



Energy Performance Contracts (EPC)

U.S. Coast Guard EPC 101 Brief for NAESCO

March 2020 | Presented by Sam Alvord



Office of Energy Management
COMDT (CG-46)



Sustainability, Environmental, and Energy Policy Statement

- *I expect every member of our total workforce to remain vigilant in our commitment to environmental sustainability and energy conservation. We will be stewards of the environment, deserving of our Nation's trust and confidence.*

Karl L. Schultz
Admiral, U.S. Coast Guard



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EPC Overview



- **A unique, holistic way to address funded and unfunded energy and facility requirements**
- Striking: ‘Alternatively Financed Projects’ from vocabulary
- No such things as an “Energy Score” or “Resilience Score” or evaluation by NPV or EROI, etc
 - Only diverting already approved mission-oriented projects after leadership approval to form acquisition team (aka allocate personnel resources)
- EPC Acquisition team still aggregating (focused on Resilient building execution of supplemental funds)
 - Pending DLA-Energy MOA update to include acquisition support services





Major Types of Energy Performance Contracts



Utility Energy Service Contract (UESC)

42 USC 8256

With a servicing electric, natural gas, or water utility



Energy Savings Performance Contract (ESPC)

42 USC 8287

EPC with an Energy Services Company (ESCO)



Power Purchase Agreement (PPA)

40 USC 501 FAR Part 41

Power generation project, various potential providers

These contracts represent the most robust performance-based public-private partnerships within the federal government.





Savings Persistence



- EPCs are proven to provide greater, more persistent savings than traditionally funded projects
 - ESPC avg savings: 108% of guarantee¹
 - Appropriation-funded project avg savings: 67% of expectation²
- Annual measurement and verification maintains rigor
- **Can include O&M and R&R**
 - Extends useful life and ensures equipment is replaced when appropriate
 - Supplements existing capabilities to avoid service gaps, as determined by Civil community
- As with any project, operational requirements and natural disasters can impact savings

¹<https://energy.gov/eere/femp/downloads/reported-energy-and-cost-savings-escp-program>

²Could What That ESCO Sales Rep Said Really Be True? Savings Realization Rates in ESCP versus Bid-to-Spec Projects, PNNL, Proceedings of the 2014 ACEEE Summer Study on Energy Efficiency in Buildings, Pacific Grove, CA, 2014.





Savings Achievement



- Actual annual savings to agency: 174%-197% of contract savings³
 - Guaranteed savings calculation assumes baseline equipment continues to operate “as is”-rather than assuming normal deterioration of equipment and efficiency
 - Savings continue beyond contract term
 - Contract guarantees are discounted compared to estimated
- Escalation rate estimation utilizes greater rigor than traditional projects
 - Is still subject to unknown market conditions
 - May deviate from expectations from year to year

³Beyond Guaranteed Savings: Additional Cost Savings Associated with ESPC Projects, ORNL/TM-2013/108, Oak Ridge National Laboratory, 2013.
Federal Energy Management Program (FEMP) Comprehensive ESPC Workshop Handbook 11-18-2019





Benefits & Challenges of EPCs



Benefits

- Encouraged by legislation and executive order
- Single contracting mechanism for a breadth of needs
- Flexible funding options
- **Can include operations and maintenance services for life-of-project**
- Holistic, cooperative approach to systems
- **Requires life of project tail**

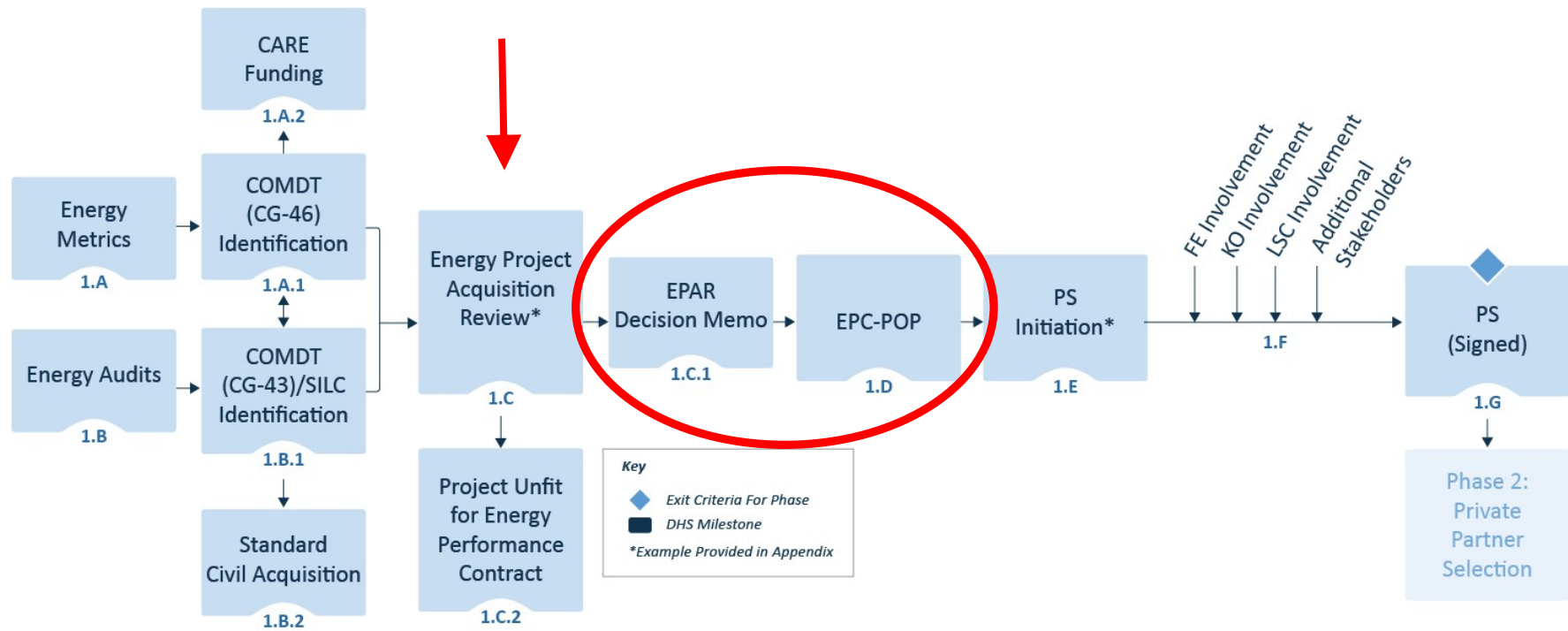
Challenges

- Considered 'outside' the usual CG project pursuit process
- Unique requirements and processes take focus and education
- Flexibility can create risk
- Expected vs realized savings is highlighted
- Requires resources
- **Requires life of project tail**





Project Identification and Approval





Guidance: EPC Green Book

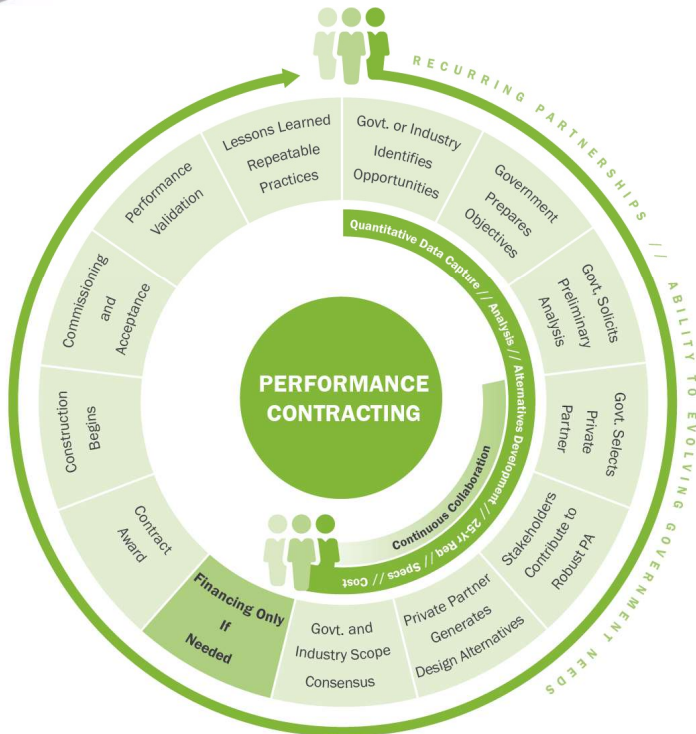


- Promulgated June 2016 – **Updated Nov 2019**
 - Joint COMDT (CG-46) & COMDT (CG-43) signature
- Directly addresses GAO concerns of DOD project management
- Includes codified guidance based on years of lessons learned
 - Includes all steps and documentation for the execution of an EPC
 - Highlights stakeholders, roles, and requirements
 - **Updated to address internal concerns and questions, provide clarity on nomenclature**
 - **Update added in the Energy Project Acquisition Review**
- Championed within the Federal Executive Steering Committee (FESC)





Breaking the “Muscle Memory”



Performance Contracting and Design-Build Project Processes

Performance Contracting	Design-Build
◆ Two-Year Development	◆ Five-Year Development
◆ Flexible, Adaptable Collaborative Consensus	◆ Government-driven Concepts/Estimation
◆ 10+ Alternatives	◆ Minimal Alternatives
◆ Solution-Driven	◆ Fiscally-Driven
◆ Government Authority Required in All Phases	◆ Government Authority Required in Few Phases
◆ Recurring Collaboration/Partnership	◆ Defined Partnership





Core Acquisition Team



Stakeholder	Approval	Partner Selection	Specifications Development	Award	Implementation	Project Performance
Office of Energy Management (CG-46)	●	●	●	●	●	●
Office of Resources, Financial Analysis Division (CG-832)/DCMS-83	△	△	■	◆	△	△
Office of Civil Engineering (CG-43)	◆	◆	◆	◆	△	◆
Shore Infrastructure Logistics Center (SILC)	■	■	■	■	■	■
Civil Engineering Unit (CEU)	◆	◆	■	◆	■	◆
Facilities Engineer (FE)	◆	◆	■	■	■	■
Contracting Officer (KO)	◆	■	■	■	■	■
Legal Service Command (LSC)	◆	△	△	■	△	△
Facilities Design and Construction Center (FDCC)	◆	△	◆	◆	■	△

K E Y

● Accountable
 ■ Responsible
 ◆ Consulted
 △ Informed

Level of Stakeholder Involvement





Annual Project Planning and Prioritization

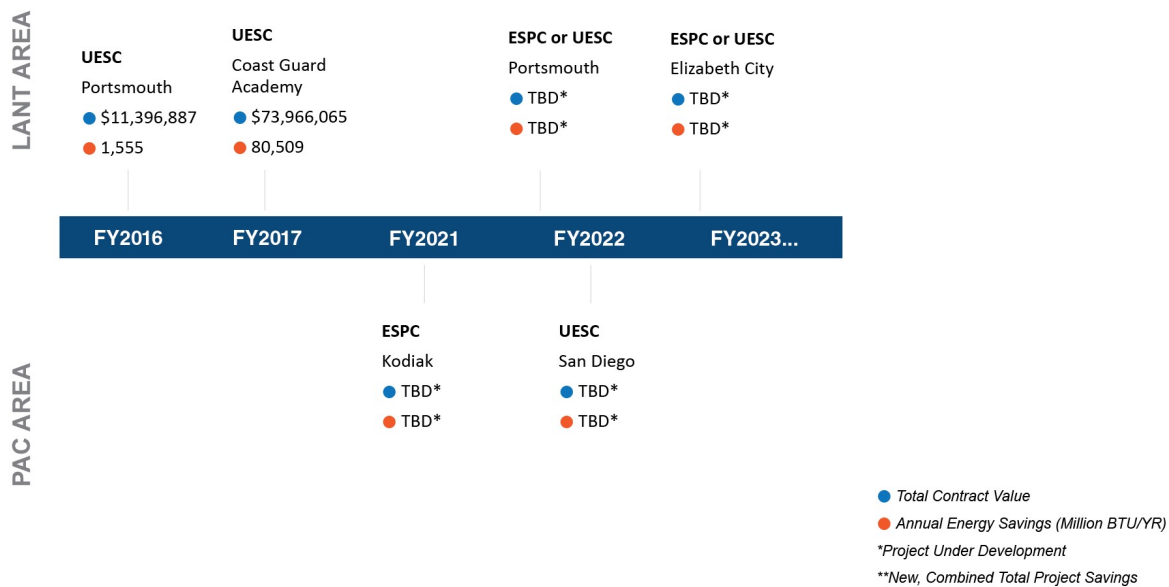


- Projects identified by both COMDT (CG-43) and COMDT (CG-46)
 - COMDT (CG-43) identifies C-POP (aka Annual O&M \$\$) and P-POP (aka MILCON \$\$) projects with an energy nexus
 - COMDT (CG-46) identifies strategic energy priorities
- Energy Project Acquisition Review (EPAR)
 - Stakeholders include:
 - Office Chiefs or Commanding Officers from COMDT (CG-46), COMDT (CG-43), the SILC-ESD, the FDCC
 - **SILC COCO for Construction**
 - CG's DOE Project Facilitator
 - DCMS-83 Representative
 - Generates an EPAR Decision Memo, routed from COMDT (CG-46) to COMDT (CG-43)
- Similar to the C-POP and P-POP, COMDT (CG-43) will produce an EPC-POP





EPC Forecast (per current EPAR Decision Memo)





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