

2017

# Air Force Civil Engineer Energy Savings Performance Contracts (ESPC) Playbook





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## Chapter 1 Introduction – Energy Savings Performance Contracts (ESPC)

The objective of the ESPC Playbook is to provide the parameters and guidance used by the United States Air Force for implementing an ESPC. This Playbook replaces Air Force [Engineering Technical Letter \(ETL\) 13-13](#). This Playbook contains a basic history of the ESPC program, primary roles and responsibilities, step-by-step instructions, job aids, and reference documents to ensure ESPC procedures are followed. Requirements in this ESPC Playbook are mandatory. Any deviations require written approval from the ESPC program manager, Air Force Civil Engineer Center, Energy Program Development Division (AFCEC/CND). This Playbook applies to all ESPC work.

Job Aids, resources and reference materials are provided digitally in [LINK](#) and can be modified as required by AFCEC/CND.

Limitations: This Playbook does not replace, supersede, or circumvent existing Department of Defense (DoD) or Air Force (AF) policy.

Applicability: This Playbook is written for the following personnel: AFCEC/CND; Base Civil Engineers (BCE); Base Energy Managers (BEM); Base Financial Managers (BFM); Base Contracting Officers (CO); Resource Efficiency Managers (REM); Assistant Secretary of the Air Force Installations, Environment and Energy (SAF/IE); Energy Services Company (ESCO) personnel; and Air Force Installation and Mission Support Center (AFIMSC) personnel.



## Chapter 2 ESPC Background, Authority, Financing and Funding

### 2.1 ESPC Background

The ESPC legislation allows the AF to implement infrastructure improvements without current year funds. An ESPC is a contract in which an ESCO designs, constructs, implements, operates, maintains, and arranges the necessary funding of improvements that reduce energy and water consumption and promote the use of renewable energy technologies. ESPCs enable the AF to improve energy performance while addressing aging infrastructure concerns and reducing consumption, through a budget-neutral approach.

ESPCs are utilized for reducing energy consumption at an installation through improvements to infrastructure, facilities, and facility systems. ESPCs can be used to replace inefficient energy and water-consuming equipment including HVAC, lighting, electrical power generation, and renewable energy. A full listing of available technologies is provided in the technical categories under [Section 4.1](#). ESPC can also be used to reduce process energy within buildings, including, but not limited to, process equipment; or research, development, test and evaluation (RDT&E) equipment. Any initiative that results in a net decrease in future energy or water costs can be considered for ESPC or other third-party financing options. Under an ESPC, the ESCO:

1. Identifies the building and/or equipment energy savings potential.
2. Finances the capital costs using private sector funding.
3. Acquires, installs, operates, and maintains the equipment for the life of the contract.
4. Guarantees savings for the life of the task order.

The ESCO receives a payment from the agencies utility service account based on meeting the guaranteed energy savings until the individual task order (TO) is paid off. The AF takes ownership of the equipment upon completion of installation.

### 2.2 Authority

The following table lists the Executive Orders (E.O.), directives, and policies that mandate and support the AF ESPC energy reduction program:

<a href="#">Air Force Policy Directive (AFPD) 32-10, Installations and Facilities</a>
<a href="#">Title 42, United States Code (U.S.C.), Section 8287, National Energy Conservation Policy Act</a>
<a href="#">10 U.S.C. 2911-13, Energy Performance Goals and Plans for Department of Defense</a>
<a href="#">42 U.S.C. 8253, Energy Policy Act of 1992</a>
<a href="#">E.O. 13423, Strengthening Federal Environmental, Energy, and Transportation Management</a> (revoked in 2015). Replaced by: <a href="#">E.O. 13693, Planning for Federal Sustainability in the Next Decade</a>
<a href="#">E.O. 13514, Federal Leadership in Environmental, Energy, and Economic Performance</a> (revoked in 2015). Replaced by: <a href="#">E.O. 13693, Planning for Federal Sustainability in the Next Decade</a>
<a href="#">Energy Policy Act of 2005</a>
<a href="#">10 Code of Federal Regulations (CFR) 436, Federal Energy Management and Planning Programs</a>
<a href="#">Energy Independence and Security Act (EISA) of 2007</a>

Table 1 Authority Documents Mandating the AF ESPC Program



The EISA of 2007 tasked the AF to reduce energy consumption. E.O. 13693 maintains federal leadership in sustainability and greenhouse gas emission reductions. E.O. 13693 specifically states beginning in fiscal year 2016, all federal agencies shall, where life-cycle cost-effective, promote building energy conservation, efficiency, and management. This will be accomplished by reducing building energy intensity measured in MBTU/SF by 2.5 percent annually through the end of fiscal year 2025, relative to the baseline of the agency's building energy use in fiscal year 2015.

## 2.3 Financing ESPCs

The National Energy Conservation Policy Act (42 U.S.C. 8287) provides legislative authority for federal agencies to enter an ESPC, including:

1. The AF can acquire contracts with ESCOs to obtain energy-conserving infrastructure improvements.
2. ESCO contracts must guarantee savings and overall utility costs to the installation cannot increase because of the contract.
3. The savings generated by the infrastructure improvements must be a result of the ESCO's efforts and investment.
4. The use of an ESPC requires a detailed understanding of its basic principles, how costs are assessed, and how risks are managed.

ESPC projects are funded solely from the cost savings they generate or avoid. All ESPC costs, including mid-contract replacement of capital equipment, are funded from ESPC savings. An installation's post-ESPC utility costs (i.e., energy and operations and maintenance [O&M]) plus the cost of the ESPC project cannot exceed the utilities costs prior to implementation of the ESPC project. Thus, the costs cannot exceed the savings (i.e., energy and O&M) generated by the projects. The payment to the ESCO is contingent upon annual verification by the Government that the guaranteed savings have been realized. Refer to the [DoE letter to ESCOs](#) for more information.

The ESCO is responsible for the design, acquisition, installation, Measurement and Verification (M&V), and maintenance of the project's equipment or systems that produce the savings. An ESPC requires the ESCO to guarantee the savings generated by, and the operation of the installed equipment. This guarantee must be satisfied and verified at the acceptance of the equipment and revalidated annually throughout the life of the TO.

### 2.3.1 Energy Cost Savings

Energy Costs Savings are one time or recurring energy cost savings that can be utilized to fund an ESPC. An ESPC is budget neutral; actual funds need to be saved or generated to pay the ESCO. The funds can be generated from O&M, cancellation of vendor contracts, material reductions, avoided costs or utility savings. An ESPC cannot utilize funding from MILCON or conduct MILCON actions. Additionally, installations should be aware re-vectoring of resources does not generate fiscal savings (e.g., ESPCs do not impact manpower, and thus manpower savings cannot be claimed). Types of cost savings that can be utilized include the following:



1. Reductions in expenses (other than energy costs) related to energy-consuming equipment affecting operations, maintenance, renewal or repair expenses of equipment; and costs associated with waste disposal, such as waste disposal fees.
2. As part of initial award, the costs savings from avoided expenditures for O&M, repair, replacement, or other capital expenditures can be utilized to assist in paying down an ESPC. Coordination with the appropriate AFCEC divisions is required. Investments can include both facility (real property and Real Property Installed Equipment [RPIE]) improvements and equipment (non-RPIE, such as kitchen equipment).
3. Reduction in utility commodity consumption, in comparison to normalized baseline, for natural gas, electrical power, water, sewer, propane, etc.

Certain risks are associated with implementing an ESPC for both the AF and the ESCO. It is essential the AF does not assume any of the ESCO’s risk.

AF risks during the life of the TO	ESCO risks during the life of the TO
Utility rates	ECM performance
Hours of operations	ECM maintenance
Mission changes	Guaranteed savings

Table 2 ESPC Risks

The ESCO will provide a guarantee of cost savings to the AF and establish payment schedules reflecting this guarantee, considering any capital costs under the contract. The ESCO provides these figures for each year of the TO. The actual payment to the ESCO is based on an agreed percentage of the calculated energy savings. These awarded TOs, like utility bills, are “must-pay” requirements and are programmed into the annual utility budget process.

Aggregate annual payments by the AF under an ESPC may not exceed the amount the agency would have paid for utilities without an ESPC during the TO term. ESPC costs can never exceed the energy and O&M savings. Forecasted energy costs and the discount rate (present value of future cash flows) are major factors in determining ESPC savings. 10 CFR 436, *Federal Energy Management and Planning Programs*, provides detailed instructions for ESPCs, including the calculation of life cycle costs. Guidance from the Federal Energy Management Program (FEMP) states that the escalation rates for ESPCs are based on the Nominal Escalation Rate for each commodity as calculated by latest version of the National Institute for Standards and Technology (NIST) software program called the Energy Escalation Rate Calculator (EERC). EERC 2.0-17 (use most current version) is available for download from the FEMP website, <http://www.energy.gov/eere/femp/energy-escalation-rate-calculator-download>. Individual escalation rates must be used for each commodity. Users of the EERC tool need only specify 100% for a single fuel type, identify the state in which their prospective project will take place, select industrial sector for AF installations, the expected start date (award year) and duration of the project. With that, the tool will determine an escalation rate for each fuel type. The provisions in 10 CFR 436.14 are mandatory, and failure to comply will result in the contract being legally insufficient. Refer to the [Energy Price Indices and Discount Factors for Life-Cycle Cost Analysis – 2016 Annual Supplement to NIST Handbook 135 \(or latest version\)](#), which provides detailed forecasted energy cost information. Refer to [ESPC Escalation Rate Guidance](#) for more information on how to determine and use escalation rates.



### 2.3.2 Maintenance Responsibilities and Funding

The ESCO is responsible for all costs relating to the performance guarantee, including labor, supplies, parts, and materials for the term of the TO. ESCOs are responsible for all maintenance and repairs during the term of the TO. The exception to this is when the ESCO and AF mutually agree upon certain cases (such as lighting), where the installation may physically perform the maintenance as long as the ESCO retains the ultimate responsibility for maintenance for the length of the TO. However, this needs approval by AFCEC/CND and the language in the TO must clearly state the ESCO is:

1. Not transferring this responsibility to the installation.
2. Responsible for maintenance and repair services for any energy-related equipment (including computer software systems) and there is no connection between ECM performance and associated ECM maintenance.
3. Required to oversee and ensure all maintenance is performed as required for each ECP within the TO.

If approved by AFCEC/CND, the installation may require the ESCO to provide all parts and materials needed to accomplish installation performed maintenance. All parts and materials needed to maintain and repair an ECM must be paid from captured O&M or energy savings. Without capturing these savings, the government cannot assure the funds are available to cover future O&M costs necessary for maintaining equipment performance.

Note: If equipment is replaced and there is a replacement cost, energy savings can only be captured if the equipment is installed by the ESCO and the ESCO remains responsible for its performance.

### 2.3.3 Capturing ESPC Savings

The National Energy Conservation Policy Act (42 U.S.C. 8287) does not explicitly state where ESPC savings must come from, however, utility energy savings and avoided maintenance costs can be included. Use caution if applying anticipated cost avoidance to the ESPC due to major repair/replacement that may not be needed because of the ESPC. If these major expenditures are included as captured savings, they become a must-pay bill from O&M funds. Before these funds are included in an ESPC, the installation and Funding Source Program Manager must agree to the funding source and create a record of decision to justify the action and agreement and submit to AFCEC/CND. (See [Section 8287a of 42 U.S.C. 8287](#)) Keep in mind that:

1. Savings must be real and verifiable so the installation doesn't run the risk of a savings shortfall. The AF requires that 2/3 of all energy savings must be metered, with a strong preference for IPMVP [Option C](#).
2. Work that encompasses O&M-type savings or other savings that do not eliminate actual costs or produce "actual savings" (real \$) versus "avoided costs" (hypothetical \$) will not be included.

### 2.3.4 Annual Reconciliation

Verification of energy savings reconciliation is required to be accomplished for each awarded TO annually. This requirement includes:



1. An approved M&V plan using at least the current International Performance Measurement and Verification Protocol (IPMVP) at the time the TO was awarded.
2. During the annual reconciliation, the ESCO will confirm the adequacy of maintenance. (See [paragraph \(a\)\(2\)\(A\) of 42 U.S.C. 8287.](#))
3. The BEM or substitute must validate that the ESCO's annual reconciliation requirement is performed in accordance with the M&V plan. AFCEC/CND is available to provide support and ensure this requirement is met.

### 2.3.5 Buy-down and Buyout

ESPCs can be funded in-part with installation funds. For example, end-of-year fallout funds, or current FY or FY+1 project funds, can be used to buy down part of the TO. These one-time funds can be identified in the payment schedule to the ESCO upon acceptance of the ECM and commencement of the performance period. This allows for a lower financed amount and shorter term, thereby reducing interest costs over the term. If, after award, O&M funds are used to buy-down a portion of the TO, several steps are necessary:

1. The use of these funds is identified as soon as possible to the ESCO.
2. The economics are considered and justified.
3. Prepayment penalties are identified by the ESCO.
4. The life expectancy of the equipment is considered (i.e., in year 11 of a 20-year TO term, it would not be wise to buy out a piece of equipment that has a life expectancy of 10 years).

Alternatively, these funds can be applied as scheduled payments during the performance period.

When government actions (e.g., removal or demolition of installed ESCO equipment, or mission changes) result in annual guaranteed savings falling below annual payments to the ESCO and the TO term cannot be extended, the buyout provision of the ECP and/or ECM can be exercised. The TO is required to clearly identify the penalties associated with the buyouts.

## 2.4 Funding Requirements

42 U.S.C. 8287 requires that energy savings provide the future payments on the initial project capital investment. While the AF is limited to the use of energy savings to pay off the initial investment, there is no such limitation on the type of initial investments (purchases) that an ESCO can make. This allows for a wider range when considering ESPC project types such as test equipment (wind tunnels), maintenance and processes/equipment. As long as the primary savings are energy/water related, ESPCs can be used across multiple AF organizations.

Government actions (post award) on a building that will impact, alter or dismantle ESPC material or equipment, rendering that part of the ESPC contract invalid, the government should buyout the applicable portion of the contract. Examples include demolition, upgrades, construction and privatization.

If possible, buyout funds should be programmed with the same government fund source as the project itself; however, this may not be possible with all project categories. The AF, to the



maximum extent possible, should look to exclude facilities/ECMs that would be affected by any of the factors above at the time of award or during initial scope development.

The following additional funding rules apply:

1. Military Construction (MILCON) funds, including Energy Conservation Investment Program (ECIP), cannot be applied to an ESPC. MILCON rules do not permit augmenting funds (O&M/utility) with MILCON funds.
2. Non-appropriated Fund (NAF) functions may or may not be authorized to supplement appropriated O&M funds. NAF Category C ECPs must use savings only from other NAF ECPs to avoid subsidizing or being subsidized by other than NAF-funded sources. All actions affecting funding must be coordinated with the NAF funds manager.
3. Military Family Housing (MFH) funds are appropriated separately and used specifically for MFH purposes. MFH ECPs must use savings only from other MFH ECPs to avoid subsidizing or being subsidized by other than MFH-funded sources.
4. Reimbursable customers require separate accounting procedures to ensure adequate payments are applied to their accounts.



## Chapter 3 ESPC Roles and Responsibilities

This chapter provides an in-depth explanation of the roles and responsibilities associated with the ESPC process.

### 3.1 AFCEC/CND Roles and Responsibilities

- a. Serves as the central Program Management Office (PMO). Refer to the [2013 Policy Memorandum](#) and the [2010 ESPC Policy Letter](#) for more guidance. Oversees **all** ESPC projects. Provides review and approvals for all stages of ESPC projects, including initial scope, Preliminary Assessment (PA), Investment Grade Audit (IGA), pre-award and post award M&V. Responsible for ESPC budgets and schedules.
- b. Determines which contracting office to use, either 772 Enterprise Sourcing Squadron (ESS), Defense Logistics Agency (DLA) Energy or Huntsville Engineering and Support Center (HNC).
- c. Provides project engineers who manage individual ESPC projects, FEMP approved Project Facilitator (PF), oversee project schedule and timeline, and coordinates with CO/ESCO/COTRs.
- d. Develops ESPC procedures and guidance. Provides training on using and implementing the ESPC to the CO, BEM, Civil Engineer (CE) financial manager, BFM, and a representative from the installation's legal office.
- e. Assists installations with developing the ESPC project through award and completion of TO terms; evaluates proposals, provides vetting review and approves each state of project development.
- f. Maintains and posts all releasable ESPC documentation to the [eDash](#) website.
- g. Reviews and provides comments and guidance on submissions from the ESCOs, including PAs, IGAs, RFIs and other documents. Refer to the [IGA Review Checklist](#) and the [PA Review Checklist](#) for guidance.
- h. Provides tools and expertise to assist in implementing an ESPC and acts as a clearinghouse for ESPC lessons learned.
- i. Maintains oversight and compliance with AF policies and interprets guidance for the installation's ESPC program.
- j. Provides access to engineering subject matter experts (SMEs).
- k. Provides project vetting and ensures the ESPC contract vehicle is appropriate for the recommended ECMs.
- l. Provides M&V expertise and support during development, commissioning, and annual M&V reports.
- m. Determines if support services are needed after a proposal is complete. Refer to the [FEMP Support Services](#) job aid for more information about available services.

### 3.2 PF Roles and Responsibilities (AFCEC/CND provides PF)

- a. Utilizes the [FEMP ESPC Project Development Guide](#), which charts the ESPC process, providing project development support to agencies developing ESPC projects using the DoE Indefinite Delivery/Indefinite Quantity (IDIQ) ESPC.



- b. The guide outlines resources that PFs are required to use in the delivery of project development services and provides project documentation templates.

Note: ESPC projects are required to work with a FEMP approved federal PF. PFs are experienced, unbiased advisors who guide the agency acquisition team through the ESPC process. AFCEC/CND will provide their own DoE approved PFs at no cost to the project.

### **3.3 772 ESS CO Roles and Responsibilities (If selected as the acquisition agent)**

- a. Overall responsibility to ensure that ESPC projects serve the best interests of the AF and are consistent with the terms and conditions of the ESPC contracts, legislation, and regulations.
- b. Coordinates with AFCEC/CND and Department of Energy (DoE) Federal Financing Specialist (FFS) for use of DoE ESPC contracts.
- c. Performs all pre-award acquisition functions and awards ESPC TOs.
- d. Provides the total contract cost for each phase of an ESPC and a final signed copy of the TO to AFCEC/CND for tracking the contract ceiling.
  - 1. For a Preliminary Assessment (PA) report, include the estimated investment cost provided by the ESCO. Refer to the [PA Review Checklist](#) for guidance.
  - 2. For the Investment Grade Audit (IGA) report, include the final negotiated contract amount encompassing the total cost over the life of the contract. Refer to the [IGA Review Checklist](#) for guidance.

### **3.4 Administration Contracting Officer (ACO) Roles and Responsibilities**

- a. Overall post-award responsibility to ensure that ESPC projects are administered in accordance with the terms and conditions of the ESPC contracts.
- b. Oversees construction management oversight and day-to-day interaction with the ESCO.
- c. Ensures M&V is performed and annual report is received from the ESCO annually and all ESCO maintenance is performed in accordance with the TO.
- d. Informs CO of any issues/problems arising that changes the scope and/or cost of the task order and issues modifications as necessary after coordination with the CO.

### **3.5 CO Roles and Responsibilities**

- a. Overall responsibility to ensure that ESPC projects serve the best interests of the AF and are consistent with the terms and conditions of the ESPC contracts, legislation, and regulations.
- b. Develops contract documents.
- c. Ensures scope and pricing are in the best interest of the government.
- d. Awards TO to the chosen ESCO.
- e. Ensures invoices are received and paid through the term of the contract.

### **3.6 COTR Roles and Responsibilities**

- a. Acts as technical representative for CO.
- b. Identifies and supports project goals and development efforts.



- c. Reviews deliverables.
- d. Provides oversight during construction and installation.
- e. Reviews and approves technical aspects of the annual M&V reports.

### **3.7 DLA Energy Roles and Responsibilities (If selected as the acquisition agent)**

- a. Overall responsibility to ensure ESPC projects serve the best interests of the Federal Government and are consistent with the terms and conditions of the ESPC contracts, legislation, and regulations.
- b. Performs all pre-award acquisition functions and awards ESPC TOs.
- c. DLA Energy acts as ACO.
- d. Provides the total contract cost for each phase of an ESPC and a final signed copy of the TO to AFCEC/CND for tracking the contract ceiling.
  - 1. For a PA report, include the estimated investment cost provided by the ESCO. Refer to the PA Review Checklist for guidance.
  - 2. For the IGA report, include the final negotiated contract amount encompassing the total cost over the life of the contract. Refer to the [IGA Review Checklist](#) for guidance.

### **3.8 HNC, United States Army Corps of Engineers (USACE) Roles and Responsibilities (If selected as the acquisition agent)**

- a. Overall responsibility to ensure ESPC projects serve the best interests of the Federal Government and are consistent with the terms and conditions of the ESPC contracts, legislation, and regulations.
- b. Performs all pre-award acquisition functions and awards ESPC TOs.
- c. Provides the total contract cost for each phase of an ESPC and a final signed copy of the TO to AFCEC/CND for tracking the contract ceiling.
  - 1. For a PA report, include the estimated investment cost provided by the ESCO. Refer to the [PA Review Checklist](#) for guidance.
  - 2. For the IGA report, include the final negotiated contract amount encompassing the total cost over the life of the contract. Refer to the [IGA Review Checklist](#) for guidance.

### **3.9 ESCO Roles and Responsibilities**

- a. Responds to Request for Proposal (RFP) or Notice of Opportunity (NoO) for an ESPC.
- b. Develops and submits a PA. Refer to the [PA Review Checklist](#) for guidance.
- c. Conducts an IGA. Refer to the [IGA Review Checklist](#) for guidance.
- d. Clearly documents the baseline data and ensures the data accurately justifies the baseline.
- e. Provides upfront funding for energy reduction project(s).
- f. Design and Implements the ESPC project, including purchasing equipment, installing equipment, and overseeing and completing construction during projects.



- g. Provides all operation and maintenance for the ESPC.
- h. Performs metering and data collection to validate guaranteed savings.

### **3.10 BCE Roles and Responsibilities**

- a. Works with the CO to implement the ESPC project. Compiles and provides required project documentation, including site data packages and evaluation criteria to the CO.
- b. Ensures that ESPC project documentation is submitted to AFCEC/CND for vetting and approval prior to proceeding to the next phase. Phases include initial scope, PA, IGA, pre-award documentation, M&V plans, post award documentation and M&V reports.
- c. Ensures the BEM completes the ESPC training available on the [FEMP web page](#) before implementing an ESPC program and newly assigned personnel associated with the ESPC program receive this training for the term of the ESPC. The CE financial manager, BFM, and a representative from the installation's legal office should attend this training to learn their responsibilities with regards to an ESPC project.
- d. Ensures the ESCO complies with M&V and O&M requirements for the term of the TO.
- e. Annually verifies the ESCO is meeting the guaranteed savings based on the requirements of the M&V plan for the term of the contract.
- f. Provides a copy of the ESCO's annual reconciliation report to AFCEC/CND.
- g. Appoints a Contracting Officer Technical Representative (COTR) for ESPC project.
- h. Provides power, water, and sewer during ESPC construction with laydown yard.



## Chapter 4 ESPC Process

This chapter explains the ESPC process, broken down into steps that are clear and easy to follow. For each step, there is a process map to assist in understanding the overall ESPC process. Refer to the [ESPC Engagement Guidance](#) document for more information on the ESPC process. (It is important to point out that the AF incurs no cost unless the TO is awarded.) Note: DoE IDIQ H.6.2 proposals will be reviewed in accordance with the instructions set forth in the TO-RFP. The agency will not be responsible for any costs incurred, such as proposal preparation costs or the costs incurred in conducting the IGA, unless a TO is awarded or authorized by the agency CO.

Note: Before an ESPC is underway via contracting, ESCOs are allowed to visit installations to market their capabilities and past performance. During pre-ESPC visits, **ESCOs are not allowed to visit buildings at installations, not allowed to discuss existing conditions at installations, and not allowed to discuss scope of potential future ESPC projects.** Refer to [ESPC Engagement Guidance](#) for more information. Doing so puts the ESCO at risk of being eliminated from the competitive selection process. There must be no real or implied government commitments to a specific ESCO. Interaction at this point that constitutes actual or perceived government obligation must be avoided.

### 4.1 ESPC Initiation

The ESPC process begins at the installation. The BCE initiates the ESPC process by contacting AFCEC/CND to request support in developing and implementing the project.

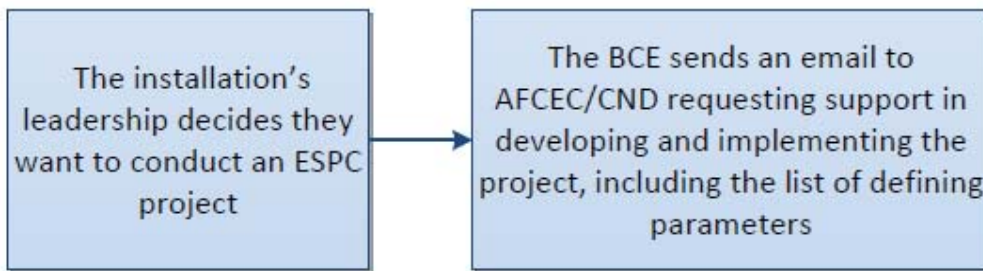


Figure 1 Installation Process Map

#### Step 1: The installation's leadership decides they want to conduct an ESPC project.

The BEM is the primary driver behind improving the installation's energy efficiency. Energy audits and REMs can assist BEMs to identify ESPC candidates and ECMs. Facility managers, process owners and operations staffs are good sources for ideas on improving their building's operational characteristics. The local staff often has the best understanding of what equipment is failing or not operating in a proper manner due to design defects, age, or other reasons. Refer to [ESPC Considerations for BEM](#) for information on the BEMs roles and responsibilities in the ESPC process.

When developing the ECM and facility list, the installation should be mindful that an ESCO's costs and overhead will be greater for widely scattered buildings than it will be for buildings clustered together. Ensure the building packages are structured to take maximum advantage of project economics. Include the less desirable projects with the more attractive projects and ensure the ESCO takes them as a package. The best economical ECMs subsidize the less economical work such as chiller and cooling tower replacement. In addition, the best economical ECMs can subsidize energy assurance or resilience ECMs. Note: not all of an installation's opportunities/projects lend themselves to ESPC project execution.



**Step 2: The BCE sends an email to AFCEC/CND requesting support in developing and implementing the project, including the list of defining parameters.**

Prior to formally engaging with an ESCO, an interaction that constitutes actual or perceived government obligation, the BEM/BCE prepares a summary of the type of ECMs being considered. Use the [Base Submittal Spreadsheet](#) job aid to help in preparing the ECM summary. This summary includes relevant baseline information and estimates of installation and individual facility energy usage. Submit the proposed ESPC projects to AFCEC/CND for vetting. Refer to Table 3 below for a general list of approved ESPC energy improvement project categories.

ESPCs are used where they make good business sense and when necessary to achieve energy goals. AFCEC/CND approves each stage of the project development and evaluation process and assists in awarding and administering the TO.

APPROVED ESPC ENERGY IMPROVEMENT PROJECT CATEGORIES	
ESPC TECHNOLOGY CATEGORIES	ASSOCIATED ECMs
1. Boiler Improvements - ECMs such as, but not limited to:	Boiler control, including new controls and retrofits to existing controls
	Replacement of existing boilers with high efficiency boilers
	Boiler decentralization
2. Chiller Improvements - ECMs such as, but not limited to:	Chiller retrofits or replacements
	Chiller plant pumping, piping, and controls retrofits and replacements
	Replacement of ice/refrigeration equipment with high efficiency units
3. Utility Monitoring Control Systems - ECMs such as, but not limited to:	Metering systems
	Digital control systems
	Monitoring systems
4. Heating, Ventilating, and Air-Conditioning (HVAC) (Not including Boilers, Chillers, and Utility Control Systems) - ECMs such as, but not limited to:	Packaged air conditioning unit replacements
	HVAC damper and controller repair or replacement
	Window air conditioning replacement with high efficiency units
	Cooling tower retrofits or replacements
	Economizer installation
	Fans and pump replacement or impeller trimming
	Thermal energy storage
Variable air volume retrofit	
5. Lighting Improvements* - ECMs such as, but not limited to:	Interior and exterior lighting retrofits and replacements
	Intelligent lighting controls
	Occupancy sensors
6. Building Envelope Modifications - ECMs such as, but not limited to:	Insulation installation
	Weatherization
	Window replacement
	Reflective solar window tinting
7. Water and Steam Distribution Systems - ECMs such as, but not limited to:	Piping insulation installation
	Hot water heater repair and replacement
	Steam trap repair and replacement
	Repair or replacement of existing condensate return systems and installation of new condensate return systems
8. Electric Motors and Drives - ECMs such as, but not limited to:	Motor replacement with high efficiency motors
	Variable speed motors or drives
9. Distributed Generation - ECMs such as, but not limited to:	Cogeneration systems installation
	Micro turbines installation
	Fuel cells installation



ESPC TECHNOLOGY CATEGORIES	ASSOCIATED ECMs
10. Renewable Energy Systems - ECMs such as, but not limited to:	Photovoltaic system installation
	Solar hot water system installation
	Solar ventilation preheating system installation
	Wind energy system installation
	Passive solar heating installation
	Landfill gas, waste water treatment plant digester gas, and coalbed methane power plant installation
	Wood waste and other organic waste stream heating or power plant installation
	Replacement of air conditioning and heating units with ground coupled heat pump systems
11. Energy/Utility Distribution Systems - ECMs such as, but not limited to:	Transformers installation
	Power quality upgrades
	Power factor correction
	Gas distribution systems installation
12. Water and Sewer Conservation Systems - ECMs such as, but not limited to:	Low-flow faucets and showerheads
	Low-flow plumbing equipment
	Water efficient irrigation
	On-site sewer treatment systems
13. Electrical Peak Shaving/Load Shifting - ECMs such as, but not limited to:	Thermal energy storage
	Battery energy storage system
	Gas cooling
14. Commissioning - ECMs such as, but not limited to:	Retro-commissioning services
	Continuous commissioning services
15. Requirements Ancillary to Energy Measure - Work efforts such as, but not limited to:	Envelope modification or improvements
	Interior modifications or improvements
	Electrical modification or improvements
	Plumbing modifications or improvements
	Protective housings for ECMs
16. Miscellaneous - ECMs such as, but not limited to:	Production and/or manufacturing improvements
	Recycling and other waste stream reductions
	Industrial process improvement
	Replace air-cooled ice/refrigeration equipment
	Replace refrigerators
	De-lamp vending machines
	Plug timers
	Energy Star® products
Project Development Costs if separated	

**Table 3 Approved ESPC Energy Improvement Project Categories**

\*Note: Refer to [UFC 3-530-01 Change 3 on TLED Requirements](#) for more information in lighting requirements.

Note: Refer to [ESPC Technology Categories and Associated ECMs](#) for HNC, DLA or 772 executed ESPC projects.



## 4.2 AFCEC/CND

AFCEC/CND is responsible for assisting the installation with the ESPC process.

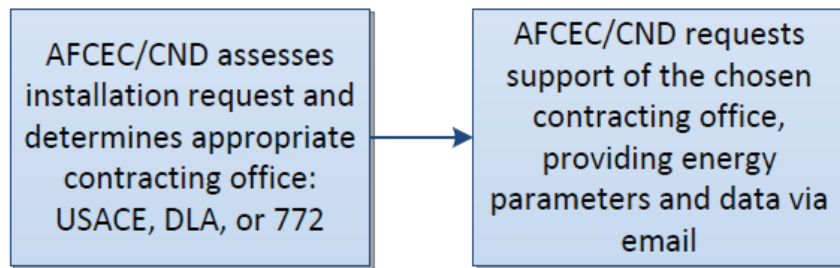


Figure 2 AFCEC/CND Process Map

### **Step 3: AFCEC/CND assesses the installation’s request and determines the appropriate contracting office: HNC, DLA Energy or 772 ESS.**

AFCEC/CND and the BCE form the Energy Team, which consists of various AFCEC/CND members, CEs, the Judge Advocate (JA), customers, and the PF (assigned by AFCEC/CND). The Energy Team assesses the proposed energy conservation opportunities to determine if an ESPC is the appropriate tool for the installation’s proposed project. If yes, AFCEC/CND coordinates with the DoE FFS to access the DoE ESPC contract.

The Energy Team coordinates the date and time for an onsite meeting or teleconference with the installation, AFCEC/CND, and the PF to explore opportunities, develop ESCO selection criteria, and acquisition strategies.

### **Step 4: AFCEC/CND requests support of the chosen contracting office, providing energy parameters and data via email.**

The Energy Team develops a site data package and provides it to the chosen contracting office via email. The site data package includes general site data such as building type (e.g., hangar, classrooms, offices); square footage; building schedule; utility rates; and specific requirements (e.g., temperature, lighting level, humidity controls).



### 4.3 Contracting Processes

AFCEC/CND chooses from the following contracting offices to complete the ESCO selection TO award process: DLA Energy, HNC or 772 ESS. The following sub-sections walk through the steps each contracting office completes in order to award the TO for the ESPC project.

#### 4.3.1 DLA Energy Contracting Process

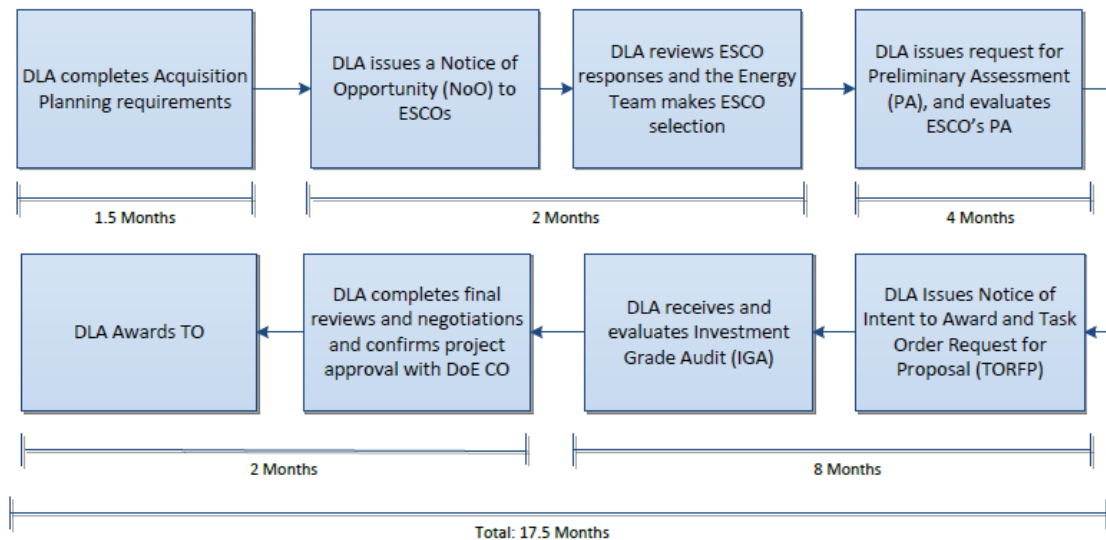


Figure 3 DLA Energy Process Map

#### Step 5: DLA Energy completes the acquisition planning requirements.

Based on information obtained during meetings with the installation and stakeholders, DLA Energy and the PF discuss the installations requirements and preferences which allows them to determine the appropriate solicitation method and evaluation criteria. After developing the NoO and Acquisition Plan documents, the CO submits them to their policy and legal departments for approval.

#### Step 6: DLA Energy issues a NoO to the ESCOs.

DLA Energy CO issues the approved NoO for ESCO review and response. The ESCOs have 30 days to respond to the NoO with the appropriate response and documents. The installation and AFCEC are engaged during the NoO period. The ESCOs commonly submit Requests for Information (RFI) regarding the NoO. These RFIs need to be responded to by the government prior to the ESCO's response submission.

#### Step 7: DLA Energy reviews ESCO responses and the Energy Team makes an ESCO selection.

The CO does a responsiveness and responsibility check for each offeror and convenes the evaluation team for their evaluation, which includes independent write-ups by team members. The Energy Team reviews the evaluations provides a combined rating to the CO. All issues are resolved through technical evaluation. The CO prepares the decision document. The CO completes the selection process, which includes a review period prior to completion, and issues unsuccessful letters to offerors not selected.



**Step 8: DLA Energy issues the request for the PA and evaluates ESCO's PA.**

DLA Energy issues a letter to the selected ESCO to begin the PA. After receipt of the PA request, a kickoff meeting is held to establish the ground rules and objectives between the ESCO and the installation. On average, the ESCO has 60 calendar days to complete the PA; which is dependent upon receipt of requested data from the AF. Once the PA is received, the CO convenes the review team. The review team conducts the PA review; the CO consolidates their comments and provides them to the ESCO. The ESCO is given a date to have each comment addressed. Once comments are addressed by the ESCO, then DLA Energy and AF determine if they will proceed and which ECMs will be pursued.

Note: The agency will not be liable for any costs associated with PA audits or preparation of the PA unless the project addressed by the PA later becomes a TO award.

**Step 9: DLA Energy issues a Notice of Intent to Award (NOITA) and the TO-RFP.**

DLA Energy hosts the IGA kickoff meeting, which is held shortly after issuance of the NOITA; all concerned parties attend. At the time of the NOITA, the DLA Energy will start the development of the TO-RFP and will request information from the installation and AFCEC. The required information is not part of the standard IDIQ, but contains AF and installation specific requirements and restrictions. Use the [PA/IGA Kickoff Checklist](#) job aid to assist with the PA and IGA steps. Refer to the [IGA Review Checklist](#) and the [PA Review Checklist](#) for guidance.

**Step 10: DLA Energy receives and evaluates the IGA.**

Once DLA Energy receives the IGA, a technical review is completed, comments are shared and the pricing team begins their analysis. The entire IGA review team should have all comments returned to the CO within 21 days. Each team member is responsible to research related reviews from operations engineers or mechanical engineers. The CO consolidates reviewers' comments and forwards them to the ESCO to address. The ESCO provides resolution to the comments. The Energy Team validates the proposed Life Cycle Cost Analysis. Once the CO closes all comments, the ESCO is advised to submit a clean IGA to move forward for approvals. Use the [PA/IGA Kickoff Checklist job aid](#) to assist with the PA and IGA steps. Refer to the [IGA Review Checklist](#) for guidance.

**Step 11: DLA Energy completes final reviews and negotiations and confirms project approval with the DoE CO.**

DLA Energy provides the final technical project to AF for approval. The DLA Energy review is a combination of pre-negotiations and the contract award review. It is done as one step due to the nature of an ESPC and is completed simultaneously with the AF approval process. If the Pre-negotiation Milestone (PNM) briefing is accomplished prior to AF approval, negotiations are held with the ESCO to close the cost, pending the receipt of AF project approval. No award is made until all approvals are rendered to the CO. The CO will finalize the final PNM.

**Step 12: DLA Energy awards the TO to the ESCO.**

DLA Energy submits the request for final pricing revisions and schedules based on negotiated settlement. The ESCO needs to revise the price proposal to match the negotiated amount and update the schedules. These should be delivered along with the



final IGA write up. The CO updates the award document, TO-RFP with negotiation revisions. Once this is complete, the ESCO is awarded the TO. Contract administration services are delegated to the DLA Energy ACO.

### 4.3.2 HNC Contracting Process

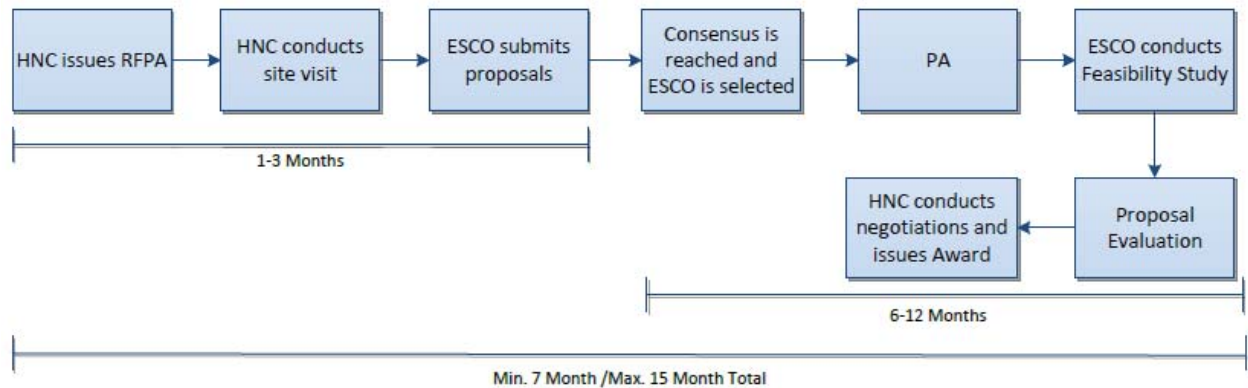


Figure 4 HNC Process Map

#### Step 5: HNC issues a Request for Preliminary Assessment (RFPA).

Once AFCEC/CND identifies HNC as the contracting agency, AFCEC/CND identifies funding for the HNC fee, and issues a “Go to Work” letter, the HNC develops the Acquisition Plan and the RFPA.

#### Step 6: HNC conducts a site visit.

The HNC conducts a kickoff meeting and training with the installation, AFCEC, and other necessary stake holders. A date is determined for the ESCO site walk as part of the RFPA process. The HNC utilizes this date to issue the RFPA and coordinates an onsite meeting with all Government parties and ESCOs. The RFPA consists of a limited number of facilities that the ESCO will address. Potential ECMs are identified.

#### Step 7: ESCOs submit their proposals.

ESCOs are competed through the evaluation of the best technical approach and experience using a broad scope of work. Upon the receipt of the ESCO responses to the RFPA, the submissions are evaluated by the selection panel, including the HNC and the customer. A consensus meeting is held with the installation, AFCEC, and Huntsville Corps (government personnel only) to select the ESCO. This is a streamlined process, which reduces the timeline and cost.

#### Step 8: Consensus is reached to select an ESCO to perform the ESPC work.

The Energy Team is assembled to reach consensus on a consolidated response for submission to HNC contracting. The HNC issues the Notice to Proceed (NTP) to the selected ESCO.

#### Step 9: The ESCO completes the PA.

The ESCO conducts a site survey to support the PA, and provides RFIs for collection of additional information. Once the RFIs are addressed, the ESCO submits the PA. The PA is reviewed by the installation, AFCEC, and HNC. Comments generated during the PA review are addressed by the ESCO. Once the ESCO has addressed the comments, a meeting is held to



discuss whether to proceed with the ESPC and which ECMs should be considered. The ECMs to be considered will form the basis of the IGA. Use the [PA/IGA Kickoff Checklist job aid](#) to assist with the PA and IGA steps. Refer to the [IGA Review Checklist](#) and the [PA Review Checklist](#) for guidance. Note: The agency will not be liable for any costs associated with PA audits or preparation of the PA unless the project addressed by the PA later becomes a TO award.

**Step 10: ESCO conducts a Feasibility Study (FS).**

The HNC requests the start of the FS. The ESCO conducts and submits their FS findings. The ESCO establishes protocols for baseline development and M&V. The Energy Team reviews the FS and submits comments to the ESCO. The installation determines which ECMs to pursue for the FS. This FS bundles rapid payback improvements with longer payback improvements to maximize the number of upgrade or modernization opportunities.

**Step 11: Proposal Evaluation.**

The ESCO submits their final proposal. The Energy Team conducts a proposal evaluation and issues comments to the ESCO.

**Step 12: HNC conducts negotiations and issues award.**

Once the comments are answered and the final proposal is submitted by the ESCO, the HNC approves the project, conducts contract negotiations, and awards the TO to the ESCO. HNC delegates contract administration services to the installation contracting office and provides the award and proposal documentation to the installation ACO.

**4.3.3 772 ESS Contracting Process**

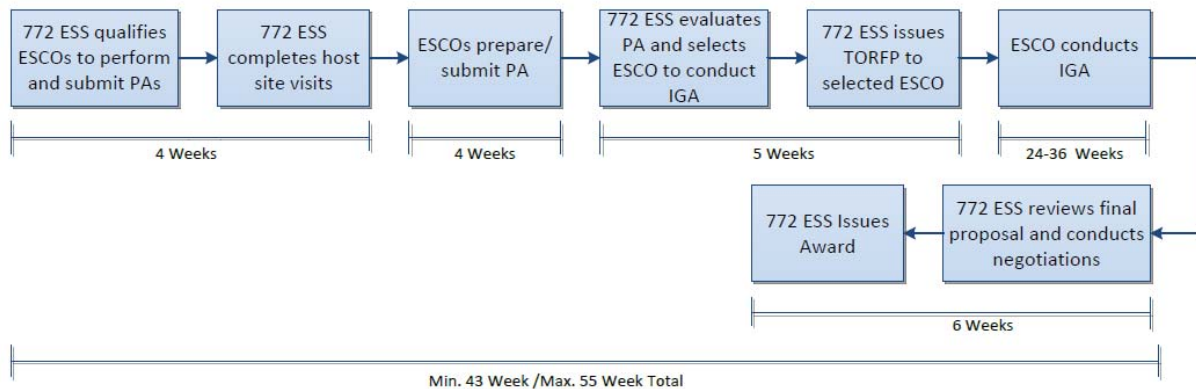


Figure 5 772 ESS Process Map

**Step 5: The 772 ESS CO qualifies the ESCOs to perform and submit PAs.**

The 772 ESS CO sends the NoO letter to the ESCOs. Interested ESCOs submit a qualification package in response to the NoO. The Energy Team reviews submitted qualification packages and select one or more ESCOs and have discussions about their qualifications. After the discussions, the CO provides the selected ESCOs a letter to conduct a PA that includes:

1. A statement of the requirements.
2. Disclosure of the significant factors and sub-factors used to evaluate proposals, including their relevant importance.
3. The date and time of a pre-proposal meeting and onsite visit.



4. The date for submission of proposals.
5. Attachments, as needed.

The CO provides a debriefing to any ESCO not selected to conduct the PA if requested in accordance with [Federal Acquisition Regulation \(FAR\) 15.505](#).

**Step 6: The 772 ESS CO completes host site visits.**

The installation CO and BEM or representative orchestrate the pre-proposal conference and onsite visit with interested ESCOs and address any questions.

**Step 7: ESCOs prepare and submit their PAs.**

The ESCOs conduct their PAs and submits them to the CO.

**Step 8: The 772 ESS CO and Energy Team evaluate the submitted PAs and select an ESCO to conduct an IGA.**

The CO provides the submitted PAs to the Energy Team, who evaluates the proposals solely against the factors and sub-factors identified in the NoO and selects one (or more if evaluated equally) ESCO to move forward with an IGA. The CO prepares written determination for selection and submits for internal review and approval. Once the reviews and approvals are completed, the CO notifies the unsuccessful ESCOs and conducts debriefings with these ESCOs when requested.

Note: The agency will not be liable for any costs associated with PA audits or preparation of the PA unless the project addressed by the PA later becomes a TO award.

**Step 9: The 772 ESS CO issues a TO-RFP to the selected ESCO.**

The CO drafts the NOITA letter and schedules a kickoff meeting with the selected ESCO. At the kickoff meeting, the CO issues the NOITA letter to the ESCO which authorizes the ESCO to commence an IGA. The Energy Team completes the AF/DoE TO-RFP and provides it to the selected ESCO. [The AF/DoE TO-RFP template](#) is provided by the PF and allows Federal agencies to modify Sections C through I of the basic DoE IDIQ contract to suit specific installation requirements; therefore, it should be provided to the ESCO as soon as possible after issuance of NOITA letter and commencement of the IGA.

**Step 10: ESCO conducts an IGA.**

The Energy Team and ESCO collaborate during the project development design phase to resolve any issues prior to submitting the final IGA proposal.

**Step 11: The 772 ESS CO reviews the final proposal and conducts negotiations.**

Upon submission of the final IGA proposal, the Energy Team reviews and provides the comments, as necessary, and the CO negotiates terms/conditions and/or costs if necessary. The ESCO provides a final proposal based on negotiations, including revisions and corrections as directed by the CO. Refer to the [IGA Review Checklist](#) for guidance.

**Step 12: The 772 ESS CO issues the award to the ESCO.**

The CO awards the TO and provides copies to AFCEC/CND. The CO delegates contract administration services to the installation contracting office and provides the award and proposal documentation to the installation ACO.



## Chapter 5 ESPC Post Award

This chapter explains the post award process, broken down into steps that are clear and easy to follow. The process map below assists in understanding the post award process.

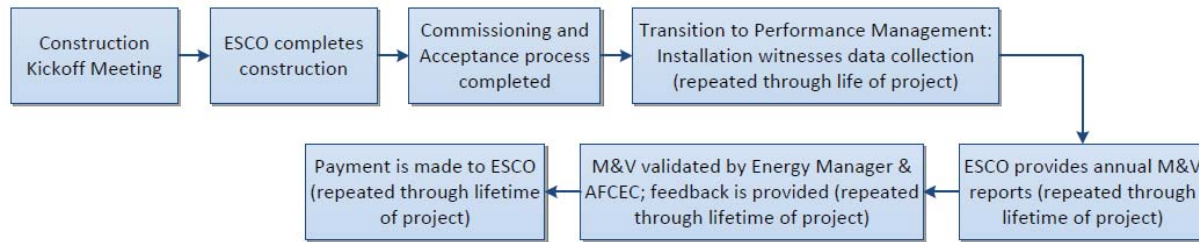


Figure 6 Post Award Process Map

### 5.1 Construction

#### Step 13: The ACO holds the construction kickoff meeting at the installation.

The ACO, COTRs, inspectors, ESCO project manager; and managers for design, construction, commissioning, M&V, and performance-period services meet to discuss and review the following for the construction phase:

- a. Roles and responsibilities
- b. Expectations
- c. Construction timelines
- d. Communication protocols
- e. Schedules for design
- f. Schedules for construction
- g. Protocols for site access
- h. Protocols for submittal review

The ACO issues a notice to proceed after the installation and project managers review the ESCO's designs, construction plans, and related submittals. The ESCO provides acceptable performance and payment bonds (as required) and insurance certificates.

#### Step 14: The ESCO completes the construction.

During the construction phase, the ACO, COTRs and inspectors are responsible for ensuring the ESCO is adhering to the agreed schedule and plans by:

- a. Monitoring the construction.
- b. Reviewing the ESCOs plan logs.
- c. Ensuring space access.
- d. Reviewing punch lists.
- e. Verifying proper ECM installation per TO requirements, design/installation plans, and approved submittals.



Follow the Contract Management Plan, which establishes continuity of contract administration as individuals come and go. If there are variances between design and as-built installation, the ESCO and agency identify and document the changes in the post-Installation report. Refer to the [COTR training](#) for more information.

**Step 15: Commissioning and acceptance process completed.**

Once construction is complete, the ACO commissions the project as long as the project meets design intent, per the directives of the TO. While construction is usually completed before acceptance, some checks after acceptance are required, such as summer performance of chillers installed in winter, and steam trap performance in winter.

Before providing acceptance of the project, ensure the following:

- a. ECMs are performing as specified.
- b. Required submittals are received.
- c. Acceptance checklist is noted with dates for each item, signed off by the COTR, and forwarded to the ACO.

Note: Partial or early acceptance of individual ECMs is common when they are producing savings prior to full project acceptance. Interest costs can be reduced by making payments based on savings from provisionally accepted ECMs before project acceptance. These implementation-period payments must be specified in Schedule Task Order 1, per the DOE IDIQ ESPC.

As part of the commissioning and acceptance process, the ESCO provides the following:

- a. As-built drawings
- b. Spare parts lists
- c. Manufacturer warranties
- d. ECM training materials
- e. O&M training materials, manuals, procedures
- f. Commissioning report
- g. Post-installation M&V report

## 5.2 Performance Management

The ACO is responsible for the ESCOs complying with its contractual responsibilities and ensuring guaranteed savings are achieved.

**Step 16: Transition to Performance Management: The Installation witnesses data collection (repeated through life of project).**

The installation's ACO provides support to the ESCO for the data collection process, including:

- a. Access to the buildings/locations
- b. Installation data per ESCO request
- c. Records (such as utility bills, maintenance data, and occupancy)



The ACO coordinates the ESCO site visit and schedules for M&V inspections/data collection, considering actual operating conditions and the availability of key personnel. The ACO designates a knowledgeable witness to accompany the ESCO during M&V activities. M&V activities focus on:

- a. Critical systems, such as Energy Monitoring and Control System (EMCS) set points, chiller/boiler performance tests
- b. ECMs generating the most energy/cost savings
- c. Sampling proper installation of ECMs such as lighting, motors, and variable frequency drives (VFDs)

Refer to the [Guide to Government Witnessing and Review of Post-Installation and annual M&V Activities](#) for M&V witnessing guidance.

**Step 17: The ESCO provides annual M&V reports (repeated through lifetime of project).**

The annual M&V report must be in accordance with the M&V plan in the awarded TO.

The ESCO:

1. Performs M&V activities per the M&V plan.
2. Produces the M&V report annually to the ACO.
3. Revises the M&V report, as requested by ACO.

**Step 18: M&V validated by BEM & AFCEC/CND; feedback is provided (repeated through lifetime of project).**

The ACO ensures prompt review of the ESCO's annual M&V report. These reports document whether all parties and the delivered energy and cost savings meet the TO requirements. Review of M&V report verifies that:

- a. The M&V plan was followed.
- b. The field-measured values were carried over to report.
- c. Calculations are correct and follow the M&V plan.
- d. Utility and escalation rates used to calculate cost savings are correct.
- e. The report provides all required information.
- f. Savings guaranteed were met.

If the M&V report shows savings shortfall, the ESCO is responsible for resolving ECM performance issues and proposing remediation options. Shortfall determinations are deducted from the next year's annual payment. AFCEC/CND is available to provide support for validation of the annual M&V report.

**Step 19: Payment is made to ESCO (repeated through lifetime of project).**

Invoices begin after the ACO has formally accepted the project. Invoices are annual and provided at the beginning of the performance year. The ACO is responsible for verifying that invoices contain any required documentation of services provided before paying the ESCO.



## Chapter 6 ESPC Business Practices

The following business practices help the installation implement an ESPC, translate the legislative requirements, and apply lessons learned to achieve a successful ESPC. Refer to [AFCEC M&V Requirements](#) for more information.

### 6.1 M&V Plan

The M&V plan is measurement-based, ensuring the AF's ability to confirm that actual energy savings are occurring and are verified in a reasonable, cost-effective manner. Refer to [ESPC M&V Best Practices for ESCOs](#) for more information on energy savings guidance. Using this plan annually guarantees the installed equipment is performing as predicted. A well-written M&V plan:

- a. Mitigates risk to the installation.
- b. Eliminates conflict when systems fail to meet their expected savings.
- c. Ensures the ESCO remains engaged with the installation over the full term of the contract.

Multiple building ECMs may be combined in one M&V plan, saving M&V costs on the project and simplifying the overall process. All M&V plans **at a minimum** must comply with both the latest version of [IPMVP](#) and the DoE M&V Guidelines: [Measurement and Verification for Performance-Based Contracts Version 4.0](#). The guidelines have the following M&V options:

- a. Option A: Retrofit Isolation uses key parameter measurements in conjunction with statistical sampling. This option can only be used with AF approval.
- b. Option B: Retrofit Isolation with Continuous Metering is used when synergistic energy impacts are fully mitigated.
- c. Option C: Whole Facility uses meters connected to the building to establish an accurate baseline and accurate post-implementation utility consumption profiles. This is the preferred option for most M&V efforts.
- d. Option D: Calibrated Simulation may not be used in any AF ESPC contract.

Refer to the [Overview of M&V Options](#) to view examples for each of the Options listed above.

### 6.2 Baseline Development

The ESCO documents the baseline data and ensures the data supports the baseline. The ESCO performs the metering and data collection and the installation verifies it to ensure the baseline reflects realistic energy consumption upon which the savings calculations are based. Data collection requirements vary by ECP and M&V method, but a minimum of 6 months' data is required for weather-impacted ECPs. Previously installed meters are used to collect this data. Refer to [ESPC M&V Best Practices for ESCOs](#) for more information on baseline development.

**Note:** It is extremely important that equipment controlled by ambient temperature devices has valid measurements. Savings validation as well as future baseline adjustments will require this accurate data before adjustments can be applied to the existing baseline.

Assumptions made in the PA report should be validated in the IGA by the ESCO. Validation includes documenting all pertinent data and formulas used to compute the energy savings so the BEM can easily explain these savings now or in the future. Baseline development and data collection begins immediately after the ESCO is selected to perform the IGA. The longer the data collection period,



the lower the risk to the installation and the ESCO, which minimizes cost. AFCEC/CND review and approval of the baseline is required.

### 6.3 Performance Tests

A performance test is a process for achieving, verifying, and documenting the performance of equipment installed or modified as part of an ECP. The performance test plan is developed as part of the IGA, prepared for each ECP and implemented after the TO award. Performance tests are completed during the construction phase to certify that all equipment is operating properly and the results are approved before conducting the energy savings verification tests. The performance test plan describes all aspects of the test process, including:

- a. Schedules
- b. Responsibilities
- c. Documentation requirements
- d. Functional performance test requirements

Functional performance tests describe the following:

- a. What conditions or loads the tests are to be performed
- b. Location of test sensors
- c. Type of test equipment
- d. Test methods
- e. Acceptable range of results

The level of detail depends on the complexity of the ECP. The performance testing plan is detailed so the installation knows exactly which tests will be performed prior to awarding the TO. After completing the performance tests, a final acceptance report is submitted for approval to the CO, ACO and BEM. The final acceptance report is submitted after all functional performance tests are completed and includes the following:

- a. Executive summary
- b. ECP description
- c. Performance plan
- d. Test results

The CO will approve the performance test results after coordination and verification of results by the BEM.

### 6.4 Energy Savings Validation

A formal set of test procedures with the acceptable range of results are developed to validate energy savings. These test procedures are submitted by the ESCO at IGA and approved before awarding the TO. The tests describe the following:

- a. Under what conditions or loads the tests are to be performed.
- b. Location of test sensors.



- c. Frequency of measurements.
- d. Type of test equipment.
- e. Test methods.
- f. Acceptable range of results.

Test procedures verify all energy savings guaranteed under the ECP/ECM. After the installation and AFCEC/CND approves the performance test results for each ECP, the ESCO will perform the approved energy savings test procedures to validate the energy savings for each ECP after TO award for each year of the performance period. Each ECP must have lifecycle cost effective on its own merits, unless specifically approved by AFCEC/CND. Once the validated energy savings are approved for all ECPs, the ESCO submits an invoice for payment the first full month after acceptance of the ECM.

## 6.5 Annual Reconciliation Plan (Audit of Savings)

Each ECP listed in the TO has a detailed annual reconciliation plan approved prior to the award of the TO. The plan includes:

- a. A formal set of test procedures.
- b. The acceptable range of results.
- c. The schedule of how reconciliation payments will be assessed if savings fall below the guarantee.
- d. A certification by the ESCO that all O&M requirements and conditions have been met for each ECP in the TO.

The test procedures are similar to those developed to validate energy savings. The purpose is to test, validate, and document the energy savings. The ACO must approve the annual reconciliation of savings after coordination and verification of savings by the BEM.

## 6.6 Maintenance Related to the TO

All maintenance is an ESCO responsibility and is performed by the ESCO for the TO term unless AFCEC/CND has provided in writing allowance for a deviation. The TO defines ESCO and installation maintenance responsibilities. In facilities and areas where ESCO and installation equipment operate, a clear line of demarcation is identified.

In simple cases (such as lighting) and only after approval by AFCEC, the installation may perform maintenance; however, the installation must carefully consider the consequences if it is unable to perform in accordance with the maintenance schedule. Since the ESCO is ultimately responsible, the ESCO determines if the government is meeting the TO requirements. If the installation fails to perform proper maintenance, the ESCO may take over the maintenance and charge the installation for performance. This requires modifying the TO, reworking the TO's financial provisions, and possibly extending the TO's term length or a buyout if the TO term cannot be extended. When the installation assumes maintenance, the ESCO provides a detailed maintenance schedule reflecting when, how often, and by whom the maintenance is to be performed, as detailed in the IGA report. Since all costs must be accounted for, the estimated cost of the ESCO performing the maintenance is captured in the proposal and reflected in the cost analysis, but may not be included as a cost to



the ECM. Additional costs are reflected in the cost analysis as a cost to the ECM if maintenance costs increase over pre-ECP levels.

## 6.7 Pricing of TO Work

The ESCO provides detailed supporting documentation to determine price reasonableness. ESCO estimates for each ECP identify all major costs including:

- a. Equipment
- b. Labor
- c. Design
- d. Maintenance
- e. Repair
- f. Parts
- g. Overhead and profit (OH&P)
- h. Travel
- i. M&V

The government should prepare an independent estimate. Contingencies are clearly identified and negotiated for each ECP. Contingency costs mitigate a project's risk, which is a factor in the profit negotiated. Refer to the [FAR 31.205-7, Contingencies](#) for additional information. Note: Contingency costs are generally not allowed.

- a. Ancillary savings, which are generally not allowed, are those not attributed to utility savings, such as manpower, materials, or eliminating contract-operated functions. Maintenance, repair, or operations costs for tasks currently being performed by the government or by a contractor hired by the government are ancillary savings if the ESCO assumes the tasks, reduces the tasks, or eliminates the tasks. Savings must be real and verifiable. The BEM determines whether an ESCO-proposed task elimination or reduction is considered an ancillary savings available for sharing. The government provides the dollar value of the ancillary savings.
- b. The final negotiated savings shall be applied to the ESPC contract. The cost of elimination contract-operated functions are not negotiated until after TO award. These costs are estimated and added into the TO.
- c. The ESCO may not represent the government to negotiate a lower utility rate in an ESPC project.

## 6.8 Equipment Ownership

Generally, the AF owns the equipment post-construction and must update real property records to show ownership of the ESCO-installed equipment. The ESCO is required to provide to the AF, prior to contract completion, O&M manuals for the equipment, as well as required maintenance training. However, due to taxes and/or rebates, occasionally the ESCO retains ownership post-construction. In either case, the ownership determination should be defined and agreed upon within the TO.



## 6.9 Infrastructure Privatization

Any utility system or family housing being considered for privatization should not be included in ESPC efforts. “Any utility system” is defined as infrastructure outside the 1.5-meter (5-foot) line of the using facility, and includes production and distribution assets. If it is necessary to include a utility system in the ECP, the installation obtains a written agreement with the ESCO for the new utility system’s owner to buy out that system if privatization takes place.

## 6.10 ESCO Quality Control

The AF requires ESCOs to provide consistency in ESCO submittals, such as the PA, IGA, and other related documents. Inaccurate or inconsistent information provided in submittals from ESCOs result in unnecessary extensions or delays in ESPC projects. ESCOs shall ensure they have the proper quality controls in place and must describe their quality assurance process within each ESCO submittal during the ESPC process. Refer to the [IGA Review Checklist](#) and the [PA Review Checklist](#) for guidance.



## Appendix A Acronym List

Acronym	Definition
ACO	Administrative Contracting Officer (Installation)
A-E	Architect-Engineering
AF	Air Force
AFCEC	Air Force Civil Engineer Center
AFIMSC	Air Force Installation and Mission Support Center
AFPD	Air Force Policy Directive
AMRS	Advanced Meter Reading System
ASHRAE	American Society of Heating, Refrigerating and Air-Conditioning Engineers
BCE	Base Civil Engineer
BEM	Base Energy Manager
BFM	Base Financial Manager
CE	Civil Engineer
CEAS	Comprehensive Energy Acquisition Strategy
CFR	Code of Federal Regulations
CO	Contracting Officer
COTR	Contracting Officer Technical Representative
DLA Energy	Defense Logistics Agency- Energy
DMAG	Depot Maintenance Area Group
DoD	Department of Defense
DoE	Department of Energy
EO	Executive Order
ECIP	Energy Conservation Investment Program
ECM	Energy Conservation Measures
ECP	Energy Conservation Project
EEAP	Energy Engineering Analysis Program
EEIC	Element of Expense Identification Code
EERC	Energy Escalation Rate Calculator
EISA	Energy Independence and Security Act
EMCS	Energy Monitoring and Control System
ESCO	Energy Services Company
ESPC	Energy Savings Performance Contract
ESS	Enterprise Sourcing Squadron
ETL	Engineering Technical Letter
EVO	Efficiency Valuation Organization
FAR	Federal Acquisition Regulation
FEMP	Federal Energy Management Program
FFS	Federal Financing Specialist
FS	Feasibility Study
HNC	Huntsville Engineering and Support Center
HVAC	Heating, Ventilation, and Air-Conditioning
IDIQ	Indefinite Delivery/Indefinite Quantity
IGA	Investment Grade Audit for DOE contracts
IPL	Integrated Process List
IPMVP	International Performance Measurement and Verification Protocol
JA	Judge Advocate
M&V	Measurement and Verification
MFH	Military Family Housing
MILCON	Military Construction
NAF	Non-Appropriated Funds
NIST	National Institute of Standards and Technology
NOITA	Notice of Intent to Award
NoO	Notice of Opportunity



Acronym	Definition
NTP	Notice to Proceed
O&M	Operations and Maintenance
PA	Preliminary Assessment
PF	Project Facilitator
PMO	Project Management Office
PNM	Pre-negotiation Milestone
POC	Point of Contact
POM	Program Objective Memorandum
RDT&E	Research, Development, Test and Evaluation
REM	Resource Efficiency Manager
RFI	Request for Information
RFPA	Request for Preliminary Assessment
RFP	Request for Proposal
RPIE	Real Property Installed Equipment
SIA	Sustainment Infrastructure Assessment
SME	Subject Matter Expert
SRM	Sustainment, Restoration and Modernization
TC	Technology Categories
TO	Task Order
TO-RFP	Task Order- Request for Proposal
U.S.C.	United States Code
USACE	United States Army Corps of Engineers
VFD	Variable Frequency Drive



## Appendix B References and Master List of Links

Section	Type	Name of Item Linked	Link
Chapter 1	Internal	ETL 13-13	<a href="https://www.wbdg.org/FFC/AF/AFETL/etl_13_13.pdf">https://www.wbdg.org/FFC/AF/AFETL/etl_13_13.pdf</a>
Chapter 2	Bookmark	Section 4.1	Bookmarked to Chapter 4 ESPC Process, Section 4.1 ESPC Initiation
Chapter 2	External	AFPD 32-10, <i>Installations and Facilities</i>	<a href="http://static.e-publishing.af.mil/production/1/af_a4_7/publication/afpd32-10/afpd32-10.pdf">http://static.e-publishing.af.mil/production/1/af_a4_7/publication/afpd32-10/afpd32-10.pdf</a>
Chapter 2	External	Title 42, U.S.C., Section 8287, <i>National Energy Conservation Policy Act</i>	<a href="https://www.gpo.gov/fdsys/pkg/USCODE-2010-title42/pdf/USCODE-2010-title42-chap91-subchapVII-sec8287.pdf">https://www.gpo.gov/fdsys/pkg/USCODE-2010-title42/pdf/USCODE-2010-title42-chap91-subchapVII-sec8287.pdf</a>
Chapter 2	External	10 U.S.C. 2911-13, <i>Energy Performance Goals and Plans for Department of Defense</i>	<a href="https://www.gpo.gov/fdsys/pkg/USCODE-2010-title10/pdf/USCODE-2010-title10-subtitleA-partIV-chap173-subchapl-sec2911.pdf">https://www.gpo.gov/fdsys/pkg/USCODE-2010-title10/pdf/USCODE-2010-title10-subtitleA-partIV-chap173-subchapl-sec2911.pdf</a>
Chapter 2	External	42 U.S.C. 8253, <i>Energy Policy Act of 1992</i>	<a href="http://uscode.house.gov/view.xhtml?req=(title:42%20section:8253%20edition:prelim)">http://uscode.house.gov/view.xhtml?req=(title:42%20section:8253%20edition:prelim)</a>
Chapter 2	External	E.O. 13423, <i>Strengthening Federal Environmental, Energy, and Transportation Management</i>	<a href="https://www.fedcenter.gov/programs/eo13423/">https://www.fedcenter.gov/programs/eo13423/</a>
Chapter 2	External	E.O. 13693, <i>Planning for Federal Sustainability in the Next Decade</i>	<a href="https://energy.gov/lm/downloads/executive-order-13693-planning-federal-sustainability-next-decade">https://energy.gov/lm/downloads/executive-order-13693-planning-federal-sustainability-next-decade</a>
Chapter 2	External	E.O. 13514, <i>Federal Leadership in Environmental, Energy, and Economic Performance</i>	<a href="https://www.fedcenter.gov/programs/eo13514/">https://www.fedcenter.gov/programs/eo13514/</a>
Chapter 2	External	Energy Policy Act of 2005	<a href="https://www.gpo.gov/fdsys/pkg/PLAW-109publ58/pdf/PLAW-109publ58.pdf">https://www.gpo.gov/fdsys/pkg/PLAW-109publ58/pdf/PLAW-109publ58.pdf</a>
Chapter 2	External	10 CFR 436, <i>Federal Energy Management and Planning Programs</i>	<a href="https://www.gpo.gov/fdsys/granule/CFR-1999-title10-vol3/CFR-1999-title10-vol3-part436">https://www.gpo.gov/fdsys/granule/CFR-1999-title10-vol3/CFR-1999-title10-vol3-part436</a>
Chapter 2	External	EISA of 2007	<a href="https://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf">https://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf</a>
Chapter 2	Internal	DoE letter to ESCOs	<a href="https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/DoE_Letter%20to%20ESCOs_Final.pdf?Web=1">https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/DoE_Letter%20to%20ESCOs_Final.pdf?Web=1</a>
Chapter 2, ESPC Escalation Rate Guidance	External	Energy Escalation Rate Calculator (EERC)	<a href="http://www.energy.gov/eere/femp/energy-escalation-rate-calculator-download">http://www.energy.gov/eere/femp/energy-escalation-rate-calculator-download</a> (use most current version)
Chapter 2	External	Energy Price Indices and Discount Factors for Life-Cycle Cost Analysis – 2016 Annual Supplement to NIST Handbook 135	<a href="https://www.nist.gov/publications/energy-price-indices-and-discount-factors-life-cycle-cost-analysis-150-2016-annual">https://www.nist.gov/publications/energy-price-indices-and-discount-factors-life-cycle-cost-analysis-150-2016-annual</a>
Chapter 2	Internal	Escalation Rate Guidance	<a href="https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/AFCEC%20Escalation%20Rate%20Guidance_Final.docx">https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/AFCEC%20Escalation%20Rate%20Guidance_Final.docx</a>
Chapter 2	External	Section 8287a of 42 U.S.C. 8287	<a href="http://uscode.house.gov/view.xhtml?req=(title:42%20section:8287a%20edition:prelim)">http://uscode.house.gov/view.xhtml?req=(title:42%20section:8287a%20edition:prelim)</a>
Chapter 2	Bookmark	Option C	Bookmarked to Chapter 6 ESPC Business Practices, 6.1 M&V Plan.
Chapter 2	External	Paragraph (a)(2)(A) of 42 U.S.C. 8287	<a href="https://www.law.cornell.edu/uscode/text/42/8287">https://www.law.cornell.edu/uscode/text/42/8287</a>



Section	Type	Name of Item Linked	Link
Chapter 3	Internal	2013 Memorandum	<a href="https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/23%20Oct%202013%20Policy%20Memorandum.docx">https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/23%20Oct%202013%20Policy%20Memorandum.docx</a>
Chapter 3	Internal	2010 ESPC Policy Letter	<a href="https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/2010-10-04%20Updated%20ESPC%20and%20UESC%20Policy%20Ltr.pdf?Web=1">https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/2010-10-04%20Updated%20ESPC%20and%20UESC%20Policy%20Ltr.pdf?Web=1</a>
Chapter 3	Internal	eDash	<a href="https://cs.eis.af.mil/sites/10040/WPP/HomePage/Home.aspx">https://cs.eis.af.mil/sites/10040/WPP/HomePage/Home.aspx</a>
Chapter 3, 4, 6	Internal	IGA Review Checklist	<a href="https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/IGA%20review%20checklist_Final.pdf?Web=1">https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/IGA%20review%20checklist_Final.pdf?Web=1</a>
Chapter 3, 4, 6	Internal	PA Review Checklist	<a href="https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/PA%20review%20checklist_Final.pdf?Web=1">https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/PA%20review%20checklist_Final.pdf?Web=1</a>
Chapter 3	Bookmark	FEMP Support Services	Bookmarked to FEMP Support Services
Chapter 3	External	FEMP ESPC Project Development Guide	<a href="https://energy.gov/eere/femp/downloads/femp-espcc-project-development-resource-guide">https://energy.gov/eere/femp/downloads/femp-espcc-project-development-resource-guide</a>
Chapter 3	External	FEMP web page	<a href="https://www4.eere.energy.gov/femp/training/">https://www4.eere.energy.gov/femp/training/</a>
Chapter 4	Internal	ESPC Engagement Guidance	<a href="https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/Reference_3%20ESPC%20%20Engagement%20Guidance_Final.docx">https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/Reference_3%20ESPC%20%20Engagement%20Guidance_Final.docx</a>
Chapter 4	Internal	ESPC Considerations for BEM	<a href="https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/ESPC_Considerations%20for%20BEM_Final.docx">https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/ESPC_Considerations%20for%20BEM_Final.docx</a>
Chapter 4	Bookmark	Base Submittal Spreadsheet	Bookmarked to Appendix C, AFB Blank Building Data Sheet
Chapter 4	Internal	UFC 3-530-01 Change 3 on TLED Requirements	<a href="https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/UFC%203-530-01%20Change%203%20on%20TLED%20Requirements_Final.docx">https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/UFC%203-530-01%20Change%203%20on%20TLED%20Requirements_Final.docx</a>
Chapter 4	Internal	ESPC Technology Categories and Associated ECMs	<a href="https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/ESPC%20Technology%20Categories%20and%20Associated%20ECMs_Final.docx">https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/ESPC%20Technology%20Categories%20and%20Associated%20ECMs_Final.docx</a>
Chapter 4	Bookmark	PA/IGA Kickoff Checklist job aid	Bookmarked to Appendix C, PA/IGA Kickoff Checklist
Chapter 4	External	Federal Acquisition Regulation (FAR) 15.505.	<a href="https://www.acquisition.gov/far/current/html/Subpart%2015_5.html">https://www.acquisition.gov/far/current/html/Subpart%2015_5.html</a>
Chapter 4	External	The AF/DoE TO-RFP template	<a href="https://energy.gov/eere/femp/downloads/doe-espcc-task-order-request-proposal-rfp-template">https://energy.gov/eere/femp/downloads/doe-espcc-task-order-request-proposal-rfp-template</a>
Chapter 5	Internal	COTR training	<a href="https://afcec-portal.lackland.af.mil/cp/cpe/SitePages/772%20COR%20Training.aspx">https://afcec-portal.lackland.af.mil/cp/cpe/SitePages/772%20COR%20Training.aspx</a>
Chapter 5	External	Guide to Government Witnessing and Review of Post-Installation and Annual M&V Activities	<a href="https://www.energy.gov/eere/femp/downloads/guide-government-witnessing-and-review-measurement-and-verification-activities">https://www.energy.gov/eere/femp/downloads/guide-government-witnessing-and-review-measurement-and-verification-activities</a>
Chapter 6	Internal	AFCEC M&V Requirements	<a href="https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/AFCEC%20M%20and%20V%20Requirements_Final.docx">https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/AFCEC%20M%20and%20V%20Requirements_Final.docx</a>
Chapter 6	Internal	IPMVP	<a href="https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/IPMVP_instructions_Final.docx">https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/IPMVP_instructions_Final.docx</a>
Chapter 6	External	Measurement and Verification for Performance-Based Contracts Version 4.0.	<a href="https://energy.gov/sites/prod/files/2016/01/f28/mv_guide_4_0.pdf">https://energy.gov/sites/prod/files/2016/01/f28/mv_guide_4_0.pdf</a>
Chapter 6	External	Overview of M&V Options	<a href="https://energy.gov/sites/prod/files/2016/01/f28/mv_guide_4_0.pdf#page=22">https://energy.gov/sites/prod/files/2016/01/f28/mv_guide_4_0.pdf#page=22</a>
Chapter 6	Internal	ESPC M&V Best Practices for ESCOs	<a href="https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/MV%20Best%20Practices_Final.docx">https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/MV%20Best%20Practices_Final.docx</a>
Chapter 6	External	FAR 31.205-7, Contingencies	<a href="https://www.acquisition.gov/sites/default/files/current/far/html/Subpart%2031_2.html">https://www.acquisition.gov/sites/default/files/current/far/html/Subpart%2031_2.html</a>
ESPC Considerations for BEM	External	ENERGY STAR	<a href="https://www.energystar.gov">https://www.energystar.gov</a>
Instructions to Access IPMVP	External	Efficiency Valuation Organization	<a href="http://evo-world.org/en/subscribe-join-en">http://evo-world.org/en/subscribe-join-en</a>

## Appendix C Job Aids

### FEMP Support Services

FEMP Services List				
Statement of Work - Optional Service Offerings for Contractor-Identified Project				
Phase Two - Initial Project Development				
Task #	Task Title	Work Scope	Deliverable	Agency Requirements
Replace Std Task# 2-1	DO RFP Development - On Site Consultation	FEMP Services will provide technical consultation resources at the Agency's site to assist in the integration of the site's requirements into the DO RFP template.	Oral Comments	Agency staff will draft DO RFP. Provide copies to FEMP Services staff for review.
Phase Three - Negotiations and Award				
Replace Std Task# 3-4	Final Proposal Review - Direct Support	FEMP Services will provide direct technical resources to review final proposal. Review will include assessment of ESPC-unique data such as markups, performance period expenses, and financing interest rates. FEMP Services will assure that price schedules have been filled out correctly. ESCO specified equipment will be evaluated for its appropriateness and installation expense (labor and material). FEMP Services will coordinate and assemble agency and FEMP Services questions and issues for Agency CO to be presented to ESCO for discussions and negotiations.	Telecon Advice and Written comments and Recommendations	Agency will provide FEMP Services staff copies of final proposal with emphasis on selected equipment compatibility with agency performance requirements. Agency shall ensure applicable acquisition team members review final proposal. Agency will generate site questions or issues prior to scheduled telecons with FEMP Services staff. Agency will review questions and issues for ESCO discussions. Agency CO will submit questions and issues to ESCO.



Phase Four - Implementing the Delivery Order				
Task #	Task Title	Work Scope	Deliverable	Agency Requirements
<b>Insert after Std Task# 4-1</b>	Design & Construction Package Review - Consultation Support	FEMP Services will provide consultation and technical review advice to support Agency review of Design & Construction Packages, submittals, shop and working drawings, manufactures data, planned service interruptions, permit acquisition plan and installation schedules for compliance, feasibility, consistency and reasonableness.	Telecon Advice and/or Written Comments/ Recommendations	Agency will review all contractor submittals and generate comments, questions and issues for FEMP Services consultation and advice. Provide copies of Agency comments, questions, issues, and applicable portions of submittals. Coordinate telecons with FEMP Services and Agency acquisition team. Submit Agency recommendations to ESCO for action.
<b>Insert after Std Task# 4-1</b>	Design & Construction Package Review - Direct Support	FEMP Services will provide direct on-site technical resources necessary to inspect and accept the installed ECMs. FEMP Services will assist Agency with development and monitoring of punch list items through completion/acceptance .	Telecon Advice and Design & Construction Package Review Report(s)	Agency will provide FEMP Services a set of Agency design/construction standards. Agency will review the Design & Construction Package Review Report(s) for concurrence. Agency provide copies of ESCO responses to Design & Construction Package review comments. Agency to submit notice to proceed to ESCO..
<b>Insert before Std Task# 4-2</b>	Project Construction Installation Commissioning - Consultation Support	FEMP Services shall provide telecon consultation support to assist Agency in QA verification for compliance w/installation plan(s), including monitor/inspect installation and start-up activities.	Written Comments/ Recommendations	Agency staff will verify that commissioning activities are conducted and are acceptable per contract requirements.
<b>Insert before Std Task# 4-2</b>	Project Construction Installation Commissioning - Consultation Support	FEMP Services shall provide telecon consultation support to assist Agency in QA verification for compliance w/installation plan(s), including monitor/inspect installation and start-up activities.	Written Comments/ Recommendations	Agency staff will verify that commissioning activities are conducted and are acceptable per contract requirements.



Task #	Task Title	Work Scope	Deliverable	Agency Requirements
<b>Insert before Std Task# 4-2</b>	Project Construction Installation Commissioning - Direct Support	FEMP Services will provide direct technical resources necessary to perform QA verification for compliance with/ installation plans. FEMP Services services may include acting as the commissioning agent and providing commissioning services consistent with the DOE/GSA commissioning guide.	Project Commissioning Report	Agency staff will facilitate access to the site(s) for FEMP Services staff. Agency staff will review the Project Commissioning Report.
<b>Insert before Std Task# 4-2</b>	Compliance with Inspection and Acceptance Plan - Direct Support	FEMP Services will provide direct on-site technical resources necessary to inspect and accept the installed ECMs. FEMP Services will assist Agency with development and monitoring of punch list items through completion/acceptance .	Installation/ Acceptance Report; Punch Lists	Agency will provide FEMP Services a set of Agency design/construction standards. Agency will provide inspection scheduling information and site access, and will act on recommendations to direct ESCO to correct any defects found and sign off on all acceptable work
<b>Insert before Std Task# 4-3</b>	Provide or Assist with Data Acquisition	FEMP Services will provide assistance M&V data collection consistent with the M&V plan. Activities may include metering and performance parameters in support of the M&V plan and /or review of M&V activities and services by others.	Data Collection Logs	Agency will collect data in support of the M&V plan and/or review the data collection activities of the ESCO. Agency will generate comments and/or questions for FEMP Services technical advice.
<b>Insert before Std Task# 4-3</b>	Provide or Assist with Data Reduction & Analysis	FEMP Services will provide assistance with M&V data analysis consistent with the M&V plan. Activities may include calculations, simulations and/or review of M&V activities and services by others.	Summary Findings and Recommendations Report/M&V Performance Report	Agency will compile and review data collected in support of the M&V plan and generate any comments and/or question for FEMP Services technical advice. Agency will review all reports generated for concurrence.



Task #	Task Title	Work Scope	Deliverable	Agency Requirements
<b>Insert after Std Task# 4-3</b>	Assist in Negotiation of Baseline Adjustments	FEMP Services will assist with the development of strategies for making baseline adjustments. Provide technical advice to account for changes in operations, etc affecting baseline(s) over time and assist Agency with negotiations with vendor for baseline adjustment.	Telecon Advice and/or Written Comments/ Recommendations	Agency will facilitate negotiations with ESCO during reconciliation of baseline. Agency will review any proposed changes to the baseline and generate comments and/or questions for FEMP Services technical advice.
<b>Insert after Std Task# 4-3</b>	Provide Project 1st year Performance Results presentation to Agency Management and Staff	FEMP Services will coordinate with Agency Acquisition Team & ESCO to provide "Project 1st Year Performance Results" presentation and discuss Agency/ESCO activities to maintain persistence of ESPC project performance beyond year 1.	On-site Presentation with ESCO & Designated Agency Acquisition Team Members; Provide Agenda and Agency Requested Copies of Presentation	Agency will coordinate facility and date with FEMP Services, ESCO and agency staff and notify invited Agency Management and staff to attend presentation.
<b>Travel</b>				
Task #	Task Title	Work Scope	Agency Requirements	
<b>Insert after Std Travel 3-3 Label "4-2"</b>	Travel to Site for Std task 4-2	On Site Support for Project Acceptance Discussion of Findings and Recommendations	Agency coordinate agency staff for FEMP Services presentation of Project Acceptance Recommendations. Agency provides at least 2-weeks notice for best airfare.	
<b>Insert after Std Travel 3-3 Label "4-2"</b>	Travel to site for Project Results Presentation	On Site Support for "Project 1st Year Performance Results" presentation with Agency and ESCO	Agency coordinate agency staff for "Project 1st Year Performance Results" presentation. Agency provides at least 2 weeks' notice for best airfare.	



## PA/IGA Kickoff Checklist

### PA/IGA Kickoff Checklist

PA/IGA Kickoff Checklist		
<b>Responsibilities</b>	<b>Installation</b>	<input type="checkbox"/> Introduction <input type="checkbox"/> Overview of installation mission and facility operation. <input type="checkbox"/> High level description of special needs and/or desires for scope and operations. <input type="checkbox"/> Review of Installation projects on the FY and FY+1 IPL (integrated process list)
	<b>Contracting Officer</b>	<input type="checkbox"/> Ensures agenda covers all required topics <input type="checkbox"/> Establishes initial meeting dates <input type="checkbox"/> Establishes communication protocols to include frequency and method of communication <input type="checkbox"/> Approves all proposed contractual actions
	<b>ESCO</b>	<input type="checkbox"/> Agenda <ul style="list-style-type: none"> <li>○ Describe expectations on ECMs to be investigated and developed.</li> <li>○ Describe the detailed plan to return and complete audit.</li> <li>○ Explain the process and order in which elements of the project will be completed and sent for Government review, coordination, and approval.</li> </ul> <input type="checkbox"/> Schedule <input type="checkbox"/> Timeline <input type="checkbox"/> Baseline development <input type="checkbox"/> Data Collection <input type="checkbox"/> Operations and Maintenance
	<b>AFCEC</b>	<input type="checkbox"/> Roles & Responsibilities <input type="checkbox"/> Escalation determination process <input type="checkbox"/> M&V expectations <input type="checkbox"/> SME contact info <input type="checkbox"/> This Playbook <input type="checkbox"/> Coordination of meter installations with AMRS
	<b>All Parties Involved</b>	<input type="checkbox"/> Conduct site visit and/or discuss data



## AFB Blank Building Data Sheet



Blank AFB Bldg  
Data.xlsx

**Link to Blank AFB Bldg Data Sheet:**

<https://cs2.eis.af.mil/sites/10041/CEPlaybooks/ESPC/References/Worksheet%20in%20Consolidated%20ESPC%20Playbook.xlsx>