Housed on the U.S. Army's Fort Detrick base, the National Interagency Biodefense Campus (NIBC) is the largest secured campus of biosafety level 3 and 4 laboratories in the world. ESG designed and constructed a microgrid system to ensure that critical utilities on the campus remain operational in the event of utility grid failures. ESG is responsible for on-site operations and maintenance of the microgrid, with follow-on work including the extending of direct-buried steam, condensate, and chilled water distribution systems. High-pressure steam and chilled water generation is provided to individual campus load centers via utility interconnections for a fully redundant distribution loop. Providing turnkey design, engineering, installation, commissioning, and procurement for steam and chilled water lateral pipelines, ESG also extended the existing duct banks to the Navy Medical Bio-Defense Research Lab transformers to connect it to the microgrid. Further, ESG provided steam supply and condensate return connections, chilled water supply and return connections, and electrical connection to the new USAMRIID facility. Completed in 2015, it is the largest, most complex biocontainment facility ever built.

UESC Highlight - Eglin AFB, Secure Energy Management System

Gulf Power Company competitively selected ESG to develop, design, and implement an energy management system (EMS) upgrade at Eglin AFB. The solution consisted of building a new, secure, network dedicated to communication with existing industrial control systems, including both the HVAC Direct Digital Controls and advanced utility metering systems. The new EMS utilizes energy management software capable of accessing real-time and archived data from disparate automation systems for use in dashboard displays, reporting, and diagnostic analysis. Work included installation of network IT infrastructure; upgrades to the HVAC controls system by installing Enterprise network controllers and components for implementing energy conservation strategies; an energy management software platform that provides useful, integrated data from the HVAC controls and utility metering systems for analysis and reporting; development of a utility billing software tool; and development of a Strategic Energy Master Plan, which serves as a model for other facilities/agencies.

UESC Highlight - NAS Jacksonville, P2 Steam to Gas / Lighting Upgrade

Energy Systems Group designed and implemented an innovative package of solutions that leveraged technology with a proven track record of performance to provide significant energy reductions and dramatically improve energy self-sufficiency for the base.

In coordination with the base leadership, ESG crafted an energy strategy utilizing the Utility Energy Services Contract (UESC) in partnership with the local gas provider, TECO Peoples Gas, to install energy efficiency upgrades to base facilities and infrastructure which included lighting improvements, water saving retrofits, and steam to natural gas conversions. This $17 million project provided over $2 million of annual cost savings and more than 65,000 MBTUs in annual energy savings at Naval Air Station Jacksonville.

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