FROM: AFCEC/DD
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2. Summary of Revisions. This ETL is substantially revised and must be completely reviewed.

3. Application. Requirements in this ETL are mandatory. Any deviations require written approval from the ESPC program manager, AFCEC/CND. This ETL applies to all ESPC work.


   3.2. Effective Date: Immediately.

   3.3. Intended Users: Major command (MAJCOM) civil engineers (CE), base civil engineers (BCE), base energy managers, base financial managers, and base contracting officers (CO).

   3.4. Coordination: MAJCOM CE energy managers.

4. Referenced Publications.

Note: For more information on ESPCs, visit the AFCEC Facility Energy/Utility Program Community of Practice (CoP):
4.1. Air Force:
- HQ USAF/A7C Policy on Energy Savings Performance and Utility Energy Service Contracts (ESPC/UESC), available as Attachment 1

4.2. Executive Order (E.O.):

4.3. Public Law:

4.4. United States Code:
- 10 U.S.C. 2911, Performance Goals and Plans for Department of Defense
- 10 U.S.C. 2912, Availability and Use of Energy Cost Savings
- 10 U.S.C. 2913, Energy Savings Contracts and Activities
- 31 U.S.C. 1301, Purpose Act


4.6. Federal Acquisition Regulation (FAR):
- FAR 6.302-5, Circumstances Permitting Other Than Full and Open Competition
• FAR 8.4, Federal Supply Schedules
• FAR 16.505, Ordering
• FAR 23.205, Energy-savings Performance Contracts
• FAR 31.205-7, Contingencies
All are available at https://www.acquisition.gov/far/

4.7. National Institute of Standards and Technology (NIST):

4.8. Department of Energy (DOE):
• Guide to Government Witnessing and Review of Post-Installation and Annual M&V Activities,


4.10. Efficiency Validation Organization (EVO):

5. Acronyms.

ACO  – Administrative Contracting Officer (Base)
AFCEC – Air Force Civil Engineer Center
AFCEC/CN – Air Force Civil Engineer Center, Energy Directorate
AFCEC/CND – Air Force Civil Engineer Center, (Energy) Program Development Division
AFPD  – Air Force Policy Directive
BCE  – Base Civil Engineer
CC  – Commander
CE  – Civil Engineer
CFR  – Code of Federal Regulations
CO  – Contracting Officer (772nd ESS)
CoP  – Community of Practice
COR  – Contracting Officer Representative
DOE  – Department of Energy
ECIP  – Energy Conservation Investment Program
ECM  – Energy Conservation Measure (bundled ECPs)
ECP  – Energy Conservation Project
baseline. E.O. 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*, expanded upon the energy reduction and environmental performance requirements of E.O. 13423. Title 10 of the Code of Federal Regulations, Part 436 (10 CFR 436.18 and 10 CFR 436.19), provides detailed instructions for calculating life-cycle costs. EISA 2007 made several changes to the authorizations for federal ESPCs. To the maximum extent practicable, energy and water conservation measures should have payback periods of less than 10 years as determined by using Federal life-cycle costing methods and procedures. However, this does not preclude the implementation of projects with payback periods of greater than 10 years, as long as the life expectancy of the installed equipment does not exceed the length of the contract, unless replacement of the equipment before the end of the contract period is included in the ECM.

**6.1. ESPC Use.** ESPCs enable the Air Force to improve energy performance while addressing aging infrastructure concerns and reducing consumption. The Air Force can use ESPCs for buildings where the Air Force pays the utility bill (except buildings leased from non-federal agencies); this includes implementation of energy conservation measures under a Host Tenant Support Agreement where utility costs are subject to reimbursement funding. ESPCs are typically considered for increasing energy efficiency through improvements to base infrastructure, buildings, and building systems. However, ESPCs can also be used to replace inefficient energy- or water-consuming equipment or processes within buildings, including, but not limited to, data center computer equipment; 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 energy services company (ESCO), 1) identifies building/equipment energy savings potential, 2) finances the capital costs using private sector funding; and, 3) acquires, installs, operates, and maintains the equipment. The ESCO earns a share of the resulting cost savings from the utility service account until the individual task order (TO) is paid off. Since 1995 the Air Force has executed many ESPC TOs at bases to improve energy efficiency, as a result, the bases, MAJCOMs, and AFCEC obtained many lessons learned. This ETL takes those lessons learned and provides guidance in implementing an ESPC. Using this ETL, an ESPC can be implemented with assurance that the energy savings can be realistically measured and validated for the term of the ESPC and meet the legal intent of the ESPC. If an ESPC is used effectively, a base can reduce energy and/or water consumption and improve facility infrastructure.

**6.2. ETL Attachments.**

**6.2.1.** Attachment 1, HQ USAF/A7C Policy Memorandum, dated 23 October 2012, requires bases to submit all proposed ESPC projects to AFCEC (through MAJCOMs) for vetting prior to formal engagement (actual or perceived government obligation) with an ESCO and approval for each stage of the project development and evaluation process.
NOTE: There is no prohibition with installations engaging informally with ESCO’s to develop potential ESPC projects, as long as there are no real or implied government commitments to a specific ESCO. Interaction at this point that constitutes actual or perceived government obligation is to be avoided.

6.2.2. Attachment 2, ESPC Considerations for Base Energy Manager, lists items the base energy manager must consider when implementing an ESPC. The attachment provides suggestions for potential problems that, if not addressed early in the process, could impact the base’s success with the proposed TO. The list is not all-inclusive; add local base issues as needed.

6.2.3. Attachment 3, Centralized Support Services, identifies the support services that will be provided by AFCEC and the DOE Project Facilitator.

6.2.4. Attachment 4, Example Coordination Checklist. Use this coordination sheet to help ensure that all appropriate functions reviewed and coordinated on each phase of TO development prior to award. This sheet is an example of recommended coordinating agencies and should be modified to meet base/MAJCOM requirements. The CE Squadron CC should assign a POC for this checklist -- typically, the base energy manager. Use this coordination sheet concurrently with preliminary assessments (PA) and investment grade audit (IGA) reviews. The CO signs the coordination sheet last, indicating that all appropriate functions have coordinated on the TO.

6.2.5. Attachment 5, Guide to Government Witnessing and Review of Post-Installation and Annual M&V Activities, provides references to detailed guidance on witnessing baseline, post-installation, first-year and annual measurement and verification (M&V) inspections and analyses, as well as commissioning of installed ESCO equipment.

6.2.6. Attachment 6, AFCEC Touch Points, provides an overview of the ESPC process once a project has been vetted and approved.

6.2.7. Attachment 7, Distribution List.

7. ESPC Legislative Overview.

7.1. General Information.

7.1.1. Unlike typical FAR acquisition practices, specific legislative authority (42 U.S.C. 8287) allows the Air Force to enter into contracts to take on debt to acquire energy-conserving infrastructure improvements under the condition that the overall utility costs to the base do not increase as a result of the contract and that any Air Force-incurred debt is secured by a guarantee of savings from the contractor. The savings generated must be a result of the contractor’s (ESCO’s) efforts and investment. To accomplish this, 42 U.S.C. 8287 authorizes the use of
ESPCs, which are performance contracts requiring the ESCO to guarantee sufficient savings to cover all costs associated with an energy conservation measure (ECM). The use of an ESPC requires a detailed understanding of its basic principles, how costs are assessed, and how risks are managed. The Secretary of Defense delegated the authority to directly negotiate contracts with ESCOs that are competitively selected without additional competition or coordination under provisions of 10 U.S.C. 2913. In addition, full and open competition need not be provided for when a statute expressly authorizes or requires that the acquisition be made through another agency or from a specified source (Federal Acquisition Regulation [FAR] 6.302-5(a)(2)).

7.1.2. ESPC projects must be funded solely from the cost savings they generate. All ESPC costs, including mid-contract replacement of capital equipment, must be funded from ESPC savings. A base’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 (see paragraph 7.1.4). The payment to the ESCO is contingent upon annual verification that the government realizes the guarantee of savings from the ESCO.

7.1.2.1. Energy cost savings are generally recurring utility energy cost savings that occur year after year when compared to an established baseline.

7.1.2.2. Energy-related cost savings are:
- Generally recurring reductions in expenses (other than energy costs) related to energy-consuming equipment, generally affecting operations, maintenance, renewal or repair expenses of equipment; and costs associated with waste disposal, such as waste disposal fees;
- One-time energy-related cost savings can result from avoided expenditures of operations and maintenance, repair and replacement, or capital expenditures funds for projects that, because of the ESPC, are not necessary and, savings accrued from ECMs that are installed and performing in advance of project acceptance.

7.1.2.3. Investments: Can include both facility (real property and RPIE) improvements as well as equipment (non-RPIE, such as computers or kitchen equipment).

7.1.3. The ESCO is responsible for the design, acquisition, installation, M&V, and maintenance of the energy conservation project’s (ECP) equipment or systems that produce the savings. An ESPC is not a design-build contract—it is a performance contract that requires the ESCO to guarantee the savings generated by, and the operation of, the installed ECP equipment. This performance requirement places the responsibility for all equipment, O&M, parts,
and materials that affect this guarantee upon the ESCO. This guarantee must be satisfied and verified at the acceptance of the ECP equipment and revalidated annually throughout the life of the TO.

7.1.4. Certain risks are always associated with implementing an ESPC for both the ESCO and the Air Force. The Air Force assumes the risk of any stipulations, including utility rates, hours of operation, and mission changes, during the life of the TO. These risks require a thorough understanding and evaluation to minimize unnecessary risks. The ESCO assumes the risk for the performance of the implemented ECM through its maintenance responsibility and guarantee of savings for the entire term of the contract. Again, careful consideration is essential to ensure that the Air Force is not assuming any of the ESCO’s risk.

7.2. Guaranteed Savings. The ESCO will provide a guarantee of cost savings to the Air Force and establish payment schedules reflecting such guarantee, taking into account any capital costs under the contract. The annual guaranteed savings are identified in two categories: energy/water and O&M savings. The ESCO must provide 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 must be programmed into the annual utility budget process. See 42 U.S.C. 8287, Section 801(a)(2)(A).

7.3. Energy/Water Costs.

7.3.1. Aggregate annual payments by the Air Force 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. See 42 U.S.C. 8287, Section 801(a)(2)(B).

7.3.2. 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. For example, 10 CFR 436.14 mandates the use of the annual supplement to Life Cycle Costing Manual for the Federal Energy Management Program (NIST 85-3273) to determine the discount rate and forecasted energy costs. To clarify, this requires using the NIST-published "implied long-term average rate of inflation" in conjunction with the appropriate regional fuel price indices. Furthermore, all Air Force installations will be considered industrial for the purposes of calculating the NIST utility escalation rate. The provisions in 10 CFR 436.14 are mandatory and failure to comply will result in the contract being found legally insufficient. The base legal office can provide a copy of 10 CFR 436; also see paragraph 4.5 of this ETL.

7.3.3. Appropriate element of expense identification codes (EEIC) should be identified and used to track energy/water costs and energy/water-related costs.
7.4. Maintenance Responsibilities. Maintenance and repair are critical to sustain an ECM's guaranteed performance throughout the life of the TO. Because the ESCO is responsible for the performance guarantee, the ESCO is also responsible for any factors that may affect this guarantee. Section 801(a)(2)(A) of 42 U.S.C. 8287 specifically requires that ESPCs “shall provide that the contractor is responsible for maintenance and repair services.” The ESCO is responsible for all costs relating to the performance guarantee, including labor, supplies, parts, and materials for the term of the TO.

7.4.1. The ESCO will perform maintenance for the TO term. In the simplest cases (such as lighting), and only after approval by AFCEC, the base may physically perform the maintenance as long as the ESCO retains the ultimate responsibility for maintenance for the length of the TO. Consequently, the language in the TO must clearly state that the ESCO is not transferring this responsibility to the base and the contractor is 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. The ESCO, being held responsible, is ultimately responsible for ECM performance — including actual energy savings — and required to oversee and ensure that all maintenance is performed as required for each ECP within the TO.

7.4.2. If approved, and if the base performs this function for the ESCO, the base may require the ESCO to provide all parts and materials needed to accomplish this service. All parts and materials needed to maintain and repair an ECM must be paid from either captured O&M or energy savings. Without capturing these savings, the government cannot assure that the funds will be available to cover future O&M costs necessary for maintaining equipment performance.

7.5. Capturing ESPC Savings. 42 U.S.C. 8287 does not explicitly state where the savings may be derived, but it logically follows that 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, the base must be aware that they will become a must-pay bill from O&M funds. Before these funds are included in an ESPC, the base and Funding Source Program Manager must agree to the funding source and create a record of decision to justify the action and agreement. See paragraph (a)(1) and Section 8287a of 42 U.S.C. 8287.

7.5.1. Savings must be real and verifiable so the base doesn’t run the risk of a savings shortfall.

7.5.2. Work that encompasses O&M-type savings or other savings that do not eliminate actual costs or produce actual savings versus avoided costs will not be included.
7.6. Annual Reconciliation.

7.6.1. Each year a verification of energy savings reconciliation must be accomplished for each awarded TO. This requirement includes an approved M&V plan using at least the current International Performance Measurement and Verification Protocol (IPMVP) at the time the TO was awarded (see paragraph 12.1). During the annual reconciliation, the ESCO will confirm the adequacy of maintenance. See paragraph (a)(2)(A) of 42 U.S.C. 8287.

7.6.2. The base energy manager or substitute must validate that the ESCO’s annual reconciliation requirement is performed in accordance with the M&V plan.

7.7. Replacement Cost. Energy savings can only be captured if the equipment is installed by the ESCO and the ESCO remains responsible for its performance (paragraph 7.4).

7.8. Buy-down. ESPC costs can also be funded with base funds; for example, when end-of-year fallout funds are used to buy down part of the existing 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, which 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: the use of these funds must be identified as soon as possible to the ESCO; the economics must be considered; prepayment penalties must be identified by the ESCO; and the life expectancy of the equipment must be 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.

7.9. Buyout Issues. 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 will be exercised. Ensure that the TO clearly identifies penalties for buyouts.

8. Funding Requirements.

8.1. Legislation requires that only real O&M savings provide the future payments on the initial project capital investment (paragraph 7.5). So, while the Air Force is limited to the use of O&M 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, but not limited to, computers/servers/data centers, test equipment (wind tunnels), and maintenance processes/equipment. As long as the primary savings are energy/water related,
ESPCs are a possible contracting methodology across multiple Air Force organizations.

8.2. Buildings encumbered with an ESPC may require a buyout of such encumbrances before non-ESPC work is performed. When government actions on a building (e.g., demolition, upgrades, construction, or privatization) will impact the ESPC contractor’s materials/equipment installed under an ESPC, or will otherwise alter the conditions of the contract, making the affected portion of the contract no longer valid, programming for the encumbered building should consider funds to buy out the applicable portions of the contract. If possible, buyout funds should be programmed with the same fund source as the project itself; however, this may not be possible with all project categories.

8.3. Military construction (MILCON) funds (including ECIP) cannot be applied to an ESPC. Military construction rules do not permit augmenting of funds (O&M/utility) with MILCON and to do so would violate the Purpose Statute, 31 U.S.C. § 1301(a).

8.4. 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.

8.5. 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. Use of MFH funds for a purpose outside their appropriated use would result in a violation of the Purpose Act (31 U.S.C. 1301).

8.6. Reimbursable customers, such as Depot Maintenance Area Group funding for industrial funding, require separate accounting procedures to ensure that adequate payments are being applied to their accounts.

9. ESPC Engagement Guidance.

9.1. Energy opportunities may come from the Installation, Energy Managers, Facility Managers, Mechanical and/or Electrical Engineers, Operations Flight, Resource Efficiency Managers (REMs), process owners, MAJCOM, AFCEC, energy audits, Sustainable Infrastructure Assessments and ESCOs. While ESCO’s are encouraged to market their firm’s ESPC capabilities to government designated energy program personnel and introduce and/or share conceptual energy conservation ideas, government personnel are cautioned against entering into any real or perceived acquisition activities prior to release of an NoO. The schedule and timing of any such visit will be at the discretion of the designated energy program personnel at that location.
9.1.1. ESCOs remain free to propose energy conservation ideas in the form of a non-proprietary document prior to the release of an ESPC NoO. Potential ideas for ECMs identified by the ESCOs may be posted by AFCEC on an AFCEC website (http://www.AFCEC.af.mil/energy/index.asp) in order to facilitate the exchange of ideas amongst Air Force personnel.

9.1.2. Air Force Personnel must remind ESCOs that any marketing literature or conceptual ideas proposed in presentations or papers freely provided to government personnel prior to release of the NoO will be handled by the government as non-proprietary and may be shared with other Air Force installations, MAJCOMs and AFCEC personnel.

9.1.3. Once a government decision is made to pursue the potential acquisition of an ESPC, as indicated by the release of an ESPC NoO, all ESCO engagement will be at the direction of the designated government contracting officer (CO).

10. Developing an ESPC. The Air Force can execute an ESPC through the DOE contract because it is multiple-award and promotes competition. Use of any contract vehicles other than a DOE indefinite delivery/indefinite quantity (IDIQ) contract must be approved by AFCEC/CND. AFCEC will centrally manage and award all ESPCs.

10.1. DOE Super ESPC Contract. DOE has awarded a multiple-award ESPC contract with 16 pre-qualified ESCOs available to all federal agencies to implement energy projects for government-owned facilities. A step-by-step approach for accessing the DOE ESPC contract is shown below. (The base cannot go directly to DOE).

10.1.1. Prior to formally engaging an ESCO (interaction that constitutes actual or perceived government obligation) the BCE will prepare a summary of the type of ECMs being considered (including relevant baseline information and initial estimates of potential savings provided by ESCO(s) during marketing) and submit to AFCEC/CND, through their MAJCOM, for vetting of potential energy projects. AFCEC will work with the Energy Team, BCE, and MAJCOM in discussing proposed energy conservation opportunities. If it is determined that an ESPC is the appropriate tool, AFCEC/CND will coordinate with the DOE federal financing specialist (FFS) to access the DOE ESPC contract. The FFS will work with the DOE contracting officer to assign a DOE project facilitator (PF).

10.1.2. The 772nd CO, base ACO and BCE will assemble a team to include CONS (772nd/Base ACO), CE, JA, customers, DOE PF, MAJCOM, and AFCEC (hereinafter “Energy Team”) and coordinate the date and time for an onsite meeting or telecom with the base, MAJCOM, AFCEC/CND, and DOE PF to explore opportunities, develop ESCO selection criteria (Fair Opportunity), and acquisition strategies. Attachment 2, ESPC Considerations for Base Energy Manager, will help the base implement an ESPC. These suggestions will help translate the requirements and apply lessons learned toward achieving a successful ESPC project.
10.1.3. The Energy Team will develop a site data package and provide to the 772nd CO as an attachment to the Notice of Opportunity letter. The site data package will include 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).

10.1.4. The Energy Team will develop Fair Opportunity requirements and selection criteria per FAR 16.505(b)(1), Fair Opportunity; Section H.3.1 of the DOE ESPC contract, Fair Opportunity Consideration Award Methods.

10.1.5. The 772nd CO will draft the acquisition plan (when required), prepare contract file folder, NoO letter and all necessary documentation required for internal reviews prior to release of the NoO.

10.1.6. Once reviews are completed, the 772nd CO sends Notice of Opportunity letters to all 16 ESCOs requesting a submission of interest and qualification package for the proposed requirement. The 772nd CO and Energy Team will review qualification packages received and select two or more ESCOs to conduct discussions (if necessary) concerning their qualifications.

10.1.7. After discussions, the 772nd CO will provide those ESCOs selected a letter to conduct a Preliminary Assessment (PA) with a clear statement of the requirement(s), disclosure of the significant factors and subfactors to be considered in evaluating proposal(s) and their relevant importance; date/time of a pre-proposal conference and onsite visit; the date for submission of proposals; and any attachments.

10.1.8. The 772nd will provide a debriefing to any ESCO not selected to conduct the Preliminary Assessment if requested in accordance with Federal Acquisition Regulation (FAR) 15.505.

10.1.9. The base ACO and Energy Manager or representative will orchestrate the pre-proposal conference and onsite visit with interested ESCOs and address any questions. The ESCOs will conduct a PA and deliver the proposal(s) to the Energy Team in accordance with the NoO letter. The Energy Team will evaluate the proposal(s) solely against the factors and subfactors identified in the NoO and select one (or more if evaluated equally) ESCO to move forward with an investment grade audit (IGA).

10.1.10. The 772nd CO will prepare a written determination for selection and submit for internal review/approval. Once internal reviews are completed and approval is obtained, the 772nd CO will notify unsuccessful ESCOs and conduct debriefings with these ESCOs when requested.
10.1.11. The Air Force may engage a DOE PF, for a fee, after submittal of the PA and prior to the investment grade audit (IGA). Attachment 3, Centralized Support Services, identifies the support services available after the preliminary proposal. The support services can be in addition to AFCEC/CND PF support. AFCEC/CND will work with the base ACO and Energy Manager in determining support services.

10.1.12. The 772nd CO will draft the Intent to Award letter and schedule a kick-off meeting with the selected ESCO. At the kick-off meeting, the 772nd CO will issue the Notice of Intent to Award (NOITA) letter to the ESCO which authorizes the ESCO to commence an IGA.

10.1.13. The Energy Team will complete the Air Force/DOE TO Request for Proposal (RFP) and provide it to the selected ESCO. The Air Force/DOE TO RFP (TORFP) template will be provided by the PF and allows Federal agencies to modify Sections C through I of the basic DOE IDIQ contract to suit specific base requirements; therefore, it should be provided to the ESCO as soon as possible after issuance of Intent to Award letter and commencement of the IGA.

10.1.14. The ESCO will commence the IGA. The Energy Team and the ESCO will collaborate during project development at the 30, 60 and 90 percent design phase to resolve any issues prior to submittal of the final IGA proposal.

10.1.15. Upon submission of the final IGA proposal, the Energy Team will review and provide the comments, as necessary and the 772nd CO will negotiate any terms/conditions and/or costs if necessary. The ESCO will provide a final proposal as a result of negotiations and submit any revisions, either as replacement pages and/or as directed by the 772nd CO. The 772nd CO will award the TO and provide copies to AFCEC/CND and the MAJCOM.

10.1.16. The 772nd CO will delegate contract administration services to the base contracting office and provide the award and proposal documentation to the ACO designated.

10.1.17. The ESCO will perform commissioning and submit a post-installation and commissioning report to the ACO after construction is complete but before government acceptance. The energy manager or contracting officer representative (COR) must witness the ESCO’s commissioning and the annual M&V activities throughout the performance period. Attachment 5, Guide to Government Witnessing and Review of Post-Installation and Annual M&V Activities, provides detailed guidance on witnessing baseline, post-installation, first-year, and annual M&V inspections and analyses, as well as commissioning of installed ESCO equipment. The energy manager and/or COR will provide the date of construction acceptance to AFCEC/CND, and the DOE FFS.
11. Responsibilities.

11.1. AFCEC/CND:

11.1.1. Approves all ESPC projects (including scope, cost, M&V and financial structure).

11.1.2. Develops ESPC procedures and guidance and provides training on using and implementing the ESPC to the CO, base energy manager, CE financial manager, base financial manager, MAJCOM representative, and a representative from the base legal office.

11.1.3. Provides assistance in awarding and administering all ESPC contracts.

11.1.4. Is the ESPC project management office (PMO) and centrally manages all ESPCs. Assists bases/MAJCOMs with developing the ESPC project through award and completion of TO terms; evaluates proposals, provides vetting review and approves each state of project development.

11.1.5. Maintains and posts all releasable ESPC documentation to the public-access website.

11.1.6. Reviews and provides comments/guidance on all ESPC proposals.

11.1.7. Provides tools and expertise to assist in implementing an ESPC and acts as a clearinghouse for ESPC lessons learned.

11.2. MAJCOM A7 (CE):

11.2.1. Provides oversight and compliance with Air Force policies and interprets guidance for the base’s ESPC program.

11.2.2. Ensures all ESPC projects are submitted to AFCEC/CND for technical review and approval per the HQ USAF/A7C policy memorandum (Attachment 1) and this ETL.

11.2.3. Provides project vetting and ensures the ESPC contract vehicle is appropriate for the recommended ECMs.

11.2.4. Reviews and verifies allocation of costs to appropriate accounts (NAF, FRM, MFH, reimbursable and EEICs) and ensures incorporation of payments in future budgets.

11.2.5. Reviews and provides comments on all ESPC proposals.

11.3. Base Civil Engineer (BCE):
11.3.1. Works with the CO to implement the ESPC program. Compiles and provides required project documentation, including site data packages and evaluation criteria to the CO; and performs an analysis on all construction costs and provides a statement to the CO that all costs are realistic for the work performed.

11.3.2. Submits all proposed ESPC projects to AFCEC/CND (through the MAJCOM) for vetting.

11.3.3. Ensures that the base energy manager receives and completes the ESPC training available on the Federal Energy Management Program (FEMP) web page (see paragraph 4.9) before implementing an ESPC program, and that newly assigned personnel associated with the ESPC program receive this training for the term of the ESPC. The CE financial manager, base financial manager, and a representative from the base legal office should also attend this training to learn their responsibilities with regards to an ESPC project.

11.3.4. Ensures that the ESCO complies with M&V and O&M requirements for the term of the TO.

11.3.5. Annually verifies the ESCO is meeting the guaranteed savings based on the requirements of the M&V plan for the term of the contract.

11.3.6. Provides a copy of the ESCO’s annual reconciliation report to AFCEC/CND.

11.5. 772nd Contracting Officer (CO):

11.5.1. Has overall responsibility to ensure that ESPC projects serve the best interests of the Air Force and are consistent with the terms and conditions of the ESPC contracts, legislation, and regulations.

11.5.2 Coordinates with AFCEC/CND and DOE FFS for use of DOE ESPC contracts.

11.5.3. Performs all pre-award acquisition functions and awards ESPC TOs.

11.5.4. 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. For a PA report, include the estimated investment cost provided by the ESCO. For the IGA report, include the final negotiated contract amount encompassing the total cost over the life of the contract.
11.6. Administrative Contracting Officer (ACO):

11.6.1. Has overall post-award responsibility to ensure that ESPC projects are administered in accordance with the terms and conditions of the ESPC contracts.

11.6.2. Oversees construction management oversight and day-to-day interaction with the ESCO.

11.6.3. Ensures M&V is performed and annual report is received from the ESCO annually, and that all ESCO maintenance is performed in accordance with the task order.

11.6.4. Informs 772nd 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 772nd CO.

12. Business Practices. The following business practices are required to help the base implement an ESPC, translate the legislative requirements, and apply lessons learned to achieve a successful ECM.

12.1. M&V Plan. The M&V plan is the cornerstone of an ESPC, ensuring the Air Force’s ability to confirm that actual energy savings are occurring and are verified in a reasonable, cost-effective manner. Using this plan annually guarantees to the base that the installed equipment is performing as predicted. Using a good M&V plan will help mitigate risk to the base, eliminate conflicts when systems fail to meet their expected savings, and ensure that the ESCO remains engaged with the base over the full term of the contract. All M&V plans must comply with the latest version of the IPMVP; Option C, Whole Facility, is the preferred option for most M&V efforts. This option uses meters connected to the building to establish an accurate baseline and accurate post-implementation utility consumption profiles. In addition, multiple building ECMs may be rolled up into one M&V plan, thereby saving M&V costs on the project. Option A, Retrofit Isolation, which uses key parameter measurements in conjunction with statistical sampling, may be used only in limited, Air Force-approved instances. Option B, Retrofit Isolation with Continuous Metering, may be used when synergistic energy impacts are fully mitigated. Option D, Calibrated Simulation, must not be used in any Air Force ESPC contract. Refer to the latest IPMVP manual for a full description of all M&V options (see paragraph 4.10).

12.1.1. Baseline Development. An energy baseline is a prediction of the amount of energy that would have been used if no energy conservation equipment had been installed. The ESCO must clearly document the baseline data and ensure that the data adequately supports the baseline.

12.1.1.1. Actual metering and data collection must be performed by the ESCO and verified by the base to ensure that 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 three months' data is required for weather-impacted ECPs. Per AF/A7C Air Force Facility Metering Policy, all facilities within an ESPC contract must be metered. Previously installed meters should be used as much as possible to collect this data. The M&V plan must be measurement-based. If the ESCO and the Air Force determine that simulation is the preferred methodology, the models must be validated (calibrated) by the ESCO.

**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.

12.1.1.2. All 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 base energy manager can easily explain these savings now or in the future.

12.1.1.3. Baseline development and data collection should begin immediately after down-selection of the ESCO to perform the IGA. The longer the data collection period, the lower the risk to the base and the ESCO (lower risks result in lower overall costs).

12.1.1.4. AFCEC/CND review of the baseline is required.

12.1.2. Performance Tests.

12.1.2.1. A performance test is a process for achieving, verifying, and documenting the performance of equipment installed or modified as part of an ECP. The process begins in the IGA with the development and approval of a performance test plan that is implemented after the TO award. The performance tests will be accomplished during the construction phase to certify that all equipment is operating properly and the results approved before conducting the energy savings verification tests.

12.1.2.2. A performance test plan developed as part of the IGA is prepared for each ECP. The performance test plan describes all aspects of the test process, including schedules, responsibilities, documentation requirements, and functional performance test requirements. The functional performance tests should describe at what conditions or loads the tests are to be performed, the location of test sensors, the frequency of measurements, the type of test equipment, the test methods, and the acceptable range of results. The level of detail depends on the complexity of the ECP. The performance testing plan will be detailed enough that, prior to signing the TO award, the base knows exactly which tests will be performed.
12.1.2.3. After completing the performance tests, a final acceptance report should be submitted for approval, in writing, to the CO, ACO and base energy manager. The final acceptance report is submitted after all functional performance tests are completed. The final acceptance report should include the executive summary, ECP description, performance plan, and all test results. The CO will approve the performance test results after coordination and verification of results by the base energy manager.

12.1.3. Energy Savings Validation.

12.1.3.1. A formal set of test procedures with the acceptable range of results will be developed to validate energy savings. These test procedures will be submitted by the ESCO at IGA and approved before awarding the TO. The tests must describe under what conditions or loads the tests are to be performed, the location of test sensors, frequency of measurements, type of test equipment, test methods, and the acceptable range of results. The test procedures will verify all energy savings guaranteed under the ECP/ECM.

12.1.3.2. After the base 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. Each ECP should be lifecycle cost effective on its own merits, unless specifically approved by AFCEC/CND.

12.1.3.3. Once the validated energy savings have been approved for all ECPs, the ESCO will submit an invoice for payment the first full month after acceptance of the ECM.

12.1.4. Annual Reconciliation Plan (Audit of Savings).

12.1.4.1. Each ECP in the TO will have a detailed annual (at a minimum) reconciliation plan approved before the TO award. The plan should describe a formal set of test procedures, an acceptable range of results, a schedule of how reconciliation payments will be assessed if savings fall below the guarantee, and a certification by the ESCO that all O&M requirements and conditions have been met for each ECP in the TO.

12.1.4.2. The test procedures should be similar to those developed to validate energy savings. The purpose is to test, validate, and document the energy savings.

12.1.4.3. The ACO must approve the annual reconciliation of savings after coordination and verification of savings by the base energy manager.
12.2. Maintenance Related to the TO.

12.2.1. All maintenance is an ESCO responsibility and will be performed by the ESCO for the TO term. The TO should lay out, in clear terms, ESCO and base maintenance responsibilities. In facilities and areas where both ESCO and base equipment operate, a clear line of demarcation must be identified.

12.2.2. In the simplest cases (such as lighting), and only after approval by AFCEC, the base may perform maintenance; however, the base must carefully consider the consequences should it become unable to perform in accordance with the maintenance schedule. Since the ESCO is ultimately responsible, the ESCO will determine if the government is meeting the TO requirements. If the base fails to perform proper maintenance, the ESCO may take over the maintenance and charge the base for performance. This will require 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 base assumes maintenance, the ESCO must provide 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 must be captured in the proposal and reflected in the cost analysis, but may not have to be included as a cost to the ECM. Additional costs must be reflected in the cost analysis as a cost to the ECM if maintenance costs increase over pre-ECP levels.

12.3. Pricing of TO Work.

12.3.1. The ESCO should provide detailed supporting documentation as needed to determine price reasonableness.

12.3.2. ESCO estimates for each ECP will identify all major costs (e.g., equipment, labor, design, maintenance, repair, parts, overhead and profit [OH&P], travel, M&V). The government should also prepare an independent estimate.

12.3.3. Contingencies will be clearly identified and negotiated for each ECP. Contingency costs mitigate a project’s risk, which is a factor in the profit negotiated; therefore, the level of contingencies for a project must be carefully considered. See FAR 31.205-7, Contingencies.

12.3.4. Ancillary savings are those not attributed to utility savings, such as manpower, materials, or eliminating contract-operated functions. Ancillary savings are any savings attributable to the project other than energy savings. 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 base energy manager will determine
whether an ESCO-proposed task elimination or reduction would be considered an ancillary savings available for sharing. The government will provide the dollar value of the ancillary savings.

12.3.4.1. Government civilian positions must be deleted from the official manpower rosters or reallocated to offset known manpower shortfalls before related savings can be added to the ESPC proposal. The base must work the request through the MAJCOM to Air Staff so the funds can be reprogrammed to the ESPC account. A provision should be included in the package to capture the lost manning at least one program objective memorandum (POM) cycle prior to the end of the ESPC TO. Use caution since O&M funds may need to be expended to pay the ESCO to continue performing until the reprogramming action is completed.

12.3.4.2. Since only the final negotiated savings can be applied to the ESPC contract, all negotiated cost reductions due to reducing or eliminating contract-operated functions must be completed before those savings are accepted in the proposed TO.

12.3.4.3. The ESCO may not represent the government to negotiate a lower utility rate in an ESPC project.

12.4. Equipment Ownership. The ESCO retains ownership of all installed equipment for the term of the contract, even if title is transferred to the government at acceptance. At the TO closeout, the Air Force must update real property records to show ownership of ESCO-installed equipment. The ESCO is required to provide to the Air Force, prior to contract completion, O&M manuals for the equipment along with any required maintenance training.

12.5. 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 base should obtain a written agreement with the ESCO for the new utility system’s owner to buy out that system should privatization take place.
13. **Point of Contact.** Recommendations for improvements to this ETL are encouraged and should be furnished to the Air Force ESPC Program Manager, AFCEC/CND, 139 Barnes Drive, Suite 1, Tyndall AFB FL 32408-5319, DSN 523-6475, commercial (850) 283-6475, FAX DSN 523-6219, or via e-mail at afcec.rbc@us.af.mil.

ANTHONY A. HIGDON, Colonel, USAF
Deputy Director

7 Atchs
1. HQ USAF/A7C Policy Memorandum
2. ESPC Considerations for Base Energy Manager
3. Centralized Support Services
4. Example Coordination Checklist
5. Guide to Government Witnessing and Review of Post-Installation and Annual M&V Activities
6. AFCEC Touch Points
7. Distribution List
MEMORANDUM FOR ALMAJCOM/A7

FROM: HAF/A7C
1260 Air Force Pentagon
Washington, DC 20330-1260


The AF continues to endorse the use of third-party financed efforts such as ESPCs and UESCs to help meet AF energy goals and comply with White House/DoD directives. Installations are beginning to identify more project opportunities and Energy Service Companies (ESCOs) and Utility Providers continue to show interest in partnering with the AF. Efforts by the Air Force Civil Engineer Center (AFCEC) to reinvigorate these programs, in partnership with several MAJCOMs, are showing success.

In Aug '12, Tinker AFB (the largest AF facility energy consumer) awarded the first ESPC since 2009. This $91M heat plant decentralization project will save 493,000 MBTU's a year, enough energy to power 12,424 homes, impacting 70 buildings and reducing Tinker's energy intensity by 30 percent. The AF will use the $6.4M in annual utility savings to pay for the financed infrastructure improvements and maintenance over the next 20 years.

I ask you to help your installations and the AFCEC continue to identify candidate projects. Your installations are encouraged to work with ESCOs and Utility Provider(s) to help identify and develop potential ESPC/UESC projects, as long as there are no real or implied government commitments to a specific contractor or utility, prior to AFCEC involvement/approval. You will soon see a revision to ETL 11-24, Energy Savings Performance Contracts, to clarify any confusion on ESCO engagements. We are hosting a RIE to improve our ESPC/USPC processes and will provide results in the near future.

ESPCs and UESCs are often the right tool to help achieve energy goals—particularly when a sound business case exists. We have shifted from a sharp focus on heat plants to a wider aperture which encompasses central plants, process energy and data centers, and we are also open to any viable ESPC/UESC that makes good business sense. Contact the AFCEC Energy Director, AFCEC/CN, Mr Rick Stacey at DSN 523-6341 for additional information.

TIMOTHY A. BYERS, Maj Gen, USAF
The Civil Engineer
DCS/Logistics, Installations & Mission Support

cc: SAF/EN
HQ AFCEC/CL/DD
AF/A7CE
Energy Savings Performance Contract (ESPC) Engagement Guidance

Preamble: This guidance applies to all ESPC acquisition activities prior to the release of the ESPC Notice of Opportunity (NoO). The guidance is not intended to limit Energy Service Company (ESCO) opportunities to introduce and market their firm’s capabilities to Air Force Installations, Major Commands (MAJCOM) and the Air Force Civil Engineer Center (AFCEC) or to limit sharing energy conservation ideas of a conceptual nature among Air Force bases. The guidance does, however, caution ESCOs from engaging in any Pre-NoO activities that could affect fair and open competition between ESCOs. AFCEC will provide overall project management and contracting support for most subsequent ESPC projects.

Installation/MAJCOM/AFCEC Guidance

− Air Force installations, MAJCOMs and AFCEC are encouraged to entertain marketing visits requested by ESCOs. Scheduling and timing of any such visit will be at the discretion of the designated energy program personnel at that location.
− While ESCOs are encouraged to market their firm’s ESPC capabilities to government designated energy program personnel and introduce and/or share conceptual energy conservation ideas, government personnel are reminded to not begin any real or perceived acquisition activities prior to release of a NoO.
− ESCOs remain free to propose energy conservation ideas in the form of a non-proprietary document prior to the release of an ESPC NoO. AFCEC may post on an Air Force-internal website all non-proprietary ESCO provided conservation measures in order to facilitate the exchange of ideas among Air Force personnel.
− Once the government makes a decision to pursue the potential acquisition of an ESPC, all ESCO engagement will be at the direction of the designated government contracting officer.
− Installations must keep their MAJCOM and the AFCEC informed as ESPC projects develop.

ESCO Guidance

− ESCOs are encouraged to market their firm’s ESPC capabilities to government designated energy program personnel and share conceptual energy conservation ideas.
− Any marketing literature or conceptual ideas proposed in presentations or papers freely provided by the ESCO to government personnel will be handled by the government as non-proprietary and may be shared with other Air Force installations, MAJCOMs and AFCEC personnel. Proprietary info, if provided by an ESCO and annotated as “proprietary” will be protected by the Air Force Energy Team.
− The scheduling and timing of any marketing visit will be at the discretion of the designated energy program personnel at that location.
− Once the government has decided to pursue potential acquisition (NoO) of an ESPC, the ESCO may not request information regarding the scope, cost or timing of that particular initiative from any government personnel except through the government’s designated contracting officer.
Acronyms/Abbreviations

AFCEC – Air Force Civil Engineer Center
CN – Energy Directorate under the AFCEC
CND – Energy Program Development Division under the AFCEC Energy Directorate
CO – Contracting Officer
DOE – Department of Energy
EMSG – Energy Management Steering Group; a cross functional team at all bases and MAJCOM comprised of unit commanders and wing leadership that meets at least semi-annually to address energy issues/performance within their respective areas of responsibility
ESCO – Energy Service Company; 16 ESCOs are fully qualified under the DOE FEMP ESPC IDIQ
ESPC – Energy Savings Performance Contract; authorized under 42 USC 8287 and FAR 23.205
FEMP – Federal Energy Management Program under DOE; owns the ESPC IDIQ that the Air Force uses
IDIQ – Indefinite Delivery/Indefinite Quantity; type of contracting vehicle with a contract dollar value ceiling and separate task orders awarded under that ceiling and contract umbrella
MAJCOM – Major Command; bases are organized, trained and equipped under their respective 13 MAJCOMs (mostly organized by function or in some cases geographically (Europe and Pacific)
NoO – Notice of Opportunity; “formal” notice to ESCOS as part of DOE FEMP ESPC IDIQ process
OPR – Office of Primary Responsibility; eg, the base energy manager is typically the focal point for facility energy and ESPCs on an installation
PA – Preliminary Assessment; after ESCOs look at specific areas on the installation (base), they can choose to submit ideas/potential solutions (non-proprietary) to meet the NoO requirements
SAF/IEN – Deputy Assistant Secretary of the Air Force for Energy; responsible for policy and oversight of the Air Force energy program
ESPC CONSIDERATIONS FOR BASE ENERGY MANAGER

A2.1. Before proceeding with an ESPC, the base energy manager will follow the process identified in paragraph 9 of this ETL and should consider the ideas and suggestions in this attachment. These considerations can assist the base energy manager in implementing a successful ESPC project.

A2.1.1. Prior to formally engaging with an ESCO (interaction that constitutes actual or perceived government obligation) the base energy manager must submit proposed ESPC projects to AFCEC/CND (through their MAJCOM) for vetting. ESPCs will only be used where they make good business sense and when necessary to achieve energy goals. AFCEC/CND will approve each stage of the project development and evaluation process and assist in awarding and administering the TO.

A2.1.2. Though the ESCO brings technical energy expertise to the base energy program, the base energy manager should be the primary driver behind improving the base’s energy efficiency. The base energy manager has multiple tools available to develop ESPC projects. Energy audits, AFCEC/CND, Sustainment Infrastructure Assessments (SIAs), REMs and MAJCOMs are available to assist energy managers to identify ESPC candidates. 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. The Air Force needs to develop a consensus position before formally initiating an ESPC, keeping in mind overall base goals. This is not a wish list for your building manager nor is it an opportunity for an ESPC contractor to “cherry pick” the most profitable projects, leaving the less economical work for others. If that happens, the other work will never be completed and you will be saddled with undesirable systems in their present condition. Keep in mind that an ESCO’s costs and overhead will be greater for widely scattered buildings than it will be for buildings clustered together. Structure your packages of buildings to take maximum advantage of project economics. Include the less desirable projects with the more attractive projects, and ensure that the ESCO takes them as a package to help support and subsidize the less economical work such as chiller and cooling tower replacement.

A2.1.2.1. Not all of the uncovered opportunities/projects will lend themselves to ESPC project execution. Rather, most of these may be best executed with appropriated dollars through the sustainment, restoration and modernization (S/R&M) program; the Air Force then avoids significant overhead and long-term interest charges imposed by the ESCO through an ESPC.

A2.1.2.1. To ensure energy projects are executed in the most efficient manner, AFCEC/CND has instituted a vetting process through the MAJCOMs. This vetting process takes “potential” ESPC or UESC projects from the MAJCOMs and...
analyzes them with base/MAJCOM/AFCEC/CND input to determine how they should be best executed in the overall Air Force energy program.

A2.1.3. The ESCO is awarded the TO that best satisfies the Air Force’s stated scope (saving the maximum energy/water) with the best financing terms, and that moves the Air Force toward the broadest swath of goals and mandates. Do not accept a preliminary report that addresses only technology that the ESCO elected to consider. If the base energy manager is interested in the viability of a specific technology and the ESPC contractor states that the proposed technology is not economical, have the contractor explain why in writing.

A2.1.4. Use a multidisciplinary team to evaluate proposals. Be certain to consider the cost of maintenance and repairs after equipment is installed, as well as items such as the equipment’s noise level. Each ECP should be evaluated on a life-cycle cost basis and energy-efficient or Energy Star® equipment should be used in the project where possible.

A2.1.5. Where practicable, consider having building energy management or advance pulse interval metering and load profile data recording devices installed as part of the contract. It is often difficult to assign energy savings value to such equipment, so be prepared for these issues. The importance of having this advanced metering technology available for obtaining the best energy procurement prices after deregulation cannot be overstated.

A2.1.6. Ensure a clear understanding with the ESPC contractor on expectations and goals.

A2.1.7. Keep the terms and provisions of the ESPC TO as straightforward and clear as possible, without, for example, all sorts of added O&M savings or escalators for cost of fuel and services. Look at each ECP and determine how it contributes to the overall project. Look at its length of payoff and the impact of its removal or inclusion on the overall project economics. Make the appropriate business trade-offs and establish an optimal scope of work for the project. A project may be modified later if you want to include some O&M savings to accomplish a desired goal; however, before you make this kind of modification, make sure the O&M savings are real and can be demonstrated to be obtainable.

A2.1.8. Ensure that all variables affecting energy consumption are identified and defined. To the greatest extent practicable, include as many of these variables as possible in the “normalized” baseline model. In this way, the energy savings will automatically “correct” to changing conditions (e.g., weather variations, variable operating schedules). For the remaining variables or for variables that are not expected to change (e.g., non-routine variables such as building square footage, occupancy, size and type of equipment), document these as “static” variables that affect facility energy consumption. If these static variables change during the ESPC.

Atch 2
(2 of 3)
project term, an engineering analysis may be necessary to estimate the energy impact and provide fair and equitable compensation.

**A2.1.9.** Either obtain load profiles or have the ESCO obtain load profiles and then go to the building during the peak energy-use period. Tour the building and make observations about the operation of energy-using equipment. Determine if any equipment use or power loads could be shifted to a non-peak period of energy use. If not, explore peak shaving, thermal load shifting, and other means of saving energy and costs that could be used to cut expenses. Consider the use of automated building management systems and timed-out electronic locks on non-essential equipment so it cannot be operated during periods of peak demand.

**A2.1.10.** The importance of coordination cannot be overstated. Pay attention to detail and follow up on everything. Be sure to involve the MAJCOM, AFCEC/CND and base engineering, construction, contracting, finance, and legal functions before awarding the TO. See Attachment 4.

**A2.1.11.** Coordinate with the local utility service providers. If you are considering a project that would allow you to go from a firm natural gas service rate to an interruptible service rate, first check to make sure an interruptible service rate is available or that one can be obtained from another service provider. Payments to the ESCO for negotiating a lower utility rate cannot be included as savings.

**A2.1.12.** A common area of contention is the contract language addressing M&V issues. Make sure there is a clear understanding and clear contract language addressing how much M&V is to be performed. Become familiar with the latest version of the IPMVP and make use of the M&V protocols in your contract. M&V must comply with the requirements of the Energy Policy Act of 2005. Use the Air Force M&V templates where appropriate.

**A2.1.13.** All MFH ECPs should be thoroughly evaluated against future MFH renovations or new housing initiatives for possible reduction or elimination of projected ESPC savings. When ECP savings are eliminated or greatly reduced, a buyout may be required. The base programming function should include the cost of the ECP buyout on Department of Defense form (DD) 1391, *Military Construction Project Data*. Before proceeding with any ESPC project in MFH, coordinate with the MAJCOM housing office and the Office of the Civil Engineer, Housing Division (A7CH), to identify and eliminate any potential conflict with current or planned MFH projects.

**A2.2.** Additions to this list are encouraged; see paragraph 13 of this ETL for POC information.
This attachment identifies the various support services provided by AFCEC and DOE and will assist in determining the level of outside support required for the project.

A3.1. AFCEC/CND in partnership with 772nd ESS will provide the following services at no cost.

A3.1.1. AFCEC/CND has the expertise and tools a base needs to implement a successful ESPC project. These are available from acquisition throughout the TO term. The ACEC/CND staff will provide:
- ESPC project support from initial scoping to completion of TO term
- Contract and technical review of all phased reports
- Price reasonableness (comprehensive technical and pricing analysis of proposed ESCO costs)
- M&V support (support in development, commissioning, and annual audits)
- Access to engineering subject matter experts
- Contracting support through 772nd ESS from NoO development to Task Order award

A3.1.2. Optional services include:
- On-site assistance for major ESPCs, e.g., high-dollar value or complex projects as determined by AFCEC/CND

A3.2. The following support services are provided by DOE at no cost during Phase 1 project planning services and Phase 2 – Preliminary Assessment:
- Assist agency with drafting evaluation criteria and Notice of Opportunity letter
- Kick-off meeting support
- Preliminary assessment (PA) review

A3.3. DOE has additional optional services available based on reimbursement of full cost. This cost can be paid as a separate line item with appropriated funding or rolled into the project cost. The services and estimated costs are described as follows:

A3.3.1. Minimum assistance with delivery order – Phase 3– IGA to Award – estimated cost $10,000:
- Technical assistance begins in Phase 3 with DOE technical staff preparing the DO RFP for agency/site; providing onsite or telecom review of draft DO RFP; and preparing second draft of DO RFP based on telecom and written agency review comments and recommendations.
- DOE services will assist agency with drafting of Intent to Award letter to selected ESCO.

A3.3.2. Standard assistance package – Phase 3 – estimated cost $30,000:
- Technical assistance for contractor-identified projects begins after review and discussions of the ESCO’s PA.
• DOE services will facilitate a one day on-site investment grade audit (IGA) kick-off meeting with agency and ESCO.
• Participate in periodic project telecoms and one on-site meeting to assist in achieving agreement with the ESCO on feasible ECMs and establishing facility baseline conditions; review energy and O&M baselines for completeness, accuracy, and confirm with agency staff.
• Final proposal review.
• Assist agency with technical and price negotiations up to Task Order award – consultation support.
• Assist agency with revisions to DO RFP for TO award.
• DOE CO/COR review of TO award.

A3.3.3. Standard assistance package – Phase 4 – Estimated Cost $50,000:
• Federal Energy Management Program (FEMP) services will participate in TO award kickoff meeting.
• Support discussion of schedules from TO award through project acceptance and related unique agency contract administration activities during ESPC.
• Provide consultation and technical review of the commissioning plan/report/post-installation M&V report and provide written recommendations relating to ECM savings potential for project acceptance.

A3.3.4. Additional support services – DOE hourly rate:
• DOE offers a full range of services, based on the estimated level of effort.
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<th>Tailored to meet agency needs</th>
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Funds Manager
Energy Manager
Design Chief
Environmental Manager
Ops Chief
Planner (if required)
MFH (if required)
Real Estate (if required)

BASE
Comptroller
Process Owner

MAJCOM Operations Division
CEO/CEC
Funds Manager
Energy Manager
AFCEC/CND Approval

Contracting Officer: ________________________________

Signature/Date

Atch 4
(1 of 1)
GUIDE TO GOVERNMENT WITNESSING AND REVIEW OF POST-INSTALLATION
AND ANNUAL M&V ACTIVITIES

A5.1. The base energy manager and/or COR must witness the ESCO’s M&V activities. This requires a thorough understanding of the awarded M&V plan to ensure the ESCO is following the proper (i.e., contractual) methods, procedures, calculations, and other elements of the approved M&V plan.

A5.2. FEMP has written guidance, *Guide to Government Witnessing and Review of Post-Installation and Annual M&V Activities*, which is required when using the DOE ESPC contract. The document addresses witnessing baseline, post-installation, first-year, and annual M&V inspections and analyses as well as commissioning of installed energy conservation projects/measures (ECP/ECM) by an ESCO. In addition, it recommends a process in which agencies designate an individual(s) to observe these inspections, review the resulting M&V reports, and certify in writing that those reports are acceptable and validate the actual savings. This guidance may also help the base pass an ESPC audit.

A5.2. FEMP has also published *Reviewing Post-Installation and Annual Reports for Federal ESPC Projects* to assist agencies when reviewing post-installation and annual M&V reports received from the ESCO.

A5.3. These and other useful guidance documents can be found at: [http://www1.eere.energy.gov/femp/financing/espces_resources.html](http://www1.eere.energy.gov/femp/financing/espces_resources.html).
AFCEC TOUCH POINTS

At completion of vetting and approval of ESPC process, implement the following procedures:

- Gov’t Team (CE, CONS, JA, Customers, DOE PF, MAJCOM, AFCEC) develop project framework/scope/NoO.

- 772nd ESS CO sends Notice of Opportunity (NoO) to all 16 ESCOs on DoE ID/IQ.

- Base hosts site visit for interested ESCOs; ESCOs prepare and submit a Preliminary Assessment (PA).

- Gov't Team evaluates PA responses in accordance with selection criteria and down selects to one ESCO to submit an Investment Grade Audit (IGA).

- ESCO conducts Investment Grade Audit.

- Gov’t team reviews & provides comments to ESCO via CO at 30/60/90% points.

- ESCO addresses review comments and ultimately provides final proposal.

- Gov’t team reviews, comments, & CO negotiates with ESCO as necessary.

- CO awards TO.

Note: “✓” = AFCEC Approval point
DISTRIBUTION LIST

SPECIAL INTEREST ORGANIZATIONS

Information Handling Services (1)
15 Inverness Way East
Englewood CO 80150

Construction Criteria Database (1)
National Institute of Bldg. Sciences
1201 L Street NW, Suite 400
Washington, DC 20005